



# ANNUAL GROUP REPORT 2013

SOLARWORLD AG







**TO BEGIN WITH: FRANK WORDS**

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## **SOLARWORLD 2013**

2013 was the year of restructuring. The global solar industry crisis affected SOLARWORLD, too, necessitating a restructuring of the company's finances and processes. We rose to the challenge and today we stand stronger, on a secure foundation.

**IN SHORT: WE ARE READY FOR THE FUTURE.**

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## **OUR VISION**

Our vision continues to drive everything we do. We are growing as an international group, becoming ever more integrated and efficient. Together we keep pushing solar power generation forward.

**IN SHORT: WE BUILD THE SOLAR WORLD.**

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## **OUR STRATEGY**

Our customers all over the world can rely on our commitment to quality. High-class workmanship is the best guarantee of long-term investment security and consistent yields with a solar power system. That is what distinguishes SOLARWORLD from the competition.

**IN SHORT: REAL VALUE PAYS OFF.**



## SUSTAINABILITY REPORTING

SOLARWORLD has a clear focus on sustainability. Our strategy is aimed at making solar energy available worldwide on the best terms and offering excellent service to our customers.

The Management Board of SOLARWORLD AG supported the group's commitment to international standard such as the United Nations Global Compact. With the present report, the Management Board, above all the CEO of SOLARWORLD AG, declares its willingness to continue this engagement in the future.

The Annual Group Report 2013 describes both our financial and our non-financial performance. Especially relevant economic, ecological and social topics are explained extensively in the group management report. Due to eco-efficiency, the section "Sustainability in Detail 2013" is only available as a pdf document at @ [www.solarworld.de/sustainability//](http://www.solarworld.de/sustainability//)

Sustainability reporting follows the international guidelines (G4) of the (G4) der Global Reporting Initiative. In doing so, we also meet requirements of the German Sustainability Code. Furthermore, this reporting serves as a progress report for the implementation of the ten principles of the United Nations Global Compact (Advanced Level). The audit of the performance indicators has been conducted in line with the generally accepted assurance principles for the audit or review of reports on sustainability issues that have been established by the Institute of Public Auditors in Germany (IDW). These principles include the requirements of the "International Standard on Assurance Engagements (ISAE) 3000" and in some areas go even beyond them.

### FOR YOUR GUIDANCE

- ➔ *Cross reference to text passages in the 2013 Annual Group Report • p. 000//*
- Ⓢ *Cross reference to charts in the 2013 Annual Group Report • p. 000//*
- @ *www.internetlink.com //*
- Ⓢ *Cross reference to Details on Sustainability Performance 2013 • p. 000//*
- Ⓢ *Cross reference to financial reports of prior years • p. 000//*

Rounding differences may occur in the Annual Group Report.



# CONTENT

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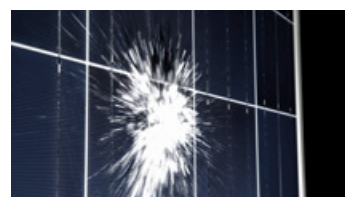
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## KEY FIGURES AND FACTS

What changed in fiscal year 2013 compared with 2012? Read an overview of the most important facts and figures.

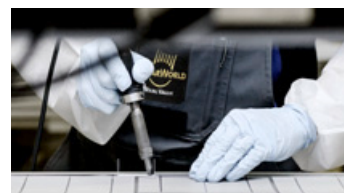
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## GROUP MANAGEMENT REPORT

How did solar markets and SolarWorld's business develop in 2013? Find answers to this and other questions in this chapter.

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## GROUP MANAGEMENT REPORT – FORECAST

What are Solar World's targets for 2014? Which are the most important opportunities and risks? Learn all details.

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\* A more detailed table of contents can be found at the beginning of the main chapters.

**LETTER BY THE CHAIRMAN**

Dear shareholders, noteholders, employees and customers of SOLARWORLD AG,

Self-assured and strong – this is how SOLARWORLD AG presents itself to you today in its Annual Group Report. One month ago, our company completed its financial restructuring. Two weeks ago, we acquired a new manufacturing site in Arnstadt, Germany. Today, SOLARWORLD has every prospect of powering its way to a successful future.

As you all know, the world looked very different this time last year. The 2013 fiscal year will go down in SOLARWORLD's history as the year of financial restructuring. We had to make some painful cuts, but under the circumstances, we found the best possible overall solution that took the different interests of all sides into account.

Despite the difficult situation, we succeeded in persuading existing and new investors that our business has a viable future. Noteholders and creditors of assignable loans accepted our restructuring proposal. Qatar Solar S.P.C. brought in fresh capital, acquiring a 29 percent stake in SOLARWORLD AG. This commitment was important for the success of the restructuring, and will continue to have positive impacts in the years ahead.

I am more confident than ever in the future of SOLARWORLD AG. Through a new investment, I have acquired a stake of around 20 percent in SOLARWORLD AG and furthermore, as CEO, I am responsible for the company until 2019.

Yet, the fact remains that the financial restructuring program harmed our operating business in 2013. Group-wide shipments fell three percent compared with 2012. SOLARWORLD's situation unsettled customers, particularly in Germany, our home market. Consolidated revenue fell much more sharply than shipments by about 25 percent to € 456 million. Above all, this trend was due to the declining German market.

Our consolidated result before interest and taxes (EBIT) was negative once again in 2013, at € –189 million. The substantial improvement compared with the previous year (€ –620 million) is primarily due to the serious impairments we were required to recognize in 2012, whereas we did not identify any need for impairments in 2013. The improvement in EBIT is also the result of massive efforts on the part of employees throughout the group. Our operational restructuring program achieved appreciable cost reductions in many areas in 2013.

We reversed the trend for the operating result in 2013. Although it is likely that our EBIT (adjusted for special items) will be negative again in 2014, we expect our operating business to return to profitability in 2015. We will keep doing everything necessary to make sure this happens.

Our path back to profitability requires us to be successful with customers. Therefore, we are placing greater emphasis than ever before on the reasons why customers should choose SOLARWORLD. These arguments are not new – they are in our DNA, as it were, and part of the company's 15-year history. At



**The Management Board of SolarWorld AG (from left to right):**

Philipp Koecke (CFO): controlling, finance, accounting and investor relations

Dr.-Ing. E. h. Frank Asbeck (CEO): strategic group development, production, supply chain management and public relations

Colette Rückert-Hennen (CIBPO): personnel, brand, marketing, sustainability and IT

Frank Henn (CSO): sales, quality management and product engineering

core, the SOLARWORLD brand represents one thing: real value. Under the banner of a new international logo, from now on we will target customers around the world with the message “SOLARWORLD – REAL VALUE.”

Global solar markets are set for renewed growth – and with clear positioning, we can share in this growth. We have set ourselves some ambitious targets. This year, we aim to increase shipments by at least 40 percent. Revenue should exceed € 680 million. In 2016, we want to break the billion-euro mark.

I am aware that the solar industry and our company are still facing a high level of risk. Once again, government policy in Germany is causing uncertainty in 2014. We are actively monitoring developments and will take counter-measures wherever necessary and possible. But there are great opportunities too, so let's boldly and energetically seize them. Thank you for your support.

Bonn, March 26, 2014

Yours

**Dr.-Ing. E. h. Frank Asbeck**  
CEO of SOLARWORLD AG



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## PROVEN QUALITY

At SOLARWORLD AG, we guarantee maximum quality from raw material to complete solar system. That's because we produce all key components ourselves. SOLARWORLD quality means that everything at SOLARWORLD comes from a single source – from wafers and solar cells to the finished solar module and tailor-made solar power kits.

This comprehensive expertise – along with our uncompromising use of the best materials from selected suppliers – provides the key to our high quality standards.

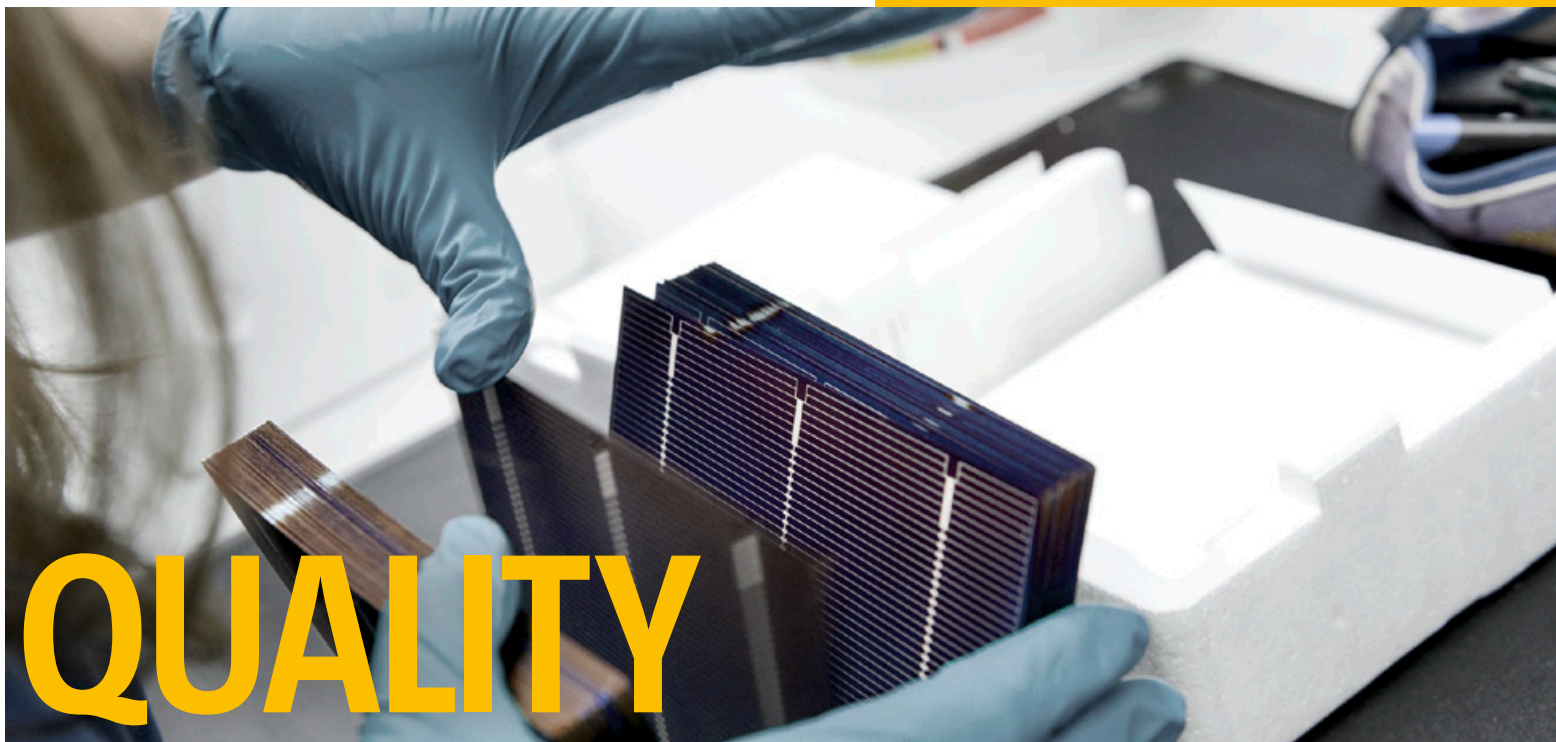
At SOLARWORLD, we always go that extra step. In our panel testing laboratories, products and materials undergo meticulous and detailed inspections that exceed international standards.

A thorough quality test is conducted after every single manufacturing stage and at all levels of production. As a result, our module defect rate is well below one percent. And even after more than 35 years of manufacturing solar in the Americas and Europe, we've never had a product recall.

Our products are subject to regular evaluation and certification in independent tests. Time and again, we achieve the best scores in tests such as the PV+Test. More information is provided on our website: [www.solarworld.de/en](http://www.solarworld.de/en)

Our proven quality guarantees our customers decades of high performance and the security that comes with investing in a reliable product.

**IN SHORT: FIRST-CLASS QUALITY –  
THE BEST BUY IN THE LONG-RUN.**



# FULFILLING CUSTOMERS' NEEDS WITH LEADING SOLUTIONS

High-quality components perfectly engineered and esthetically finished – SOLARWORLD provides sophisticated, long-lasting system solutions. Based on our many years of experience and our established quality processes, we set the highest standards in complete solar solutions for homes, businesses, governments and utilities.

Solar World's customers and partners benefit from our progressive system innovations. Around the world, we meet our customers' desire for the greatest possible reliability, long-term performance and esthetic integration into architectural environments. Because they blend into the roof so unobtrusively, our solar systems have even been used to increase the energy performance of protected historical buildings.

SOLARWORLD customers save time and money because our turnkey system solutions mean less planning and assembly work and low installation costs. Our system offering includes free system documentation and insurance (in Germany).

Always looking ahead, SOLARWORLD offers storage solutions and interfaces that allow for future system expansion. At the same time, our control units and apps make monitoring the system easy and fun today. —

**IN SHORT: ALL INCLUSIVE – ESTHETIC, LONG-LASTING AND DESIGNED FOR THE FUTURE.**

# SOLUTIONS







# PARTNER

**IN SHORT: BASIC TRUST – IN THE LONG TERM AND IN PARTNERSHIP.**

## A RESPONSIBLE PARTNER YOU CAN TRUST WORLDWIDE

Over many years, we have worked to earn a high level of trust from our partners and customers. This strong foundation – based on our reputation for quality and efficiency – has never faltered, even during the international solar market crisis. Time and again, our customers confirm their basic faith in our products and services.

SOLARWORLD nurtures trusting customer relationships and is one of the best-known solar brands in Germany. This trust is founded on long-term partnerships with wholesalers and – thanks to our extensive authorized installer network – close relationships with local installers.

In fact, in the Americas, where we've been producing solar systems since 1975, some of our core installers and distributors have stood by SOLARWORLD for more than three decades.

Our yearly customer satisfaction surveys are an active gauge of trust, and at the same time they are an incentive for us to ensure that we are perceived as a reliable partner. In Germany, we received the "Germany's Customer Champion" award in 2013.

We are dependable, transparent and respectful in dealings with our customers, partners and employees. —



# SUSTAINABILITY



**IN SHORT: WE MAKE A DIFFERENCE –  
SOCIALY AND ECOLOGICALLY.**

## AUTHENTIC FOCUS ON SUSTAINABILITY

Sustainability and SOLARWORLD have been inextricably linked since the company's founding.

Sustainability is at the core of our forward-looking corporate vision.

For us, sustainability means that the company and all employees take a clear stance on environmental and social issues. We manufacture sustainably at all levels, and we practice sustainability as an authentic part of our corporate culture.

SOLARWORLD measures its quality against the highest sustainability standards. Our products are ecological, safe and socially correct. Every year, we publish reliable figures and clear guidance in our sustainability reporting, which is transparent and accessible online at any time.

SOLARWORLD AG is committed to environmentally friendly electricity production around the world. With SOLAR2WORLD, we make a valuable contribution to regional development in poorer regions of the globe.

A host of awards – including the German Sustainability Award, Sector Leader in the Carbon Disclosure Project plus the Green Brand and Change Maker Awards – repeatedly affirm that we are following the right path. —

# REAL VALUE



## HIGH-CLASS WORKMANSHIP IS THE BEST GUARANTEE OF LONG-TERM SECURITY

The year 2013 was challenging for SOLARWORLD AG at all levels, in all areas.

Especially during the months of financial crisis and painful restructuring, we kept working in a solution-oriented way, analyzing the market down to the tiniest detail, thoroughly re-examining our own foundations, scrutinizing all internal structures and processes, and making things more efficient wherever necessary. Throughout, we asked:

- How can we continue to thrive in the marketplace?
- What do our products represent, compared to others around the world?
- What lies at the core of our work?
- How can we make the SOLARWORLD brand even stronger internationally?

### **The answer is clear:**

We need to remember our core competencies, stand firmly by our own values, and boldly, independently pursue our shared vision. This is what has always defined us:

### **SOLARWORLD IS REAL.**

**This is what the SOLARWORLD brand stands for.**

### **REAL VALUE**

SOLARWORLD's newly formulated strategic brand essence is not some one-dimensional advertising concept that was drawn up on a flip board.

Our brand is much more: It is an attitude, a self-imposed quality standard by which we measure our work, our processes and all products that come to market. We must live up to the continuing high level of trust placed in SOLARWORLD, its products and services, and its values. Every day, every time.



**REAL VALUE** places the emphasis on our strong foundations, which have carried us through the period of international crisis in the solar industry.

Free to focus on what we stand for, we are now building SOLARWORLD on the distinct, authentic and lasting values that have emerged from independent tests, surveys, internal assessments and analyses.

■ **PROVEN QUALITY**

■ **FULFILLING CUSTOMERS' NEEDS WITH LEADING SOLUTIONS**

■ **A RESPONSIBLE PARTNER YOU CAN TRUST WORLDWIDE**

■ **AUTHENTIC FOCUS ON SUSTAINABILITY**

These four **REAL VALUES** are demonstrably embodied in our structures and processes, reflected in our production standards and firmly rooted in our corporate ethos. This unique group of values clearly and powerfully sets us apart from our competitors. Only SOLARWORLD can claim this unique combination of **REAL VALUES** as its own.

High-class workmanship is the best guarantee for creating real value. Hence, **REAL VALUE** has become SOLARWORLD's international claim, inseparably linked to our company's name and new logo.

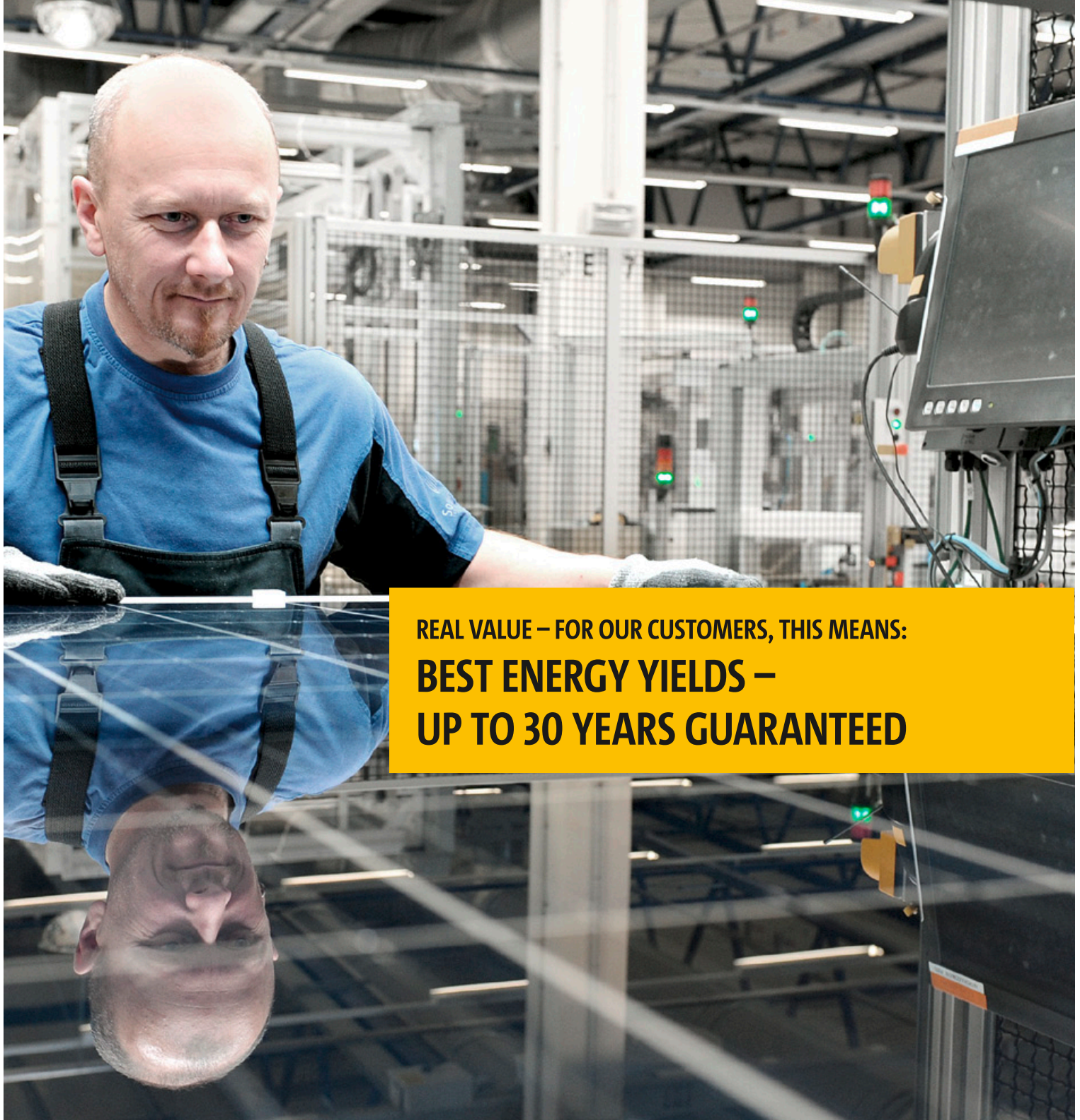
How does this benefit customers who choose SOLARWORLD products? It's as simple as it sounds:

**QUALITY MADE BY SOLARWORLD –  
THE BEST BUY IN THE LONG RUN.**



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# #1: KEY FIGURES AND FACTS



REAL VALUE – FOR OUR CUSTOMERS, THIS MEANS:

**BEST ENERGY YIELDS –  
UP TO 30 YEARS GUARANTEED**

# #1 KEY FIGURES AND FACTS

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**018**    **REVENUE BY REGION**

**019**    **DEVELOPMENT OF KEY FIGURES IN FIVE-YEAR COMPARISON**

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**022**    *Innovation*



# SOLARWORLD 2013

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## 01 SELECTED INDICATORS // IN K€

Financial indicators	2013	2012	Change
Revenue	455,821	606,394	-150,573
Foreign quota in % of revenue	70.6 %	50.4 %	20.1 %-points
EBITDA	-146,787	-202,760	55,973
EBIT	-188,664	-620,324	431,660
EBIT in % of revenue	-41.4 %	-102.3 %	60.9 %-points
Capital employed (key date)*	403,922	511,458	-107,536
Consolidated net result	-228,307	-606,291	377,984
Consolidated net result in % of revenue	-50.1 %	-100.0 %	49.9 %-points
Total assets	931,835	1,192,230	-260,395
Equity	-243,084	-11,409	-231,675
Equity ratio (in %)	-26.1 %	-1.0 %	-25.1 %-points
Cash flow from operating activities	17,324	-47,241	64,565
Net indebtedness**	858,475	780,672	77,803
Investments in intangible assets and property, plant and equipment	22,757	46,452	-23,695
<b>Employee indicators</b>	<b>2013</b>	<b>2012</b>	<b>Change</b>
Employee (key date)	2,073	2,355	-282
of which trainees (key date)	50	73	-23
Personnel costs ratio (in %)	30.8 %	23.9 %	6.9 %-points
Revenue per employee (in k€)	220	257	-38
EBIT per employee (in k€)	-91	-263	172

\* Intangible assets and property, plant and equipment less deferred investments subsidies plus net current assets except for current net liquidity

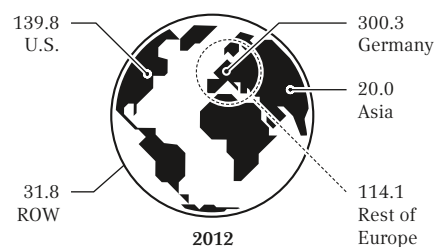
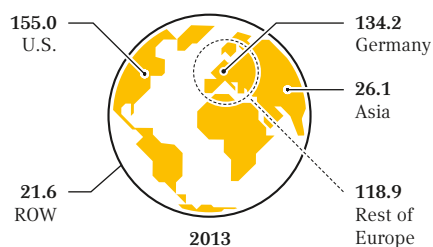
\*\* Financial liabilities less liquid funds and other financial assets

# SOLARWORLD 2013

## 02 QUARTERLY COMPARISON OF THE CONSOLIDATED INCOME STATEMENTS // IN K€

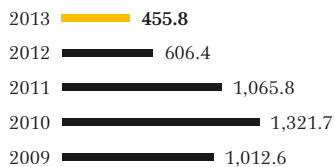
	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q4 2012	Change
Revenue	112,202	88,967	144,455	110,197	137,494	-27,297
Inventory change in products	-47,707	2,240	-43,132	-3,326	-55,659	52,333
Own work capitalized	55	17	436	34	10	24
Other operating income	16,257	14,117	9,017	19,896	45,772	-25,876
Cost of materials	-51,169	-64,099	-78,925	-78,473	-128,373	49,900
Personnel expenses	-30,279	-27,767	-27,588	-26,732	-28,871	2,139
Amortization and depreciation	-10,306	-11,422	-10,186	-9,963	-351,175	341,212
Other operating charges	-21,376	-28,759	-30,028	-105,317	-49,943	-55,374
<b>Result of operations</b>	<b>-32,323</b>	<b>-26,706</b>	<b>-35,951</b>	<b>-93,684</b>	<b>-430,745</b>	<b>337,061</b>
Financial result	-16,598	-18,673	-19,614	-21,855	-20,018	-1,837
<b>Pre-income tax result</b>	<b>-48,921</b>	<b>-45,379</b>	<b>-55,565</b>	<b>-115,539</b>	<b>-450,763</b>	<b>335,224</b>
Taxes on income	4,806	18,132	-8,069	22,228	74,465	-52,237
<b>Consolidated net result</b>	<b>-44,115</b>	<b>-27,247</b>	<b>-63,634</b>	<b>-93,311</b>	<b>-376,298</b>	<b>282,987</b>

## 03 REVENUE BY REGION // IN M€

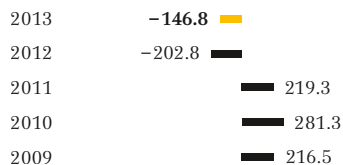


## 04 DEVELOPMENT OF KEY FIGURES IN FIVE-YEAR COMPARISON

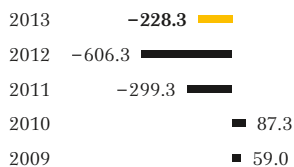
## Revenues (in m€)



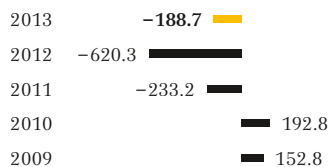
## EBITDA (in m€)



## Group profit/loss (in m€)



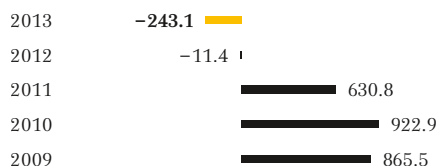
## EBIT (in m€)



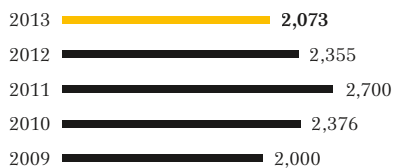
## Investments excl. financial investments (in m€)



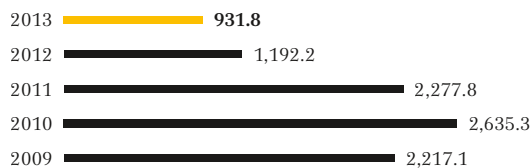
## Equity (in m€)



## Employees



## Balance sheet total (in m€)





# SUSTAINABILITY PERFORMANCE

## 05 ENVIRONMENTAL PROTECTION

NAME AND DESCRIPTION	2012	2013	2014
<b>Energy:</b> Total energy consumption (in primary GJ, calculated, preliminary)	3,944,161	2,595,288	↑
<b>Water:</b> Total water take-out (in m <sup>3</sup> , estimated, preliminary)	1,260,735	1,168,417	↑
<b>Water:</b> Waste water discharge (in m <sup>3</sup> , estimated, preliminary)	997,022	1,012,111	↑
<b>Emissions:</b> Total GHG emissions (in tCO <sub>2eq</sub> , calculated, preliminary)	139.372	95.700	↑
<b>Emissions:</b> NO <sub>x</sub> , SO <sub>x</sub> and other air emissions (in t, estimated, preliminary)	38	42	↑
<b>Waste:</b> total production waste (in t, estimated, preliminary)	14,811	10,013	↑
<b>Environmental compatibility:</b> Share of ISO 14001 certified locations (weighted by average capacity)	100 %	100 %	↔
Since 2014 without sales sites in Rest of the World (ROW)			
<b>Packaging:</b> Material (in t, calculated, preliminary)	2,673.8	2,536.5	↑
<b>Environmental violations:</b> sanctions due to environmental violations	0	0	0

## 06 CUSTOMERS AND PRODUCT RESPONSIBILITY

NAME AND DESCRIPTION	2012	2013	2014
<b>Customer satisfaction with SOLARWORLD:</b> Share of satisfied customers among all respondents (measured, final)	93.8 %	93.1 %	↔
Aggregate number (trade: wholesalers, authorized installers)			
<b>Earnings from new products</b> with life cycles of less than 12 months (estimated, final)	55 %	60 %	↔
<b>Health and safety aspects of the products:</b> Share of product recalls for safety or health reasons in total number of products sold	0	0	0
<b>Customer loyalty:</b> Share of new customers (2012: estimated, final; 2013: calculated, final)	64 %	39 % (direct customers) 35 % (authorized installers)	↔
The groupwide indicator relates to module and system customers. As of 2013, we differentiate between direct customers and authorized installers.			
<b>Customer loyalty:</b> Market share (total, calculated, final)	2 %	2 %	↑
<b>Sanctions due to product and service conditions</b>	0	0	0

## 07 EMPLOYEES

NAME AND DESCRIPTION	2012	2013	2014
<b>Employment type:</b> share of temporary employees	8 %	14 %	↔
<b>Attrition rate:</b> share of employees leaving the company per year	16 %	15 %	↓
<b>Collective bargaining agreements:</b> share of employees covered by collective bargaining agreements	50 %	54 %	↑
<b>Training and professional development/qualification:</b> average training expenditure per employee (in €)	310.90	200.17	↑
<b>Age structure of the workforce</b> (persons)	≤30: 23 % 30–40: 33 % 40–50: 28 % >50: 17 %	< 30: 19 % 30–40: 32 % 40–50: 29 % > 50: 21 %	↔
<b>Absenteeism:</b> total missed worktime due to sick leave/total planned working time in the calendar year	3.9 %	4.4 %	↓
<b>Accident rate</b> (per 1000 employees, incl. temporary workers)	12.1	12.4	↓
<b>Relocation of work places due to restructuring:</b> total costs of relocation (in k€) including compensation payments, severance pay, outplacement, recruitments, training, consulting	125	112	↔
<b>Diversity:</b> share of women in total workforce	24 %	23 %	↔
<b>Diversity:</b> share of women in management positions (without Management Board and managing directors)	17 %	19 %	↔
<b>Compensation:</b> total amount of all bonus payments (in m€)	19	12	↑
We do not grant stock options.			
<b>Discrimination:</b> number of documented incidents	0	0	0

## 08 SUPPLY CHAIN

NAME AND DESCRIPTION	2012	2013	2014
<b>Certification:</b> ISO 9001 certification of suppliers (measured at 84 % (2012: 85 %) of the direct material suppliers, final)	87.0 %	95.5 %	↔
<b>Certification:</b> ISO 14001 certification of suppliers (measured at 84 % (2012: 85 %) of the direct material suppliers, final)	42.4 %	78.8 %	↔
<b>Production loss:</b> difference between planned and actual production due to material bottlenecks (in %)	0	0	↔
<b>Production loss:</b> monetary effects of production loss due to material bottlenecks (in €)	0	0	↔

# SUSTAINABILITY PERFORMANCE

## 09 COMPLIANCE AND SOCIETY

NAME AND DESCRIPTION	2012	2013	2014
<b>Effects of subsidies:</b> Share of business activity in markets with feed-in tariffs or regulated pricing	100 %	100 %	↔
The sales share in markets without feed-in tariff or regulated pricing is still below 1 %. // Benchmarks: heavily subsidised markets such as nuclear energy, German coal, EU agricultural market			
<b>Governmental financial assistance:</b> Investment grants and research grants (in k€)	32,769	7,215	↔
<b>Donations to political parties (in k€)</b>	0	0	0
<b>Other donations (in k€)</b>	375	101	↔
<b>Regional development:</b> SOLAR2WORLD project scope (in kWp)	78	27	↑
<b>Litigation risks:</b> Expenditures and fines for lawsuits and court cases regarding anti-competitive behavior, Anti-Trust, monopoly behavior	3	0.4	↓
SOLARWORLD was involved in the trade litigation of the Coalition of American Solar Manufacturers in the U.S. as well as in the trade complaints of EU ProSun in the European Union and invested the indicated sum for that.			
<b>Corruption:</b> Share of business activity in regions with a corruption index (Transparency International) of less than 60	26 %	45 %	↑
<b>Ascertained corruption incidents</b>	0	0	0
<b>Sanctions for non-compliance with laws and regulations</b>	0	0	0
In early 2014, we received two fines from the German Federal Financial Supervisory Authority (BaFin) due to alleged infringement of capital market law disclosure obligations, both in the amount of 25,000 euros.			

## 10 INNOVATION

NAME AND DESCRIPTION	2012	2013	2014
<b>Innovation:</b> Total R&D expenditures (in m€)	49.1	26.5	↔
<b>Innovation:</b> Total investment in research on ESG relevant aspects	100 %	100 %	100 %
Our entire business (solar energy) is ESG relevant.			
<b>Number of inventions filed in the last 12 months</b>	71	59	↑

These and further sustainability performance indicators can be found at [Sustainability in Detail](#) • p. N001ff. //



# #2: GROUP MANAGEMENT REPORT

REAL VALUE – FOR OUR CUSTOMERS, THIS MEANS:

**GLASS-GLASS MODULE –  
VIRTUALLY INDESTRUCTIBLE**

# #2 GROUP MANAGEMENT REPORT

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# GENERAL INFORMATION ABOUT THE GROUP

## BUSINESS MODEL

### PRODUCTS AND SERVICES – POSITIONING

SOLARWORLD supplies customers around the world with solar power solutions of all sizes. Together with our subsidiary SOLARPARC AG, we also offer investors development and operation services for large-scale solar power plants. In addition, SOLARWORLD supplies wafers and cells to customers in the international solar industry.

The group has an international distribution network that incorporates the specialist and wholesale trade, together with installers, as intermediaries between us and our private and commercial end customers.

SOLARWORLD concentrates exclusively on crystalline solar power technology as this has held its ground in the renewable energies market, proving to be a particularly efficient and environmentally friendly way of generating power.

SOLARWORLD emphasizes high standards of corporate responsibility at its sites and is committed to resource-efficient, energy-saving processes in all areas of the company. We count on the high quality and tangible value proposition of the SOLARWORLD brand to set us apart from the competition. An integrated quality and innovation process across all stages of production provides the basis for this. Our complete solutions for solar energy generation are our company's market-differentiating benefit.

### GROUP STRUCTURE AND SEGMENTS

**MOVING FURTHER UP THE SOLAR VALUE CHAIN.** SOLARWORLD's core business is the production of solar modules and international sales of modules and complete solar power solutions. Via its subsidiary SOLARPARC AG, the company develops, sells and operates large-scale solar projects. Its production facilities cover the entire solar manufacturing chain from wafers to cells and modules. SOLARWORLD also conducts its own research and development activities.

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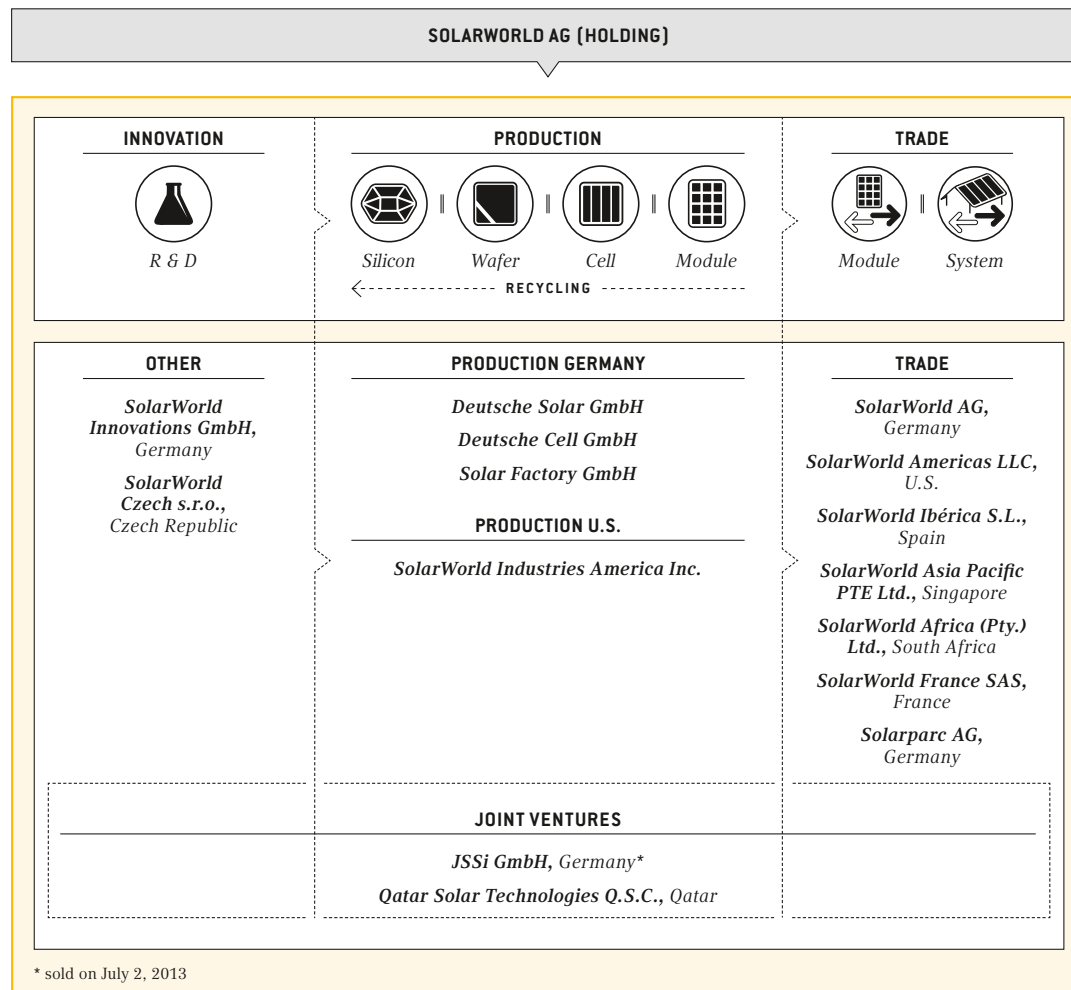
**SOLARWORLD AG OPERATES AS A HOLDING COMPANY.** SOLARWORLD AG is the parent company of the SOLARWORLD group. It emerged from the sole proprietorship, Frank H. Asbeck, Ingenieurbüro für Industrieanlagen (Engineering Office for Industrial Plants), which was established in 1988. On March 26, 1999, SOLARWORLD AG was registered in the commercial register of the local court of Bonn with the registration number HRB 8319, as a German Stock Corporation organized under German laws. As the holding company, SOLARWORLD AG performs central group functions such as group controlling, group accounting, finance, investor relations and communication. The Management Board of SOLARWORLD AG is responsible for group management. The corporate audit and sustainability management report directly to the board as staff departments.

**GLOBAL ORIENTATION OF KEY STRATEGIC AREAS STRENGTHENED.** In addition to its role as a holding company, SOLARWORLD AG is home to the group's international distribution center. As the parent company, SOLARWORLD AG also develops and directs global strategies and activities in key areas such as the global supply chain, human resources, product management, logistics, production planning and IT, which are then implemented together with the subsidiaries at local level.

**SEGMENT STRUCTURE RETAINED.** As in past years, SOLARWORLD's operational business was divided into four segments in 2013: "Production Germany", "Production U.S.", "Trade", and "Other". These provide the structure for our internal organization, reporting and management. The "Production Germany" and "Production U.S." segments each comprise the regionally coherent and fully integrated production activities. The "Trade" segment covers international sales of modules, complete kits and large-scale plants. It also includes proceeds generated by our subsidiary SOLARPARC AG from electricity sales, project planning, and the sale and operation of wind farms and solar power stations. Business activities where the financial impact is not or is no longer crucial to the assets, financial position and earnings of the group are included in the "Other" segment.

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## ⑪ SEGMENT STRUCTURE AND STAGES OF THE VALUE CHAIN



**REDUCTION IN NUMBER OF COMPANIES.** On the cut-off date, December 31, 2013, the SOLARWORLD group comprised a total of 52 (December 31, 2012: 55) companies. These included 28 subsidiaries and associated companies of SOLARPARC AG.

In 2013, SOLARWORLD sold two solar projects and the project companies SEPV8 LLC and SEPV9 LLC in charge of these projects to an external investor. Furthermore, SOLARWORLD sold SOLARPARC DIAMANT GMBH & Co. KG as well as its stake of 49 percent in the joint venture JSSi GMBH.

In November 2013, SOLARWORLD AG formed the wholly owned subsidiary SOLARWORLD INDUSTRIES-THÜRINGEN GMBH, which took over cell and module production facilities along with other assets from Bosch Solar Energy AG on March 12, 2014. (24) SolarWorld group structure as of December 31, 2013  
• p. 156//

## STRATEGY AND ACTION

### NECESSARY STEPS TO RESTRUCTURE THE GROUP

For SOLARWORLD, 2013 was a year of restructuring. The solar industry crisis made financial restructuring measures necessary for our company. SOLARWORLD successfully completed this complex process on schedule, one year later, on February 24, 2014. (25) Financial restructuring successfully completed • p. 080//

Parallel to the financial restructuring, the SOLARWORLD group pressed ahead with an operational restructuring program in 2013. The aim of this program is to cut costs in all key fixed and variable cost items and to boost efficiency in production and shipments. In addition, we identified non-operating assets that we subsequently sold or will sell with an effect on liquidity. Specifically, the program included the following measures:

#### PURCHASING OPTIMIZATION MEASURES:

- Silicon purchasing: Existing long-term silicon supply contracts, which were concluded owing to supply bottleneck across the industry in the past, put pressure on the earnings of SOLARWORLD AG since their terms are no longer in line with market conditions and the current business volume. So in 2013, the company reduced its large silicon inventories. From 2014, it plans only to purchase silicon according to its requirements and at market prices.
  - Global material group management/global sourcing: We reduced purchase prices for materials and components through price renegotiation, a global second source strategy, and by changing suppliers. We implemented these measures for production materials such as films, glass and pastes, as well as for components such as system, racking technology and inverters, and for indirect materials.
- (26) Global supply chain – procurement • p. 056//

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**PRODUCTION OPTIMIZATION MEASURES:**

We can further reduce manufacturing costs by continuously improving processes, increasing throughput, reducing specific consumption of raw materials and supplies, recycling consumables, and increasing production yields.

**HR MEASURES:**

- Staffing level adjustment: Owing to low production capacity utilization, excess personnel capacities at our production sites were reduced. In Germany, at the beginning of 2013, we implemented reduced working hours in the production and logistics departments. We trimmed our sales and administrative expenses by making staff cutbacks in administration, marketing, internal sales, purchasing and logistics. At the time of producing this Annual Group Report, all of these measures had been largely implemented and are now helping to reduce costs accordingly. ➞ Employees • p. 066 //
- Merging and integrating group companies: Company mergers will eliminate redundant administrative structures and support process optimization to mobilize additional cost-cutting potential.

**MEASURES TO REDUCE MARKETING COSTS:**

- Optimize TV and media presence.
- Focus activities on selected customer target groups.
- Less print media and increased use of online marketing. ➞ Brand and marketing • p. 051 //

**LOGISTICS OPTIMIZATION MEASURES:**

- Boost staff productivity: Human resource allocation in group logistics was reduced through manpower planning optimization, new IT-based logistics solutions and continuous process improvement.
- Consolidation of external warehouses: Warehouse consolidation and direct transportation enabled the closure of external shippers' warehouses.
- Cargo optimization: Optimized use of cargo space achieved a reduction in transportation costs.

**SELL OF OPERATING ASSETS:**

- Sell an unused office building.
  - Sell machinery and equipment.
-

## STRATEGIC ORIENTATION OF THE GROUP

In addition to the restructuring measures to safeguard the viability of the group, SOLARWORLD AG pursued its long-term corporate strategy in 2013. The goal is to make SOLARWORLD permanently profitable again. Providing customer-oriented solar power solutions we want to offer a real added value and take a technologically leading position in the international solar markets.

Consistent customer orientation has become a crucial success factor in recent years, as solar markets have transformed from production-driven seller's markets into fiercely competitive buyer's markets. We see ourselves as a leading supplier of solutions which enable both private and commercial users to generate and use clean, cost-efficient energy. We want to serve customers with a tangible quality promise. Quality workmanship is the best guarantee of long-term reliability and consistent yields from a solar power installation, and therefore makes the most cost-effective purchase in the long run. This claim clearly differentiates SOLARWORLD from its competitors.

In the future, particularly in our core markets, we aim to continue to position ourselves as a provider of complete solar power solutions that precisely meet our customers' expectations.

Based on customer-oriented system solutions and services of undoubtedly outstanding quality, we intend to continue developing SOLARWORLD as a global brand.

## KEY PROGRAMS FOR STRATEGY IMPLEMENTATION

Our employees are essential for the successful implementation of our strategy at all levels in the group. We have identified five key programs which are the focus of a group-wide change program in 2013. ➞ Change workshops started • p. 067 //

### CUSTOMER FOCUS

Customer needs should run through all elements of our business and processes.

SOLARWORLD meets customers' expectations and needs by proven quality, leading solutions, trustworthy partnership and its authentic focus on sustainability. Product differentiation and comprehensive customer service create added value for the customer ➞ Real value • p. 012 //

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## PERFORMANCE AND INNOVATION

SOLARWORLD secures its market leadership in module performance. The acquisition of cell and module production facilities from Bosch Solar Energy AG strengthens this position. SOLARWORLD aims to be a trend-setter in solar power solutions. ➞ [Innovation report](#) • p. 058//

## SALES GROWTH

SOLARWORLD intends to increase shipments both in its core markets such as Germany and the United States, and in new international markets. In addition, the project business of SOLARWORLD's subsidiary SOLARPARC AG is set to be expanded and internationalized. ➞ [Trade](#) • p. 049//

## COST EFFICIENCY AND PROFITABILITY

SOLARWORLD is cutting fixed costs in all organizational units, at all stages of the value chain and at all locations. In doing so, we optimize cash flow and contribute to turn EBITDA positive again so that profits can be generated sustainably. ➞ [Forecast report](#) • p. 110//

## DEVELOPMENT OF THE ORGANIZATION

SOLARWORLD's international organizational units will grow closer together and the group as a whole will merge to form one global entity. The organizational structure of SOLARWORLD will be made leaner.

## GROUP STRATEGIC FINANCING

Group financing is handled centrally by SOLARWORLD AG, which also acts as a holding company. Controlled directly by the Management Board, SOLARWORLD AG is responsible for group liquidity planning and controlling, and for raising capital. ④① [Five-year comparison of financial position](#) • p. 077//

④③ [Five-year comparison of assets position](#) • p. 079//

As the wave of consolidation has advanced within the solar industry, a large number of lenders have pulled out of financing the solar industry and other related sectors. The high risk situation among solar companies and significantly tighter lending rules for banks making risk investments have made banks more cautious. As a result, there are currently difficulties in raising capital. The same applies to borrowing on the capital market by issuing corporate bonds and similar instruments.

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Given this difficult financing situation as well as the impaired operative business in the last years, SOLARWORLD AG started the restructuring of existing financial liabilities in January 2013 to adjust these liabilities in line with the company's earning power. In the context of negotiations with creditors of assignable loans (Schuldscheine) and noteholders of two bonds, a restructuring concept was passed in early August 2013. This concept has made a reduction of our financial liabilities by 57 percent possible through a debt-to-equity swap. The following financing measures were completed by February 24, 2014:

- Simplified capital reduction at the ratio 150:1. On January 20, 2014, the capital stock of the group was reduced from € 111,720,000.00 to € 744,800.00.
- Subsequent capital increase with existing shareholders' subscription rights ruled out. Capital stock was increased from € 744,800.00 to € 14,896,000.00 on February 24, 2014.
- New shares were issued against contributions in kind exclusively to creditors of SOLARWORLD AG. As a result of the contributions in kind, the financial liabilities of SOLARWORLD AG were reduced by 57 percent or € 570 million to € 427 million.
- In exchange for transferring their notes, noteholders received purchasing rights for new shares and new bonds. In situations where noteholders did not exercise their purchasing rights, the Settlement Agent in charge monetized the respective shares and notes from the new bonds at the best.
- The existing assignable loans (Schuldscheine) and a loan originally provided by the European Investment Bank will be continued under new conditions; the new loan period is 5 years.
- In exchange for the existing bonds, two new bonds with reduced nominal value were issued. These bonds as well as the new loan are secured comprehensively; all creditors are entitled to these securities pro rata and pari passu, i. e. ranking equally.

Moreover, SOLARWORLD has found a strategic investor, Qatar Solar Technologies, who has provided a loan of € 50 million to the group.

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## CORPORATE MANAGEMENT AND CONTROL

033

**STRATEGIC GROUP MANAGEMENT.** The Management Board determines corporate objectives from SOLARWORLD's strategy and re-assesses these objectives annually. They are broken down into divisional targets so that they can be implemented by employees at all levels. The Management Board members maintain constant dialog with each other. In addition, every month they convene for a regular meeting at which they talk about the business situation, discuss opportunities and risks, review target achievement and adjust targets if necessary. The Management Board introduces necessary measures in close consultation with the management bodies of group companies. In addition, members of the Board and managing directors of the subsidiaries get together several times a year. At these meetings, the respective regional and market-specific circumstances are taken into account, and further short to medium-term goals and measures are decided on.

Revenue, EBITDA and EBIT are the primary financial control indicators used by the SOLARWORLD group. Group controlling continuously monitors these and other department-specific indicators in a target/actual comparison, and produces a monthly report for the Management Board. This report analyzes the business development in the different sales regions of the group. It also points out the reasons for gaps in a target/actual comparison.

Owing to the consolidation phase in the solar industry and the necessary financial restructuring process within the SOLARWORLD group, strict control of our liquidity situation has assumed even greater importance. In 2013, we stepped up our cash flow planning and monitoring activities. Both now enter into the monthly reports for the Management Board.

The Management Board receives a weekly summary of shipments, revenue and stock levels in the "Trade" segment. In addition, on a monthly basis, more detailed analyses and target/actual comparisons of shipments and revenue by product groups, regions and customers as well as of sales costs are produced in standardized form and reported to the Management Board. As a result, we identify trends in the price and quantity structure at an early stage, and rapidly introduce necessary measures.

It is also important, however, to analyze the development of production costs per unit and watt, as well as the production volume including an account of individual cost drivers such as material usage and labor intensity. In addition, group controlling monitors the implementation of operative restructuring measures and reports gaps in the target/actual comparison to the Management Board.

Non-financial indicators such as productivity figures, customer satisfaction, employee recruitment and retention, and resource consumption supplement the financial control indicators.

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To be able to assess customer satisfaction and forecast market trends, we rely in part on information obtained from dialog with our customers.

**INTERNAL CONTROL SYSTEM.** The internal control system (ICS) in the SOLARWORLD group includes various mechanisms and has a decentralized structure. At the same time, group controlling, group accounting and the corporate audit perform oversight control functions. Group controlling is responsible for monthly reporting of the segment-based financial indicators and for the risk management system. Financial circumstances are also taken into account here. Group accounting ensures that accounting is uniform and complies with legal requirements and standards as well as the group's internal guidelines and generally accepted accounting principles. ➞ *Internal control and risk management system in relation to the group accounting process • p. 088*// Corporate audit pursues an integrated, risk-oriented and systematic approach in its audits. One of its aims is to assess the reliability of the risk management system and internal control system. Corporate audit examines operational processes in respect of regularity, security, safety and efficiency criteria and compliance with legal requirements and company policies. As an instrument of the Management Board, the corporate audit is organizationally and functionally independent of the bodies it audits, thus enabling the proper performance of its duties. Corporate audit can autonomously determine the scope of the audit and reporting. Within operative restructuring measures begun in 2012 and 2013, corporate audit supports the implementation of measures that had resulted from previous audits. For example, corporate audit has advised the company on the improvement of logistics.

**COMPLIANCE MANAGEMENT SYSTEM.** We enhanced the group's compliance management system in 2013. We appointed a Local Compliance Officer for each SOLARWORLD site, and a Global Compliance Officer for the group as a whole. SOLARWORLD's Compliance Committee acts as an interdepartmental supervisory body that advises on development of the compliance management system and on specific incidents in the company, and approves necessary measures. It meets on a quarterly basis with additional meetings if necessary. Operated by a European service provider, the SpeakUP system enables anonymized notification of potential compliance-relevant incidents to the compliance committee by telephone or via an Internet portal. Furthermore, this system enables dialog – while safeguarding anonymity – between the person providing the information and the Global Compliance Officer. This allows compliance notifications to be dealt with more effectively.

We seek to prevent non-compliance by developing a heightened awareness of potential compliance risks and taking suitable precautions. Furthermore, we aim to rapidly identify specific incidents, deal with them professionally, and in turn introduce improvement measures to prevent further incidents.

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In 2012, the compliance committee conducted a risk assessment for the group, which was used to identify the main risk areas. In the departments concerned, awareness-raising training was implemented to address these issues. Over the course of 2013, the trained executives passed on their knowledge to their teams. Another risk analysis was performed during the same year and completed at the beginning of 2014. Priorities for 2014 are defined on this basis.

In February 2013, the new version of the Code of Conduct was communicated to all employees. It aims to provide guidance to employees and help them ensure their conduct is in line with key values such as integrity, sustainability and social responsibility. In 2013, we released supplements to the Code of Conduct that concern conduct with contractual partners as well as the comparatively complex issues of gifts and invitations. Moreover, we amended and standardized commission contracts for our group.

## DISCLOSURE RELEVANT FOR TAKEOVERS

The information pursuant to § 315 (4) No. 1 and No. 3 HGB (the composition of subscribed capital and participation in capital) can be obtained from the following paragraphs.

The provisions concerning the appointment and dismissal of Management Board members as well as amendments to the Articles of Association (§ 315 (4) No. 6 HGB) result from the German Stock Corporation Act. Regarding Management Board powers (§ 315 (4) No. 7 HGB), reference is made to the Stock Corporation Act. In addition, the following applies:

At the Annual General Meeting (AGM) on May 20, 2010, the authorizations to increase the capital stock approved during previous AGMs were canceled. At the same time, the Management Board was authorized with the approval of the Supervisory Board to increase capital stock once or several times to a total of up to € 55,860,000.00 for a period of five years, i. e. until May 20, 2015, by issuing new, no-par bearer shares or registered shares in exchange for cash contributions or contributions in kind.

On August 7, 2013, the extraordinary shareholders' meeting of SOLARWORLD AG passed the cancellation of the authorized capital without replacement. The resolution of the extraordinary shareholders' meeting was entered in the commercial register on January 20, 2014. On the same day, the company's capital stock was reduced from € 111,720,000.00 to € 744,800.00. Subsequently, the capital stock was increased to € 14,896,000.00 by issuing 14,151,200 new shares. ➞ Financial restructuring successfully completed • p. 080//

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As of December 31, 2013, financial liabilities amounting to converted € 931 (2012: 931) million existed for which creditors can demand early repayment in the event of a change of control (§ 315 (4) No. 8 HGB). A change of control shall be deemed to occur if and when one party (with the exception of Dr.-Ing. E.h. Frank Asbeck, members of his family or companies controlled by any of the aforementioned parties) directly or indirectly holds more than 50 percent of the voting rights concerning the shares issued or acquires the possibility to nominate or elect the majority of Supervisory Board members, or to cause such a nomination or election to take place.

In February 2014, these financial liabilities were significantly reduced and restructured as part of the financial restructuring program. Following the restructuring of former liabilities and taking up new liabilities of € 50 million, financial liabilities amounting to € 417 million still exist, for which creditors can demand early repayment in the event of a change of control (§ 315 (4) No. 8 HGB). Under the new conditions, a change of control shall be deemed to occur if Qatar Solar S.P.C. and the current or future members of the Management Board together directly or indirectly hold a total of more than 49.9 percent of the issued shares, another person or a group of persons acting in concert other than those aforementioned directly or indirectly holds more than 30 percent of issued shares or all material assets of SOLARWORLD AG are sold to one person or a group of persons acting in concert. ➔ *Financial restructuring successfully completed • p. 080//*

With regard to § 315 (4) Nos. 2, 4, 5 and 9 HGB, no information is required.

## REMUNERATION OF THE MANAGEMENT BOARD AND THE SUPERVISORY BOARD

The remuneration system for the Management Board and the Supervisory Board is outlined in the ➔ *Remuneration report • p. 128//*. This report is part of the group management report.

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# BUSINESS REPORT 2013

037

## THE STOCK

**STRONG GROWTH IN STOCK MARKETS.** Global equity markets experienced strong growth in 2013, driven mainly by expansionary international monetary policy. This held out the prospect of longer-lasting low interest rates. The gradual stabilization of economic growth in the eurozone and increasingly solid economic data from the U.S. reinforced the positive trend. Against this macroeconomic background, the major indices saw substantial gains and reached new all-time highs. Geopolitical factors such as the escalating conflicts in Syria and Egypt, the government impasse in Italy, the Cypriot sovereign debt crisis and particularly the U.S. budget dispute brought only temporary declines in the markets.

The German stock index – the DAX – gained a total of around 24 percent in the 2013 financial year to close the year at 9,522 points. At the end of December 2013, it reached its high for the year – and a new all-time high – of 9,594 points. The TecDAX turned in an even stronger performance, gaining around 40 percent and advancing to a new all-time high of 1,169 points shortly before the end of the year. It closed at 1,166 points on December 30, 2013.

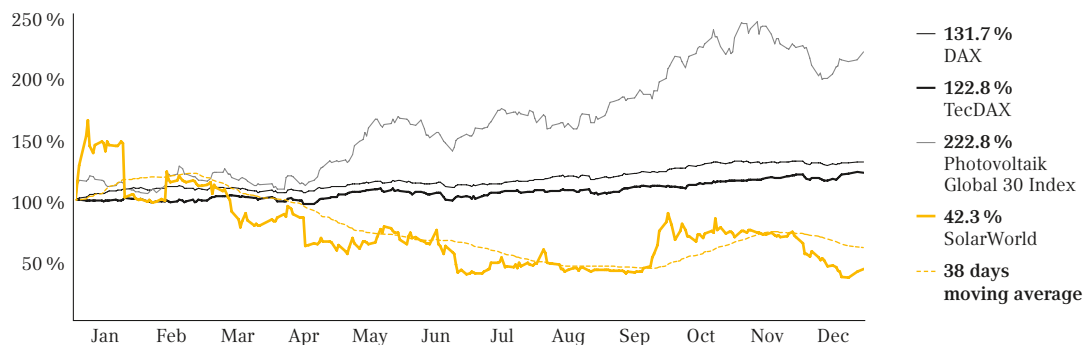
**SOLAR STOCKS GAIN – SOLARWORLD STOCK UNDER PRESSURE.** Despite the persistent industry crisis, solar stocks recorded gains on international markets. The Photovoltaik Global 30 Index advanced around 133 percent from the beginning of January to the end of the year. It came in at 30.28 points on December 31, 2013. The SOLARWORLD stock moved contrary to this trend. Negative reactions to the company's financial restructuring process had a substantial negative impact on its price performance in 2013. Consequently, the stock price fell around 58 percent between January 2, 2013 and December 31, 2013. The title reached its lowest point on June 27, 2013, at around € 0.37. The highest price during the year was € 1.88 on January 8, 2013.

**SOLARWORLD STOCK LEAVES TECDAX.** As at March 18, 2013, the share of SOLARWORLD AG was excluded from the selective index TecDAX. The working group for indices of Deutsche Börse (German Stock Exchange) explained its decision by the comparatively low market capitalization of the SOLARWORLD stock. It had been listed in the TecDAX since 2004. However, the SOLARWORLD stock still appears in numerous indices.

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## ⑫ THE SOLARWORLD STOCK IN COMPARISON

Source: Deutsche Börse, 2014



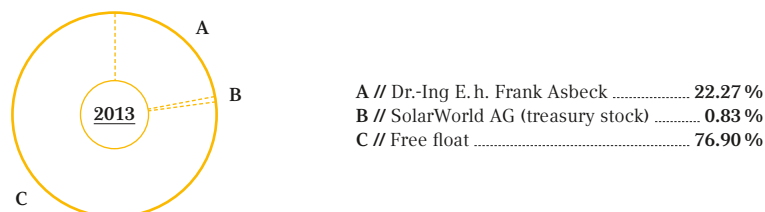
**CAPITAL STOCK OF SOLARWORLD AG UNCHANGED.** In 2013, SOLARWORLD AG's capital stock remained unchanged at € 111,720,000.00 and was divided into 111,720,000 no-par bearer shares with an imputed nominal value of € 1.00. In January and February 2014, the restructuring measures approved in August 2013 were implemented, as a result of which the capital stock changed as planned. ➞ [Financial restructuring successfully completed • p. 080//](#)

**CEO'S STOCK HOLDING REDUCED.** The shareholder structure of SOLARWORLD AG changed in the fourth quarter of 2013. In 2013, CEO Dr.-Ing. E.h. Frank Asbeck and his two related companies Eifelstrom GmbH and Solar Holding Beteiligungsgesellschaft mbH sold a total of 6,215,064 shares in SOLARWORLD AG via the stock exchange.

The company published notifications of these transactions as directors' dealings pursuant to § 15a of the German Securities Trading Act (WpHG). The corresponding information is available on the company's website at @ [www.solarworld.de/en/directors-dealings//](http://www.solarworld.de/en/directors-dealings//). As a result of these transactions, on November 27, 2013, the CEO's share of voting rights fell below the reporting threshold of 25 percent. Therefore, on December 2, 2013, in accordance with § 26 WpHG, SOLARWORLD AG published a voting rights announcement at @ [www.solarworld.de/notification-of-voting-rights//](http://www.solarworld.de/notification-of-voting-rights//). Since December 3, 2013, Dr. Ing. E.h. Frank Asbeck has held all voting rights in SOLARWORLD AG directly; there are no longer any attributions pursuant to § 22 WpHG.

### 13 SHAREHOLDERS' STRUCTURE

as at 31.12.2013



In January 2014, the CEO of SOLARWORLD AG, Dr.-Ing. E. h. Frank Asbeck, sold more of his shares via the stock exchange and came below further voting rights thresholds required to be reported. Moreover, the shareholder structure of SOLARWORLD AG changed fundamentally once again in February 2014 as a result of the restructuring measures. ➔ Shareholders' structure substantially revised • p. 082 //

**NO TREASURY SHARES ACQUIRED.** In 2013, SOLARWORLD AG did not make use of the authorization issued by the Annual General Meeting on May 20, 2010, to acquire treasury shares pursuant to § 71 (1) No. 8 of the German Stock Corporation Act (AktG). On the cut-off date of December 31, 2012, SOLARWORLD held 924,607 no-par value shares.

On the cut-off date, pursuant to § 71b AktG, 110,795,393 no-par value shares carried dividends and voting rights. This is equivalent to a stake of 99.17 percent. The number of no-par value shares held by SOLARWORLD changed fundamentally due to the capital measures that were implemented in the first quarter of 2014. (46) Shareholders' structure after financial restructuring • p. 082 //

**EXTRAORDINARY SHAREHOLDERS' MEETINGS OF SOLARWORLD AG.** In connection with the financial restructuring process at SOLARWORLD AG, two extraordinary shareholders' meetings took place in the 2013 financial year, on July 11 and August 7. Pursuant to § 92 (1) of the German Stock Corporation Act, on July 11, 2013, the Management Board of SOLARWORLD AG informed shareholders at an extraordinary shareholders' meeting called specifically for the purpose that half of the company's capital stock was used up by losses.

At the extraordinary shareholders' meeting of SOLARWORLD AG on August 7, 2013, the resolutions necessary to implement the restructuring of the group's financial liabilities and balance sheet were passed. ➔ Noteholders and shareholders give their approval • p. 043 //

Also on the agenda at the extraordinary shareholders' meeting on August 7 was the election of the new Supervisory Board of SOLARWORLD AG. The shareholders decided to re-elect the Chairman of the Supervisory Board, Dr. Claus Recktenwald, and the member of the Supervisory Board Dr. Georg Gansen.

Mr. Marc M. Bamberger was newly elected to the Supervisory Board. The previous Supervisory Board member Dr. Alexander von Bossel did not stand for re-election and resigned his position at the end of the extraordinary meeting. The term of appointment for Dr. Claus Recktenwald and Mr. Marc M. Bamberger in each case ends with the conclusion of the next ordinary Annual General Meeting of SOLARWORLD AG. The shareholders appointed Dr. Georg Gansen, for his part, until the conclusion of the general meeting which decides on the approval of the Supervisory Board's actions and the Management Board's actions for the financial year ending December 31, 2017.

Furthermore, shareholders approved an amendment to the Articles of Association according to which the Supervisory Board shall be expanded from three members to six members.

The Chairman of the Supervisory Board, Dr. Claus Recktenwald, also informed shareholders that the appointment of CEO Dr.-Ing. E.h. Frank Asbeck would be extended until January 9, 2019.

## MAJOR BUSINESS EVENTS

**FINANCIAL RESTRUCTURING HAS MAJOR IMPACT ON 2013 FINANCIAL YEAR.** On January 24, 2013, the company issued an ad-hoc notification announcing the need for financial restructuring. Subsequently, the Management Board conducted negotiations on a restructuring concept with all main creditors. On June 18, 2013, SOLARWORLD AG announced that an agreement had been reached on the implementation of the restructuring of its liabilities with all creditors of assignable loans (*Schuldscheine*) as well as a creditor of a secured loan. It also presented the restructuring concept. This concept contained a series of measures on which the creditors of the two corporate bonds and the shareholders of SOLARWORLD AG had to pass resolutions. At noteholders' meetings on August 5 and 6, 2013, the noteholders of the two bonds approved the measures respectively. At an extraordinary shareholders' meeting on August 7, 2013, the shareholders of SOLARWORLD AG also approved the necessary capital measures. By registration of the implementation of the capital increase, the financial restructuring was completed on February 24, 2014. ➞ *Financial restructuring successfully completed* • p. 080// The restructuring process as well as the measures that were decided upon and have now been implemented are described in detail in ➞ *Financial restructuring* • p. 042// In 2013, the financial restructuring process affected SOLARWORLD's operating business, for example with regard to shipments in Germany and the realization of new large-scale projects. ➞ *Trade* • p. 049// Parallel to the financial restructuring, SOLARWORLD also implemented numerous operational restructuring measures in the 2013 financial year. ➞ *Necessary steps to restructure the group* • p. 028//

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**SHIPMENTS AND REVENUE DECREASING IN 2013 – OPERATING LOSSES REDUCED.** The persistent consolidation process in the solar industry as well as the ongoing financial restructuring of SOLARWORLD AG affected the business development of SOLARWORLD AG in 2013 more strongly than expected. Differently than planned, shipments and the revenue did not exceed previous year's level. Group-wide shipments of wafers, modules and kits went down by 3.3 percent to 588 (2012: 608) MW. The consolidated revenue decreased more significantly by about 25 percent to € 455.8 (2012: 606.0) million. In the 2013 fiscal year, SOLARWORLD was able, however, to reduce its operating losses. Totaling € –188.7 (2012: –620.3) million, EBIT was over previous year's level. These improvements can be attributed to the comprehensive operative restructuring measures to lower costs, e.g. the reduction of material expenses. However, the main reason was the significantly lower impairments on fixed assets. ➞ Economic Position 2013 • p. 071//

**REORGANIZATION OF MANAGEMENT BOARD DEPARTMENTS.** On February 7, 2013, SOLARWORLD AG and Boris Klebensberger amicably came to a mutual agreement on the termination of Mr. Klebensberger's position in the Management Board. The COO position was not filled again. Instead, the departments of the Management Board were restructured to achieve rapid implementation of planned measures and projects. The production units in Freiberg/Germany and Hillsboro/U.S. are now placed directly under the leadership of CEO Dr.-Ing. E.h. Frank Asbeck. IT became part of Colette Rückert-Hennen's responsibility, who now holds the new position of Chief Information, Brand & Personnel Officer (CIBPO). ➞ Management and control chaged in 2013 • p. 124//

**SOLARWORLD IMPLEMENTS ORGANIZATIONAL RESTRUCTURING IN THE UNITED STATES.** In our key market U.S., SOLARWORLD implemented a fundamental organizational change in October 2013. By mid-2014, sales and production will be grouped together at the Hillsboro, Oregon site to exploit market opportunities more effectively. In addition, the production company SOLARWORLD INDUSTRIES AMERICA INC. in Hillsboro and the sales subsidiary SOLARWORLD AMERICAS LLC in Camarillo, California will be merged into one management unit. ➞ Production • p. 055//

**SOLARWORLD ACQUIRES SUBSTANTIAL PARTS OF BOSCH'S SOLAR ACTIVITIES.** On November 26, 2013, SOLARWORLD signed an agreement to acquire parts of assets of Bosch Solar Energy AG at the location Arnstadt/Thuringia. This comprises a cell production capacity of 700 MW as well as module production capacity of 200 MW. ➞ Production lines acquired from Bosch Solar Energy AG • p. 084// Future development in production • p. 114//

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**EU PROCEEDINGS AGAINST ILLEGAL TRADE PRACTICES COMPLETED.** At the beginning of December 2013, as planned, the European Commission concluded its anti-dumping and anti-subsidy proceedings against Chinese solar manufacturers. Both sets of proceedings stemmed from trade complaints brought in 2012 by the EU ProSun industry initiative, in which SOLARWORLD AG is a member. @ [www.prosun.org//](http://www.prosun.org//)  
 ➔ [International trade conflicts](#) • p. 047//

## FINANCIAL RESTRUCTURING

Owing to the international solar industry crisis, SOLARWORLD AG needed to restructure its financial liabilities in 2013. After just over a year, this complex and difficult process was successfully completed on February 24, 2014. The main restructuring steps in 2013 were as follows:

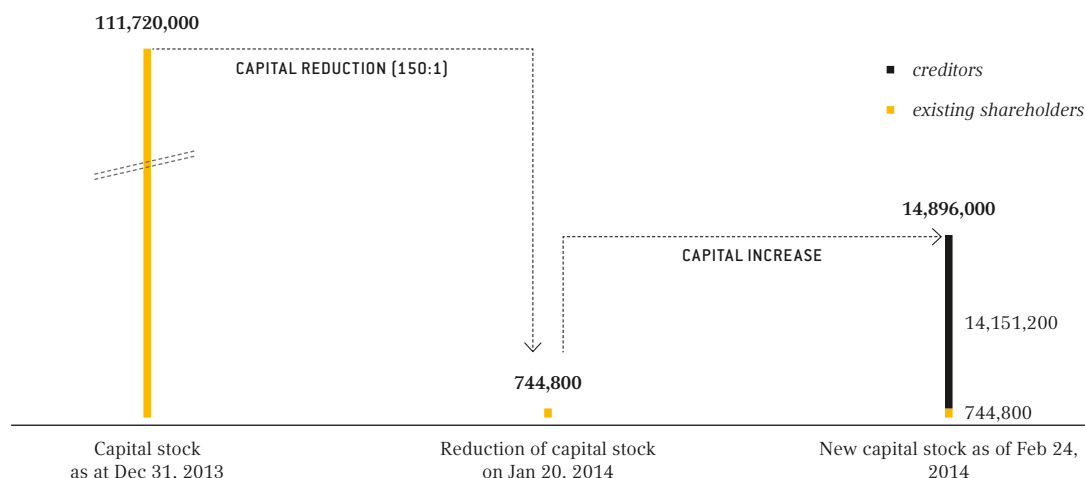
**SOLARWORLD ANNOUNCES NEED FOR RESTRUCTURING.** On January 24, 2013, the company issued an ad-hoc notification announcing the need for financial restructuring. Prior to this, in consultation with the Supervisory Board of SOLARWORLD AG, the Management Board had had the company's business planning for the years ahead – in particular its projected earnings and financial planning – reviewed by an external expert. As a result of this review, the company's management had resolved that serious reductions in the company's liabilities were necessary. At the same time, they were of the opinion that it was more likely than not that the required financial restructuring concept and necessary operational measures could be achieved and that a positive going concern prognosis was thus given. After this announcement, the Management Board conducted negotiations on a concept with its main creditors.

**RESTRUCTURING MEASURES ARE PRESENTED.** On June 18, 2013, SOLARWORLD AG announced that an agreement had been reached on the implementation of the restructuring of liabilities with all creditors of assignable loans (*Schuldscheine*) as well as a creditor of a secured loan. It also presented the restructuring concept. The key measure in the concept was a debt-to-equity swap of a part of the existing liabilities. The group would also bring in a new investor (Qatar Solar S.P.C., Doha/Qatar) with a stake of 29 percent, and the founder and CEO Dr.-Ing. E.h. Frank Asbeck would acquire a stake of 19.5 percent in the new capital stock of SOLARWORLD AG. To make this happen, the creditors would assign a portion of their shares to the two investors. The proceeds from this transaction have now been paid out to the creditors as a cash component. Creditors' remaining claims are retained and were converted into new bonds in early 2014. ➔ [Financial restructuring successfully completed](#) • p. 080//

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## 14 CAPITAL MEASURES FOR SOLARWORLD AG

*in accordance with the resolutions of the extraordinary shareholders' meeting of August 7, 2013*



**NOTEHOLDERS AND SHAREHOLDERS GIVE THEIR APPROVAL.** The measures presented in June 2013 also required the approval of holders of the two bonds issued by SOLARWORLD AG. These creditors were brought into the restructuring process at various noteholders' meetings held in May, July and August 2013 in Bonn. At the last noteholders' meeting on August 5 and 6, 2013, the noteholders approved the company's proposals with a majority of more than 99 percent in each case. At an extraordinary shareholders' meeting on August 7, 2013, the shareholders of SOLARWORLD AG approved the necessary capital measures for the financial restructuring – again with a majority of more than 99 percent in each case. Specifically, the resolutions of the extraordinary shareholders' meeting included a capital reduction from € 111,720,000.00 to € 744,800.00, a capital increase by contribution in kind with exclusion of shareholders' pre-emptive rights to € 14,896,000.00 and the cancellation of authorized capital. As part of the capital increase by contribution in kind, a part of financial liabilities were transferred to the company and in this way the planned debt-to-equity swap was carried out in early 2014.

A number of legal challenges against the resolutions of the noteholders' meeting on August 6, 2013 and extraordinary shareholders' meeting on August 7, 2013 were filed within the statutory appeal period. In October 2013, the company filed applications for summary judgments (*Freigabeverfahren*) with the Cologne Higher Regional Court (*Oberlandesgericht*), which granted approval to implement the measures on January 13, 2014. Parallel to the summary judgments, SOLARWORLD AG held talks with the complainants. The company was able to reach an out-of-court settlement with the majority of them. Accordingly, shareholders who held at least 1,000 no par value shares in SOLARWORLD AG on August 7, 2013 could submit unlimited offers to buy shares which creditors do not subscribe to during the capital increase. They had to subscribe to at least 50 shares or full multiples thereof. The specified price

range for the subscription was between € 6.50 and € 12.50. A similar arrangement applied to the new unsubscribed notes. The price range for purchasing the series 1017 bond (DE000A1YCN14) was between € 207.98 and € 415.96. The price range for purchasing the series 1116 bond (DE000A1YDDX6) was between € 186.44 and € 372.87. At least three notes or a full multiple thereof had to be subscribed to. These capital measures were completed on February 24, 2014. You can find the final results of the exercising of acquisition rights and the allocation prices in the ➔ Exercise of acquisition rights • p. 081//

## THE MARKET

### ECONOMIC ENVIRONMENT

**GLOBAL ECONOMY STILL WEAK.** There was no appreciable upturn in the global economy in 2013, according to the Kiel Institute for the World Economy (IfW). The European debt crisis and restrictive fiscal policy in most industrialized countries continued to dampen the economy during the year under review, even though business activity picked up over the course of the year.

According to IfW, the recession in the euro area continued in 2013. The main reasons were the high debt burden and consolidation pressures on government budgets. Because of the crisis, investment and private consumption could only recover slowly.

In Germany, domestic consumption was not sufficient to compensate for weak foreign trade. Corporate investment continued to be weak. Production capacities were not fully utilized. Consequently, the German economy lost momentum in 2013.

In the United States, the economic recovery remained moderate in 2013. Structural problems such as excess capacities in the real estate market and high private household indebtedness continued to retard economic growth. Conflicting majorities in the House of Representatives and the Senate made it difficult to implement fiscal measures to stimulate the economy.

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## ⑮ ECONOMIC DEVELOPMENT OF OUR MAIN SALES MARKETS\* // IN PERCENT

Source: Kiel Institute for the World Economy, 2014

	2012	2013 e	2014 e
Germany	0.7	0.4	1.7
U.S.	2.8	1.6	2.3
Euro area	-0.6	-0.4	0.9
World	3.2	2.9	3.7

\* measured according to gross domestic product

## THE SOLAR POWER MARKET

**EXCESS CAPACITIES DESPITE GROWING GLOBAL DEMAND.** According to estimates by Greentech Media Inc., total demand for solar power systems increased by around 11 percent in 2013 to 38.2 (2012: 34.5) GW. However, this growth was insufficient to utilize existing global production capacities of around 63 GW. Thus, enormous oversupply was one of the main reasons for continuing solar industry consolidation in 2013.

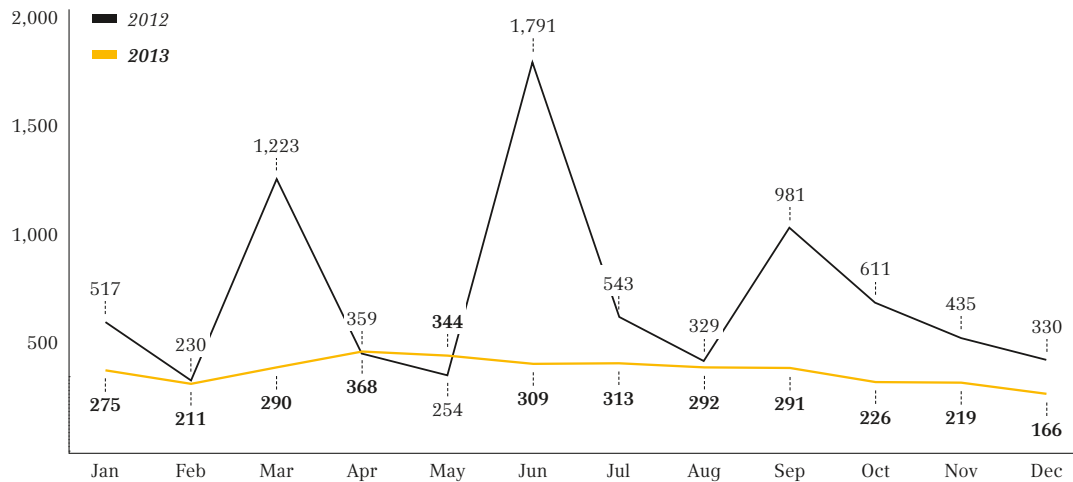
Nevertheless, the first signs of stabilization in the solar market emerged in the second half of 2013. The massive drop in prices began to slow from around June 2013. With the introduction of preliminary anti-dumping and anti-subsidy duties in Europe, there was a slight rise in prices for Chinese solar products. ➔ *International trade conflicts* • p. 047 // Despite this, average prices persisted at a low level, and manufacturers' margins remained under pressure in 2013.

**EUROPEAN SOLAR MARKETS IN SHARP DECLINE.** The European market as a whole contracted in 2013. The dramatic scaling back in 2012 of regulatory incentives to install solar power had a negative impact on demand. According to estimates by Greentech Media Inc., newly installed capacity fell around 38 percent to 10.6 (2012: 17.0) GW in 2013. Analysts expect European demand to fall again in 2014. According to a study by Deutsche Bank, new installations of solar power systems in Europe are likely to decline to 8.3 GW in 2014.

Germany in particular – until 2012 the growth engine of the European solar market – saw a substantial drop in demand in 2013, which contributed to the slow down of the European market. As market commentators anticipated, Germany was no longer the world's largest solar market in 2013. For the first time, the level of new installations was much higher in China, Japan and the United States. A Deutsche Bank study showed that Germany was only the world's fourth largest solar market in 2013.

## ⑩ NEW SOLAR POWER INSTALLATIONS IN GERMANY // IN MW

Source: German Federal Network Agency, 2014



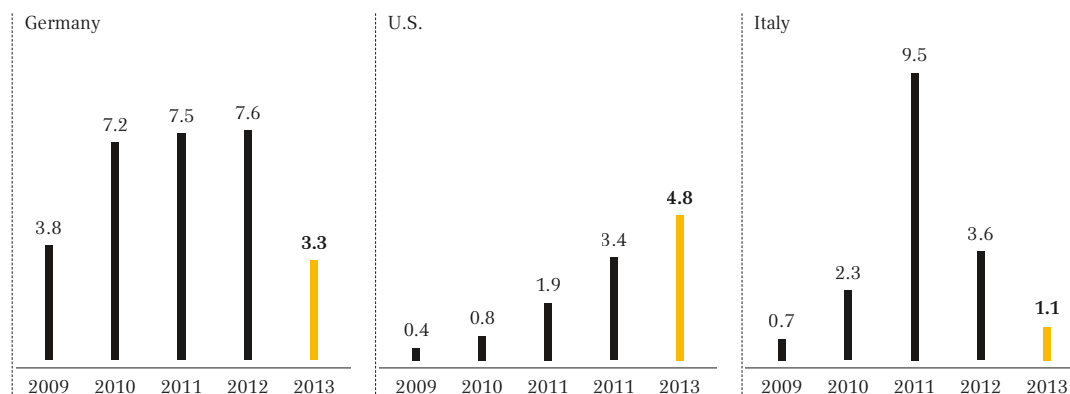
According to the German Federal Network Agency, total demand in the German solar market more than halved in 2013 to around 3.3 (2012: 7.6) GW – new installations had totaled well over seven gigawatts in 2011 and 2010 as well. Stricter controls on the construction of large solar farms slowed new installations in Germany in the year under review. In contrast to the market as a whole, the market for smaller roof-mounted systems with less than 10 kW did not collapse, though new installations were down 15 percent to 0.6 GW (2012: 0.7) GW.

Italy's solar market also contracted significantly in 2013, in line with expectations. According to the Italian electricity authority GSE, here new installations fell 2013 by almost 70 percent to 1.1 (2012: 3.6) GW. Nevertheless, the Italian market has remained attractive particularly for non-subsidized solar power plants due to rising electricity prices and strong solar radiation.

**U.S. SOLAR MARKET CONTINUES GROWTH.** A large proportion of growth in the 2013 global solar market took place in the United States. According to the U.S. Solar Energy Industry Association (SEIA), the newly installed capacity rose by 41 percent to 4.8 (2012: 3.4) GW. The residential market segment (residential market) recorded very strong growth of around 60 percent to 0.8 GW in 2013, whereas the non-residential segment stagnated with a newly installed capacity of 1.1 GW: As previously, however, utilities were the main growth driver in the U.S. market. Around 60 percent of newly installed capacity in 2013 was in this segment.

## ⑪ HISTORICAL DEVELOPMENT OF OUR MAIN SALES MARKETS // IN MW

Source: German Network Agency, SEIA, GSE; 2014



**STRONG GROWTH IN CHINA AND JAPAN.** The Chinese market grew massively in 2013. Analysts believe that newly installed capacity is likely to have more than doubled to 8.0 (2012: 3.5) GW. The Chinese government has set a target of reaching a total solar power capacity of about 34 GW by 2015 in order to support sales by Chinese solar companies. However, the Chinese market is walled off against non-Chinese companies such as SOLARWORLD. It is a different story in Japan, where foreign companies like SOLARWORLD are able to participate in the market growth. According to estimates by Deutsche Bank, the Japanese solar market experienced extremely strong growth in 2013 to 7.0 (2012: 2.1) GW.

**INTERNATIONAL TRADE CONFLICTS.** At the beginning of December 2013, as planned, the European Commission concluded its anti-dumping and anti-subsidy proceedings against Chinese solar manufacturers. Both sets of proceedings stemmed from trade complaints brought in 2012 by the EU ProSun industry initiative, in which SOLARWORLD AG is a member. @ [www.prosun.org//](http://www.prosun.org//)

Furthermore, on December 2, 2013, the European Commission announced that the EU Member States had approved its proposal to impose anti-dumping and anti-subsidy duties on imports of solar cells and solar power modules from China. The measures came into force on December 6, 2013, for a period of two years. Depending on the manufacturer, these duties are set at between 33 and 65 percent, or at around 48 percent on average. At the same time, on December 2, 2013, the European Commission confirmed its decision to accept the bilateral minimum pricing undertaking with Chinese manufacturers, which had been in force since August 6, 2013. By this undertaking, duties are suspended for companies which agree to comply with an agreement on minimum prices. The agreed minimum price is € 0.56 per watt.

European solar manufacturers are critical of the undertaking. Given this situation, SOLARWORLD and other European manufacturers filed two complaints with the General Court of the European Union. The EU General Court is currently examining the complaints.

Based on a complaint filed by our U.S. subsidiary SOLARWORLD INDUSTRIES AMERICA INC. on December 31, 2013, in January 2014 the U.S. authorities launched a further anti-dumping investigation against Chinese solar companies. The reason for this complaint is that the duties imposed in 2012 do not apply to solar imports from China which incorporate solar cells made in other countries. A number of Chinese manufacturers are exploiting this loophole to avoid punitive duties, thereby continuing their aggressive and injurious behavior on the American market. The newly launched investigations could result in an extension of the duties. (→ *Trade vote against unfair competition in the United States* • p. 084//

## REPERCUSSIONS OF THE GENERAL CONDITIONS ON BUSINESS DEVELOPMENT

SOLARWORLD AG was affected by the ongoing crisis in the solar industry in 2013. Global oversupply and aggressive trade practices had a negative impact on the group's business development. However, the first signs of a significant deceleration in the downward price spiral appeared mid-year. As expected, the German market contracted sharply in 2013. SOLARWORLD's sales figures reflect developments in this key market. Apart from the general market trend, SOLARWORLD's business in Germany was affected by the company's financial restructuring, which became necessary due to the persistent solar industry crisis. The European solar market as a whole also declined in 2013 compared with the previous year; yet SOLARWORLD successfully resisted this negative trend, and exceeded its own expectations. Our company also benefited from dynamic growth in Japan.

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## TRADE

### GENERAL TREND

**GROUP-WIDE SHIPMENTS SLIGHTLY BELOW PREVIOUS YEAR'S LEVEL.** In the 2013 financial year, SOLARWORLD shipped a group-wide volume of modules and kits of 548 MW – only a slight fall of 3 percent compared with the previous year (2012: 567 MW). Yet this stable overall trend masks some extreme shifts within individual markets. While our European export market – i. e. outside Germany – developed very dynamically (+44 percent), and we achieved growth in the United States, Japan and Africa, our shipments in Germany dropped sharply (–41 percent) compared with the previous year. In addition, contrary to plans, SOLARWORLD AG could not implement any new large-scale projects in 2013. Because of the restructuring, we were unable to obtain interim financing for the construction phase of large-scale projects. Despite this, our subsidiary SOLARPARC AG was highly active in 2013, establishing a global structure for large-scale projects within the group, as planned. We also developed a pipeline for the international project business in markets such as Japan, Kazakhstan, Turkey, Canada and the United States.

➞ Future sales markets • p. 113//

The sharp decline in business in Germany and the absence of new large-scale projects were the main reasons why we were unable to reach our own target of increasing shipments in 2013 compared with the previous year.

**INTERNATIONALIZATION STRATEGY PAYS OFF.** In 2013, our shipments outside Germany grew significantly to reach 76 (2012: 60) percent of all shipments. The European export markets and the U.S. achieved a higher share of shipments than Germany. These markets largely compensated for the volume decline in Germany. Since dynamic growth in solar markets particularly outside of Germany is anticipated in the future as well, further internationalization remains a strategic goal for SOLARWORLD. ➞ Sales growth • p. 031// The future market 2014 • p. 110//

**SALES OF SOLAR KITS BELOW TARGET.** The module business dominated the year under review. We did not realize our strategic goal of increasing sales of complete systems as a percentage of our shipments in 2013. This was partly due to comparatively weak business in Germany, since this market had a particularly high proportion of solar kits in the past.

**REVENUE DOWN.** Because of the decline in the systems business, revenue in the “Trade” segment fell significantly more sharply than shipments in 2013. Revenue fell 25 percent compared with the previous year to € 436 (2012: 583) million. The continuing very low price level was another reason for the decline in revenue.

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## REGIONAL SHIPMENTS

**RELUCTANCE TO BUY IN GERMANY.** We believe there are two reasons for the sharp fall in sales figures in Germany. Firstly, amendments to the German Renewable Energy Sources Act (EEG) caused a huge contraction in the German market in 2013, especially in the large-scale systems segment. ➞ *Market • p. 044//* Secondly, our German customers responded with uncertainty to the financial restructuring process within SOLARWORLD AG. Buying resistance was stronger and more persistent than we had anticipated in our plans. It also affected the end customer market for smaller and medium-sized kits – an area in which we are traditionally strong. We expect sales to increase again in 2014 as we have now successfully completed the restructuring. Measures implemented in 2013 further optimized our sales processes in the German market. For example, we have facilitated business for our customers – electrical wholesalers and installers. For the first time, we offer them a package – the SOLARWORLD KIT EASY – that contains all the components of a pitched roof system assembled on one pallet for particularly fast and straightforward installation. In November 2013, we started an advertising campaign in Germany offering a complete package to our end customers that consists of a SOLARWORLD KIT EASY and high-quality glass-glass module SUNMODULE PROTECT and the full installation service.

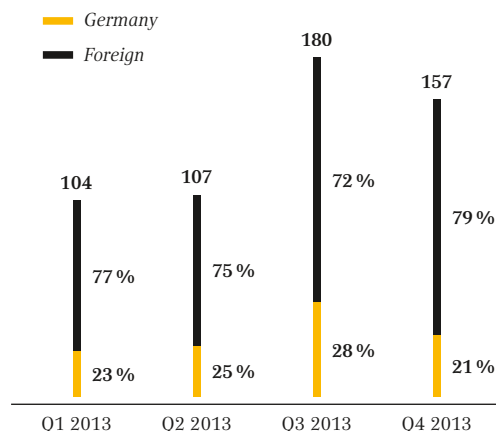
**STRONG GROWTH IN EUROPEAN EXPORT MARKETS.** Outside Germany, Italy was once again our largest European market in 2013. Although our shipments decreased compared with the previous year – following the general market trend – they were well above target. We achieved robust growth in the United Kingdom and France, while smaller markets such as Austria, Scandinavia and the Baltic also performed well. In addition, the Middle East and North Africa (MENA) region became more important to us.

**SLIGHT GROWTH IN THE UNITED STATES.** In the United States, we slightly increased our shipments in the year under review compared with 2012. While our American customers also responded to the financial restructuring process with reluctance to buy our products, the effect was only temporary. Our U.S. sales figures rose considerably again in the third and fourth quarters. Our new glass-glass module SUNMODULE PROTECT met with an initial positive response from customers. However, the market is still fiercely competitive and the price level extremely low. Despite this, in 2013 we observed a decline in the price gap between ourselves as a quality provider, and competitors. The legal measures against dumping and unfair trading practices by Chinese providers probably contributed to this stabilization. ➞ *Trade vote against unfair competition in the United States • p. 084//*

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## ⑱ REGIONAL DEVELOPMENT OF SHIPMENTS IN THE “TRADE” SEGMENT IN 2013 // IN MW

Source: SolarWorld, 2014



**JAPAN MOST IMPORTANT MARKET IN ASIA-PACIFIC REGION.** As expected, Japan became our largest market by far in Asia in 2013. Together with our local distribution partner, we achieved continuous sales here. In the Asia-Pacific region, SOLARWORLD also focused on Australia and Thailand.

**SUCCESS WITH HOMEMADE POWER IN AFRICA.** In 2013, our shipments increased in Southern Africa, where businesses increasingly install solar roof-mounted systems that allow them to use self-generated power directly.

## BRAND AND MARKETING

**MARKETING ACTIVITIES ADAPTED TO NEW CHALLENGES.** SOLARWORLD's financial restructuring and the generally difficult market environment impeded product and brand activities to a certain extent in 2013. Nevertheless, the SOLARWORLD brand was and is built on a firm foundation. As a result of our investments in marketing over the years, we have achieved strong brand recognition and attractiveness.

SOLARWORLD's difficult economic position required particularly efficient use of our marketing budget in 2013. As part of the necessary operational restructuring measures, we reduced our marketing expenditure by around 30 percent, for example by optimizing our TV and media presence. We focused our activities more intently on selected target groups and produced less print media than in the past.

Despite a severely limited budget, it was important to support the company's strategic goals via brand and marketing communication. In the context of the further internationalization of our business, we therefore invested a greater proportion of our marketing budget in activities in the growing export markets.

**BRAND PROMISE: QUALITY AND SYSTEM EXPERTISE.** Quality is and remains the best guarantee of investment security with a solar power system. So, during the reporting year, we again emphasized this selling point to installers and end customers in our international communications. Independent tests supported our arguments by confirming the reliability and durability of our products. In 2013, SOLARWORLD's SUNMODULE PLUS SW 245 POLY was the only product to receive the top rating "very good" under new test conditions in the PV+Test conducted by the trade journal PV Magazine and TÜV Rheinland. This strong performance is another credible demonstration of our commitment to quality.

During the year under review, system innovations such as our battery system SUNPAC 2.0 and the robust glass-glass module SUNMODULE PROTECT were introduced onto the market as components of our solar power solutions. We communicated and emphasized their respective selling points to our resellers and end customers.

Despite the difficult market situation, we not only retained the trust of our authorized installers and wholesalers but also gained new specialist partners both nationally and internationally. At the end of 2013, in European core markets including the United Kingdom, Italy, France and Belgium, a total of 273 (December 31, 2012: 172) installers were members of our partner programs. To support the program, in 2013 we organized tours of our Freiberg plant for partners from Italy and the United Kingdom.

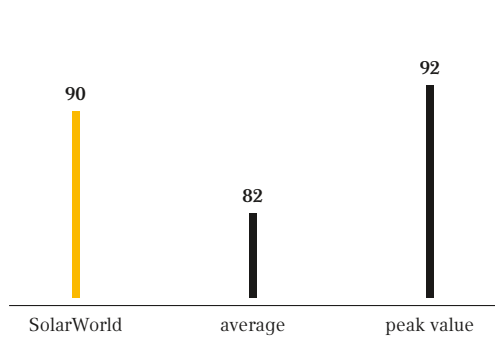
Close contact with customers earned SOLARWORLD a place among Germany's "Kundenchampions" ("Customer Champions") in 2013. SOLARWORLD joined such major German brands as Audi, Miele and Esprit as an award winner in the nationwide "Deutschlands Kundenchampions" competition. The competition was based on an "all-round customer relations check", which the competition initiators carried out based on a representative sample of customers.

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## ⑲ SATISFACTION WITH PRODUCT QUALITY

// IN PERCENT

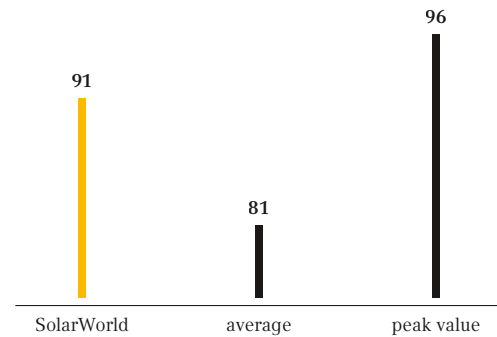
Source: Deutschlands Kundenchampions 2013 survey



## ⑳ LONG-LASTING CUSTOMER RELATIONSHIPS

// IN PERCENT

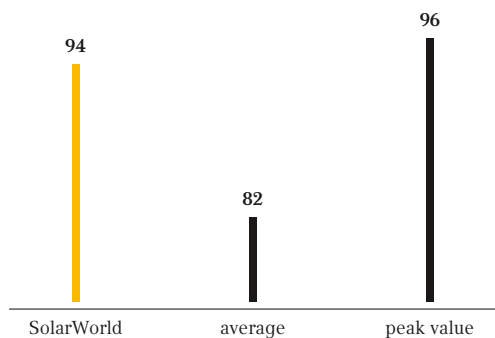
Source: Deutschlands Kundenchampions 2013 survey



## ㉑ WILLINGNESS TO RECOMMEND

// IN PERCENT

Source: Deutschlands Kundenchampions 2013 survey



**CUSTOMERS EXPRESS HIGH SATISFACTION WITH QUALITY AND SERVICE.** To gauge our customers' satisfaction with the quality and customer service they receive from SOLARWORLD, this year we conducted another of our own annual surveys of our trade customers. At 21 (2012: 33) percent, the response rate was lower than in the previous year. 94 (2012: 93.6) percent of customers said they were "satisfied" to "very satisfied" in terms of their overall satisfaction with SOLARWORLD. This shows that our customers continue to trust and value SOLARWORLD's products and services. Regarding customer service, the customers we surveyed showed high levels of satisfaction once again. Overall, 97 (2012: 96.5) percent of customers rated our services as "very good" or "good". And they reaffirmed their high satisfaction with our product quality; 100 (2012: 99.6) percent of respondents said our product quality was "very good" or "good".

**CONTINUED HIGH WILLINGNESS TO RECOMMEND.** Like the German “Customer Champions” survey, our own poll of customers showed that SOLARWORLD’s customers have a high willingness to recommend. On a scale of 0 to 10, when asked whether they would recommend SOLARWORLD to people they know, the average score in customer responses was 9.13 (2012: 9). This is a particular indicator that our customers place a high level of trust in our products and services, and are willing to personally recommend SOLARWORLD.

**ADDITIONAL INCENTIVES CREATED FOR SPECIALIST PARTNERS.** With the aim of intensifying our long-standing customer relationships with installers – even and especially in challenging market conditions – we decided to use a targeted mix of direct communication plus print and digital media in Germany in 2013. To reduce costs, we scaled back on printed materials and instead opted for more online communication. For example, we set up a new web portal for installers. In our communications, we made a point of describing the benefits of SOLARWORLD products to installers and wholesalers in a transparent way, and offering incentives to actively promote these benefits to their customers. In 2013, we created an extra sales incentive for our resellers in the form of a special bonus program accompanied by product and sales training. Around 50 percent of all SOLARWORLD partners in Germany participated in this program.

With the rising number of system products, the system concept – a specific SOLARWORLD benefit – is becoming increasingly important in brand communication. Our innovative solutions for intelligent home automation – such as SUNPAC 2.0, which launched in 2013, and the SUNTROL EMANAGER – expanded our potential customer base.

**QUALITY ASPECTS COMMUNICATED TO END CUSTOMERS.** All communications relating to marketing activities directed at end customers in 2013 aimed to highlight the quality advantages of our products. In terms of content, we emphasized the high durability and stability of the new “Protect” module generation – with 30-year performance guarantee – as well as homemade power system offerings with storage options, an integrated system insurance policy and extensive system documentation. We launched a TV campaign in the German market in the second half of 2013 that was focused on end customers. It too highlighted the quality and durability of our products, generating the demand effect we sought. This new commercial was translated and made available for international use in all major target languages including English, Italian and French. We ran TV commercials to accompany campaigns in a highly targeted way and boost demand through our increased media presence.

**PRODUCTS PRESENTED TO THE TRADE.** SOLARWORLD was present at the most important international trade fairs in 2013, in Europe, the United States, Abu Dhabi, Japan and Thailand. To use our resources even more efficiently, we concentrated on the important trade shows much more exclusively than in previous years, and implemented a modified exhibition concept. Additional roadshows in Italy and the UK allowed us to strengthen contacts with installers and wholesalers, who were able to make their first personal contact with products and services of the SOLARWORLD brand. This was an important trust-building and sales-promotion activity with resellers in these target markets.

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**SOLAR MOBILITY UNDER THE SOLARWORLD BRAND.** Ever since the company was founded, SOLARWORLD – as an internationally operating group of companies – has sought to promote the development of solar power generation. Enshrining this aim in our vision is one way in which we assume social and environmental responsibility. In this context, we have a long-standing involvement in the development of the light-weight solar airplane e-One, in partnership with PC-Aero GmbH. The solar aircraft features specially produced cell technology on its wings and was presented in 2013 – complementing the SOLARWORLD GT solar vehicle – as a new ambassador for solar mobility.

PRODUCTION

**OPERATIONAL RESTRUCTURING MEASURES IMPLEMENTED AND INNOVATIONS TRANSFERRED INTO PRODUCTION.** In 2013, the group did not expand its existing capacities in Freiberg, Germany and Hillsboro, United States. Since the beginning of 2013, we have geared group-wide production to a basic capacity utilization of around 600 MW. Over the course of the year under review, at both production sites, we continued operational restructuring and integrated innovations into regular production to enhance efficiency and reduce costs. One key measure here was the realignment of international wafer production. As part of this, our monocrystalline wafer plant in the U.S. with a nominal capacity of 250 MW was shut down at the end of August 2013. We continue to use just part of the facility there for research purposes. SOLARWORLD successfully transferred its new glass-glass module SUNMODULE PROTECT into production in the summer of 2013. We have converted part of the Freiberg module plant to manufacture this product.

22 GROUP-WIDE, NOMINAL CAPACITIES 2013 // IN MW

	 Wafer	 Cell	 Module
Germany (Freiberg)	750	300	500
U.S. (Hillsboro)	250	500	350
Group	1,000	800	850

In addition, we introduced organizational changes at Freiberg and Hillsboro in 2013 that are aimed at further enhancing efficiency in our production units. Wafer, cell and module production stages at Freiberg are set to be integrated into one subsidiary by mid-2014. At our site in Hillsboro, Oregon, by the middle of the year we will likewise merge our production facilities with the sales unit previously based in Camarillo, California. On November 26, 2013, SOLARWORLD announced it had signed an agreement

regarding the purchase of parts of the Bosch Solar Energy AG at Arnstadt, Thuringia. With the acquisition, which was completed on March 12, 2014, the SOLARWORLD group increases its production capacities for cells by 700 MW and for modules by 200 MW as of 2014. ➞ Future development in production • p. 114//

## GLOBAL SUPPLY CHAIN – PROCUREMENT

**ESTABLISHING A GLOBAL SUPPLY CHAIN.** Accounting for a substantial share of our total costs, material usage is existentially important to us as a manufacturing company. In 2013, we integrated logistics, production planning and purchasing into a global organizational structure to establish a continuous supply chain that is customer and sales driven. With this global supply chain, we aim to align material usage in the group as a whole as closely as possible with changing conditions in the solar market.

**CUT COSTS – SAFEGUARD SUPPLY.** Particularly during the crisis year of 2013, the group faced the challenge of achieving further strong reductions in material costs while guaranteeing supplies in line with demand. Furthermore, owing to SOLARWORLD's difficult financial and economic position in 2013, some suppliers were unable to insure receivables from companies in the SOLARWORLD group. Despite this, we were able to negotiate cost reductions with suppliers as well as payment terms in our favor.

Our global second source strategy made a significant contribution to cost-cutting and our security of supply. We consider procurement opportunities, both in procurement market offering the lowest prices, and in the markets where we manufacture, i.e. in Europe and the United States. Local suppliers are usually able to deliver faster, and with greater flexibility. During this difficult period, quality and sustainability remained important supplier selection criteria. ②③ Supplier selection criteria • p. 057//

To cut costs and be more flexible, we reviewed the qualification of materials and significantly sped up the process.

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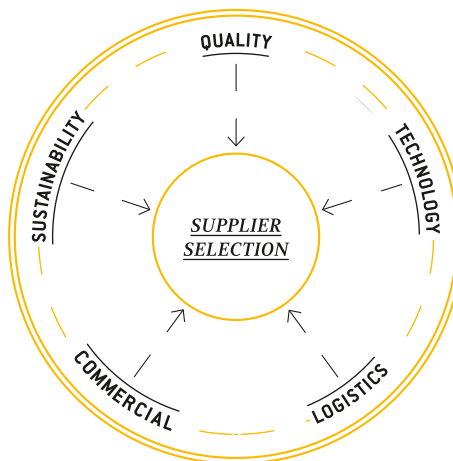
**SEEKING SILICON SUPPLY IN LINE WITH DEMAND AND MARKET CONDITIONS.** In the past, owing to supply pressure in the industry, SOLARWORLD entered into long-term silicon supply contracts. Their terms are no longer in line with market conditions. Legal opinions differ regarding fulfillment of existing contracts. (53) *Procurement risks* • p. 095// (62) *Legal risks* • p. 104//SOLARWORLD did not buy any silicon in 2013. Instead, it reduced its large silicon inventories or met requirements through its own recycling. From 2014, we plan only to purchase silicon according to our requirements and at market prices.

**SHARPER FOCUS ON INDIRECT MATERIALS.** Having achieved significant reductions in direct material costs, in 2013 we turned our attention to indirect costs, e.g. expenses for marketing, trade shows, travel, IT and services, but also for energy and replacement parts. In these areas, we exploit all opportunities to buy at better prices or avoid costs in the first place. We succeeded in reducing indirect material expenses by more than 30 percent compared with 2012.

**CONTINUE LONG-TERM PARTNERSHIPS.** SOLARWORLD considers long-term and reliable partnerships as an important factor for durable success in the solar industry – not only concerning customer relations but also concerning supplier relations. Particularly during the industry crisis, therefore, we maintained close contact with our suppliers, e.g. at the second “Supplier Day” at Intersolar Europe 2013 in Munich.

#### (23) SUPPLIER SELECTION CRITERIA

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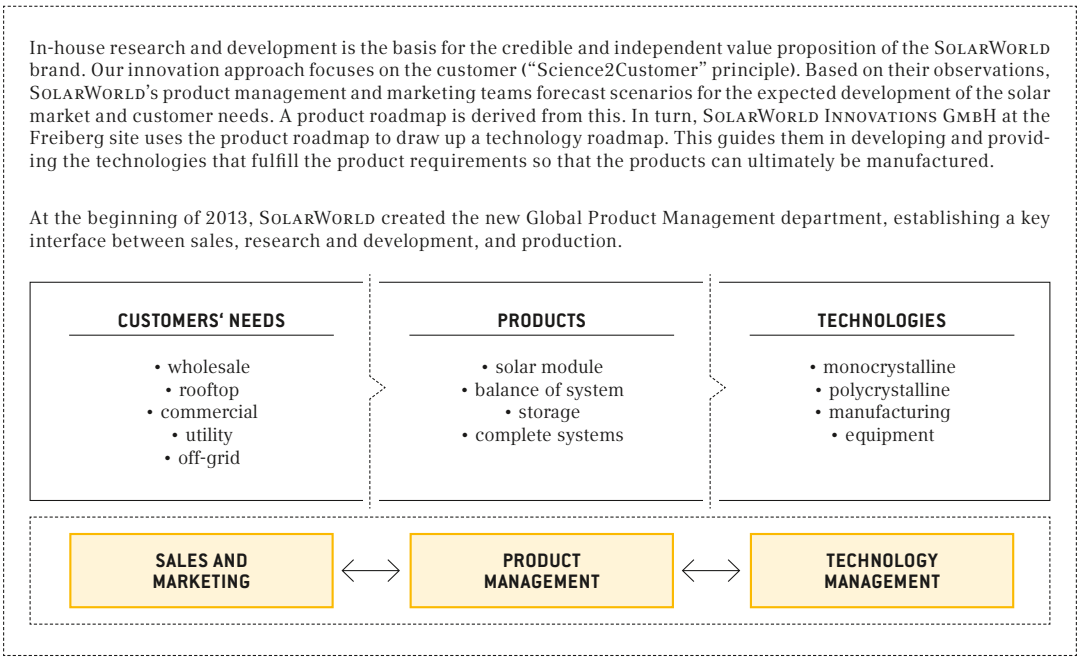
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INNOVATION REPORT

Innovations are essential for SOLARWORLD to survive in the fiercely competitive solar market. So even though 2013 was a difficult year, we pressed ahead with research and development, and brought new products onto the market – such as the glass-glass module SUNMODULE PROTECT.

**INTEGRATED INNOVATION APPROACH CONTINUED.** SOLARWORLD aims to continuously enhance the performance and quality of its products. We aim to gain and retain a competitive edge here. This requires an integrated concept and process across all stages of module production. Accordingly, in 2013, we worked on innovations from crystallization, to wafers and cells, through to module production.

24 SCIENCE2CUSTOMER: INNOVATION PROCESS AT SOLARWORLD



**PERC TECHNOLOGY ACHIEVES SUBSTANTIAL ADDITIONAL MODULE OUTPUT GAINS.** We enhanced the performance of our monocrystalline modules once again in 2013. In contrast to conventional modules providing 240 to 260 Wp, we already offer our customers modules with an output of 265 to 275 Wp. We achieved this increase mainly due to PERC cell technology. (→ Glossary • p. 224// SOLARWORLD implemented this technology in monocrystalline production in the U.S. at the end of 2012. We are the first manufacturer in the world using this technology to produce a large volume of solar cells.

In 2013, SOLARWORLD INNOVATIONS GMBH was already working on the second generation of PERC modules. In pilot production, we were able to increase output to more than 300 Wp. TÜV Rheinland has certified these modules with an output of 306 Wp. This equals the world record for standard-format PERC modules with 60 cells.

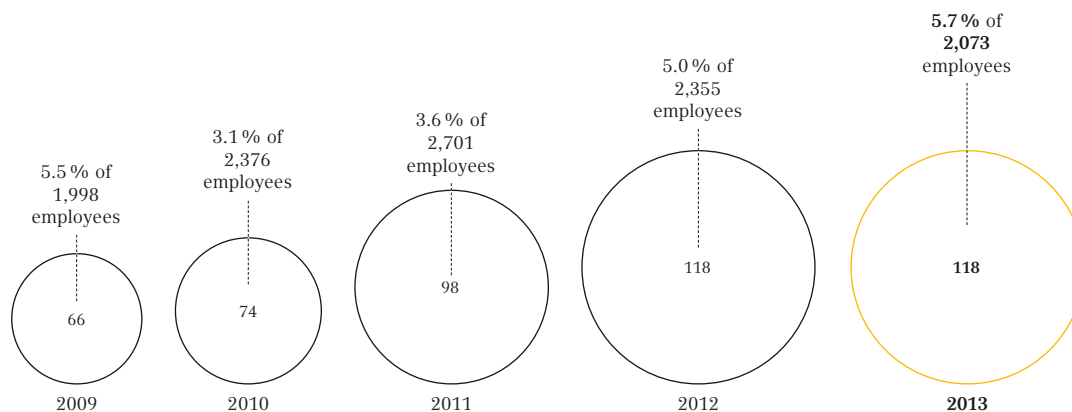
**CUSTOMER-ORIENTED SYSTEM SOLUTIONS ENHANCED.** Self-consumption of self-generated solar power is an important trend. Therefore, in 2013, our product management team continued to focus on intelligent solutions that enable customers to generate solar power for their own self-consumption requirements. This included developing the SUNTROL EMANAGER – an integrated hardware and software solution that helps our customers increase the proportion of self-generated solar power that they consume themselves.

**HIGHER PROPORTION OF R&D EMPLOYEES IN THE WORKFORCE.** The number of full-time employees at our research subsidiary SOLARWORLD INNOVATIONS GMBH remained constant in 2013, while there was a significant drop in the number of employees in production and throughout the group as a whole. (→ Number of employees reduced again • p. 066// Accordingly, the proportion of R&D employees as a percentage of the total workforce increased to 5.7 percent.

To further facilitate transfers from research and development into production, SOLARWORLD INNOVATIONS GMBH formed a dedicated new “Integration” department in 2013.

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**25 HEADCOUNT DEVELOPMENT SOLARWORLD INNOVATIONS GMBH\****as at December 31*

\* excluding temporary workers and students

**FOCUS ON OWN DEVELOPMENTS.** In 2013, we continued to develop our essential expertise within our company. The high priority that SOLARWORLD gives to proprietary developments is reflected in our extensive and diversified patent portfolio.

**26 DEVELOPMENT OF INVENTIONS AND PATENTS***as at December 31*

	2009	2010	2011	2012	2013
Number of registered inventions	28	51	58	71	59
Number of active patent applications	n. a.	106	230	226	234
Number of granted active patents	n. a.	97	99	113	123
Number of active patent families	87	107	152	173	175

**CLOSE LINKS WITH PARTNERS.** At our Freiberg production site, our subsidiary SOLARWORLD INNOVATIONS GMBH is the hub of a network of machine and system manufacturers, producers of consumables, and partners in the research and scientific communities. All in all, SOLARWORLD INNOVATIONS GMBH collaborated with 27 scientific institutes, universities and higher education institutions in 2013.

**ACTIVE IN FUNDED PROJECTS.** In 2013, SOLARWORLD INNOVATIONS GMBH was involved in nine publicly funded projects and three cluster projects. The German federal government's Photovoltaic Innovation Alliance research program played an important role here. Within this framework, SOLARWORLD INNOVATIONS GMBH participated in the "Sonne" research group, which successfully completed three years of development activities in December 2013. The project allowed necessary foundations to be put in place for enhancing the output and quality of solar modules.

#### 27 DEVELOPMENT OF R&D EXPENSES\*

	2009	2010	2011	2012	2013
Total R&D expenses (in m€)	12.0	19.2	27.2	49.1	26.5
Sponsored portion (in %)	15.0	11.5	14.5	10.7	27.2

\* disclosure excluding the R&D activities of our joint ventures

#### 28 RESEARCH RATIO AND RESEARCH INTENSITY // IN PERCENT

	2009	2010	2011	2012	2013
Research ratio	1.2	1.5	2.6	8.2	5.8
Research intensity	1.2	1.6	1.6	3.4	3.4

[Research ratio = R&D expenses/revenue x 100]; disclosure excluding the R&D activities of our joint ventures

[Research intensity = R&D expenses/total expenses x 100]; disclosure excluding the R&D activities of our joint ventures

## ENVIRONMENT

SOLARWORLD stands for sustainability. The “green idea” is the basis of our actions. Despite the difficult state of business, we continued our commitment to the environment and society in 2013; doing so is part of our identity and clearly sets SOLARWORLD apart from its competitors in solar manufacturing for all stakeholders.

SOLARWORLD’s activities center on production, which is why we must address four central topics: energy, emissions, water, and waste. We have set out to make cuts in these areas and intend to achieve these specific goals by 2020 by continuously improving the efficiency of our processes and replacing materials that harm the environment. We measure our progress compared to the production unit watt peak, in other words, how much energy, emissions, water, and waste we can save per watt peak. Furthermore, we set an absolute emission target for new cars in our vehicle fleet.

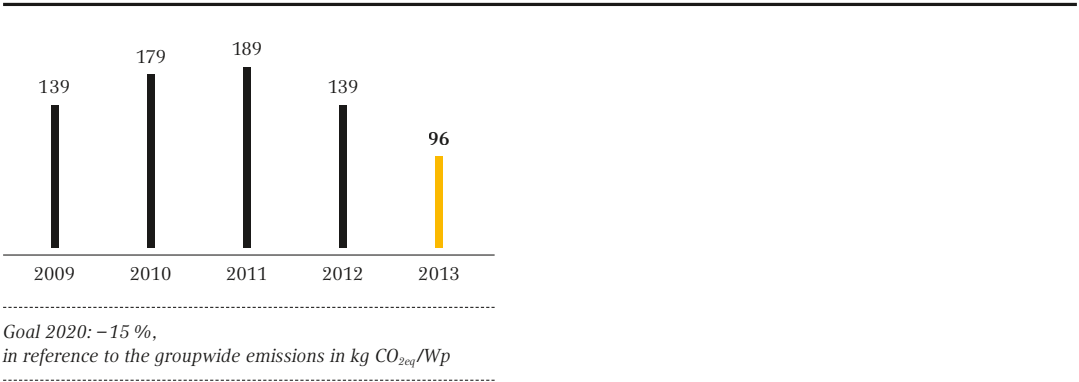
**(29) ENVIRONMENTAL TARGETS 2020**

	Unit	Base year 2012	Target 2020/ percentage change	Status 2013/ percentage change
<b>Energy &amp; climate protection</b>				
Groupwide energy consumption	kWh/Wp	0.63	0.47 –25 %	<b>0.59</b> –6 %
Cumulated energy demand (life cycle)	MJ <sub>eq</sub> /Wp	21.6	18.4 –15 %	<b>17.8</b> –18 %
Groupwide CO <sub>2</sub> emissions	kg CO <sub>2eq</sub> /Wp	0.45	0.38 –15 %	<b>0.31</b> –31 %
Global Warming Potential (life cycle)	kg CO <sub>2eq</sub> /Wp	1.3	1.1 –15 %	<b>1.1</b> –15 %
Average CO <sub>2</sub> emissions from passenger cars in the SOLARWORLD vehicle fleet (new passenger cars)	g CO <sub>2eq</sub> /km	152 (all passenger cars)	95 –38 %	<b>130</b> –14 %
<b>Water</b>				
Specific volume of water consumption	m <sup>3</sup> /MWp	2,253	2,028 –10 %	<b>2,958</b> +31 %
Specific volume of waste water	m <sup>3</sup> /MWp	1,738	1,564 –10 %	<b>2,550</b> +47 %
<b>Waste</b>				
Specific volume of waste	t/MWp	26.9	24.2 –10 %	<b>25.5</b> –5 %

Solar power generation replaces other sources in the energy mix, thus helping reduce harmful greenhouse gas emissions and preserve fossil resources. Nevertheless, the process for manufacturing our products also uses energy. But our products generate far more energy over their life cycle than is needed to manufacture them. Likewise, far more greenhouse gas emissions are avoided than are created in the entire manufacturing process.

**CO<sub>2</sub> EMISSIONS.** Since the Carbon Disclosure Project Germany was founded in 2005, we have been involved in capturing greenhouse gas emissions. Our group-wide greenhouse gas emissions reduced in 2013 to 96 (2012: 139) thousand tCO<sub>2eq</sub>.

**30 GROUP-WIDE CO<sub>2</sub>-EMISSIONS // IN THOUSAND tCO<sub>2eq</sub>**

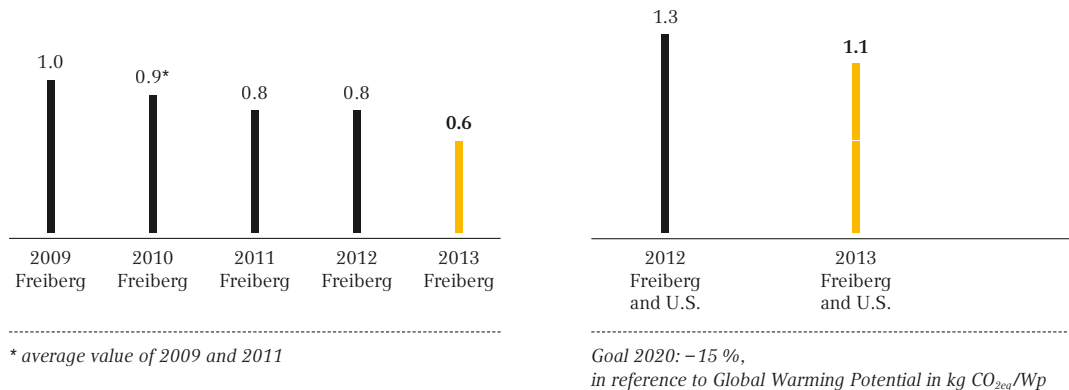


We use the life cycle analysis to calculate the global warming potential (GWP) of our products (greenhouse gas emissions per production unit, CO<sub>2eq</sub>/Wp). We take into account emissions from the entire production process, including preliminary stages and input factors in the analysis. Our 2013 GWP for polycrystalline modules in Freiberg came to 0.64 (2012: 0.75) kg CO<sub>2eq</sub>/Wp. The balance of system then generates an additional 0.17 kg CO<sub>2eq</sub>/Wp.

Products from the U.S. have a higher GWP owing to different production processes. Hence our overall GWP for 2013 was 1.1 (2012: 1.3) kg CO<sub>2eq</sub>/Wp.

SOLARWORLD does not use or emit any nitrogen trifluoride (NF3).

### 31 GLOBAL WARMING POTENTIAL // IN KG CO<sub>2eq</sub>/WP



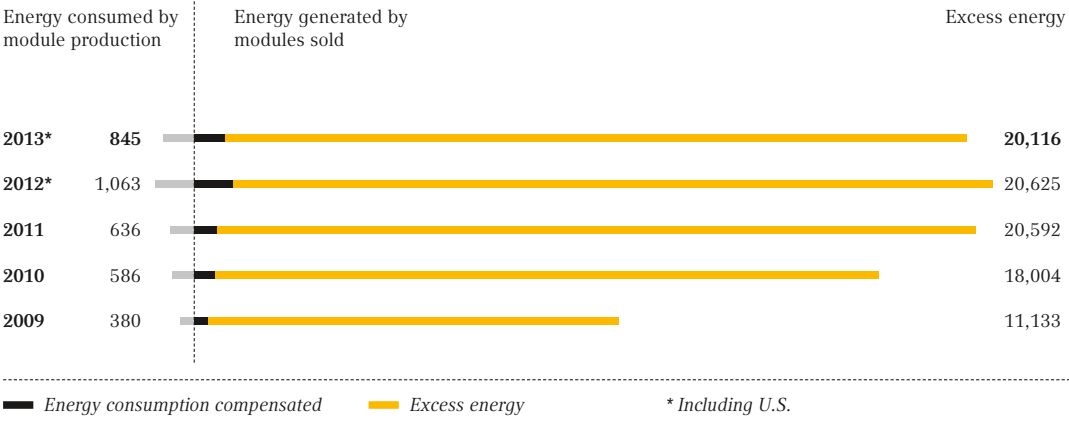
**PAYBACK TIMES.** The energy payback time is the amount of time it takes the solar power plant to produce as much energy as was used to manufacture it. Accordingly, the CO<sub>2</sub> payback time refers to the time it takes to compensate for the greenhouse gases that were emitted during manufacturing. Our calculations are cradle-to-gate calculations. SOLARWORLD's performance progress can be determined from the energy and CO<sub>2</sub> payback times.

While it takes one year to compensate for the energy consumption of the entire production process of a system in Bonn, Germany (power yield: 940 kWh/kWp), it only takes half a year in San Francisco, U.S. (power yield: 1,670 kWh/kWp). By way of comparison, in 2008 the energy payback time was still 3.5 years according to a study by ESU-services. CO<sub>2</sub> emissions are compensated for in a little more than one year in San Francisco, while it takes six years in Grenoble, France (power yield: 1,250 kWh/kWp) due to the high percentage of nuclear power in the French energy mix. These calculations come from our life cycle analysis for our solar modules from Freiberg, Germany (not including system components), installed on a roof with a southerly orientation and an optimum inclination with an average module lifespan of 30 years. An overview of many sites around the world and additional information on the calculations is available on our website: @ [www.solarworld.de/sustainability//](http://www.solarworld.de/sustainability//)

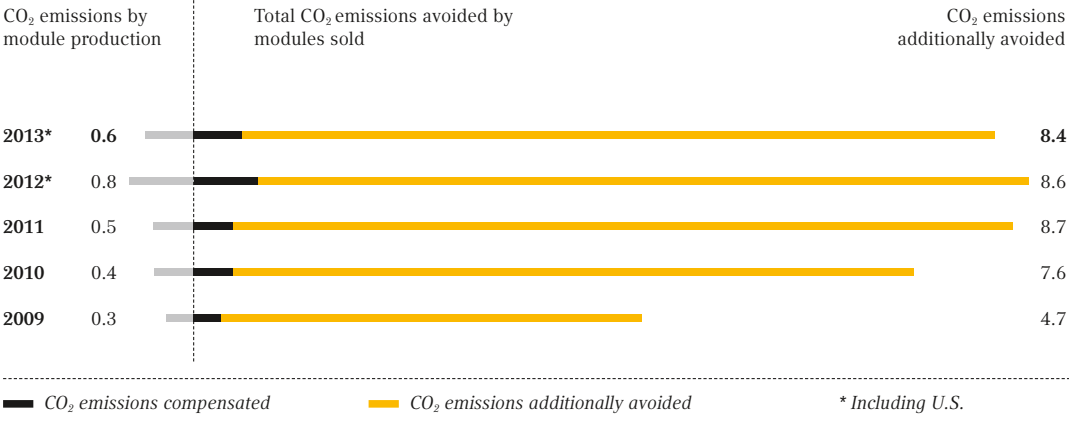
**POSITIVE ENERGY AND CO<sub>2</sub> BALANCE.** Thanks to the volume of solar power modules sold in 2013, an energy surplus of 20,116 (2012: 20,625) GWh can be achieved during a lifetime of 30 years. Thereby, some 8.41 (2012: 8.59) million tCO<sub>2eq</sub> can be saved. The costs for environmental damage avoided as a result total around € 589 (2012: 601) million. The CO<sub>2</sub> emissions avoided exceed the CO<sub>2</sub> emissions caused along the entire production chain by a factor of 14 (2012: factor of 11). Since we have no exact information about how and where our modules are installed, our calculations are based on a standardized installation in Germany (1,275 kWh/m<sup>2</sup>).



32 ENERGY BALANCE // IN GWH



33 CARBON FOOTPRINT // IN M tCO<sub>2eq</sub>



You can find more information about the respective model assumptions and the calculations under [Sustainability in Detail • p. N054 et seq. //](#).

## EMPLOYEES

In 2013, the first priority for the HR department was to support the implementation of the operational restructuring program. During the year under review, the global SOLARWORLD Change Program was launched. Its purpose is to increase employees' understanding of the necessary restructuring measures in the group. By preparing executive staff and employees for changes in processes and structures, the program helps them become actively involved shaping change in their area of work.

Despite all the changes, SOLARWORLD's guiding idea is still the same. Because our vision is steadfast, it remains the guiding idea for our successful restructuring.

**NUMBER OF EMPLOYEES REDUCED AGAIN.** In 2013, it was again necessary to look for cost savings in all areas of the group. This need, combined with additional restructuring measures, resulted in further job cuts at our production and sales locations. In other areas, however, we again appointed new people to key positions.

As of December 31, 2013, SOLARWORLD employed 2,073 (December 31, 2012: 2,355) permanent staff. There were also 316 temporary workers, whom we continue to employ on a flexible basis – mainly at our production sites – to ensure that our capacities are utilized in line with market conditions. However, we reduced the number of temporary workers to a minimum back in 2012. When hiring temporary workers, we rely on our long-standing collaboration with established temporary staffing companies. In principle, these employees are paid according to collective labor agreements.

As a result of the restructuring measures, in 2013 the group-wide number of employees including temporary workers fell around 6.6 percent to 2,389 (2012: 2,558). The attrition rate decreased to 14.6 (2012: 16.4) percent in 2013.

### 34 HEADCOUNT DEVELOPMENT // NUMBER OF PEOPLE

as at Dezember 31

	2013	2012	+/- absolute
Germany	1,447*	1,559**	-112
United States	607	769	-162
Rest of the world	19	27	-8
<b>Group</b>	<b>2,073</b>	<b>2,355</b>	<b>-282</b>

\* incl. 50 trainees

\*\* incl. 73 trainees

**LEANER STRUCTURES IN PRODUCTION AND SALES.** Far-reaching structural changes aimed at making necessary cost savings and increasing efficiency are currently taking place, particularly at our two production sites in Freiberg and Hillsboro. At the Freiberg site, the subsidiaries will be merged into one unit by mid-2014. Our American sites at Camarillo and Hillsboro will also be merged into one U.S. company. In future, sales and production will be jointly managed at the Hillsboro site. Sales activities in Camarillo, in greatly reduced form, will then concentrate exclusively on the Californian market.

In addition, we have shut down crystallization and wafer production at Hillsboro. ➞ Production • p. 055// The production closure affected 120 jobs; 61 employees were transferred to other positions.

**DEVELOPMENT OF GLOBAL ORGANIZATIONAL UNITS CONTINUED.** In 2013, we continued merging local into group-wide organizational units. This enables us as a group to adapt more flexibly and more efficiently to global market movements, and strengthens our competitiveness. Back in 2012, purchasing merged into a global unit. Its processes are now more efficient and more cost-effective due to the resulting synergies. Subsequently, the purchasing, logistics and planning functions were combined to form the organizational unit global supply chain management in 2013. ➞ Global Supply Chain – Procurement • p. 056// The year 2013 also brought integration in the large-scale projects business, which is now managed by the Utility Scale Project Business organizational unit. The primary objective in all these developments is to further strengthen our international competitive position.

In addition, we strengthened links between our sales subsidiaries SOLARWORLD AFRICA and SOLARWORLD ASIA PACIFIC with our export sales unit.

**CHANGE WORKSHOPS LAUNCHED.** Following its initiation in 2012, we launched the global Change Program at all group locations in 2013 for the successful future management of the extensive restructuring and associated changes affecting all departments. Thirty-one specially trained internal change agents, who are available to employees as trained advisors, are now supporting structural and process changes in all areas of the company. The change agents held a total of 31 change workshops group-wide in 2013 for top management and executive staff. The workshops helped executive staff develop methods to promote and shape the change process in their teams. With the group vision and strategy setting the overall direction, each department formulated its own internal vision and strategy, now to be followed by specific action plans. In this way, employees help to shape the change process. Step by step, they embrace and implement the necessary new structures.

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**STRONG CORPORATE CULTURE SUPPORTS CHANGE PROCESS.** Our vision, accompanied by our “green idea”, provides an important foundation for the implementation of our change program. For many employees, our strong corporate culture – built on this vision – is a key motivator when it comes to putting their experience and efforts into shaping the global realignment throughout the company. Nevertheless, in times of transformation, a strong corporate culture thrives on its willingness to adapt. One of the tasks of the change program, therefore, is to foster, reinforce and develop the corporate culture.

**SOLARWORLD VOTED ONE OF THE MOST ATTRACTIVE EMPLOYERS.** As before, we can attract new employees when we need to fill key positions. In addition, the 2013 employer ranking published by consulting firm Universum Communications shows that German students still see SOLARWORLD as an attractive employer. Future engineers and natural scientists again voted SOLARWORLD among the top 100 German employers.

**TALENT MANAGEMENT PROGRAM ENHANCED FOR NEW CAREER GOALS.** In 2013, employee support and development focused on preparing employees for the changed processes and new requirements. Therefore, we enhanced our global talent management program, adapting it for specific career needs. We introduced new elements into the talent development program to prepare employees who show distinct technical or managerial talent for task areas which were only recently created with the new organizational structures. In addition to assisting traditional managerial careers, another focus is a support program for specialist and project careers, via which we aim to develop new key competences in the company. Here experienced executives supervise high-potential employees in an internal mentoring program. As well as the training program, we created a platform which allows junior staff to regularly share their experiences with each other.

**EMPLOYEE DEVELOPMENT.** In addition to the change program, employees were offered a wide range of training opportunities such as language courses and project management seminars. By reducing language barriers, we aim to promote intercultural cooperation between our locations. Individual development support was provided in the form of 360° feedback. Expenses for training and professional development totaled € 0.4 (2012: 0.7) million in 2013.

**EMPLOYEE PROFIT-SHARING.** So that employees can share in the company’s profits, SOLARWORLD has established a profit-oriented employee participation scheme. However, in 2013, as in the previous year, employees did not receive any payouts since the targets for shipments, operating result and production costs were not met. The long-term plan is to modify the variable salary components and rules. But there will still be profit-sharing in the future.

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**LOWER NUMBER OF TRAINEES.** In view of the market situation, we had to significantly cut back our trainee programs during the year under review. We want our training opportunities to offer long-term prospects. Therefore, in connection with the restructuring measures, we decided to concentrate our training places in 2013 on those areas where there is a foreseeable possibility of subsequently being offered a permanent job. This is the case in IT or mechanical careers, for example. In 2013, 25 (2012: 23) young people completed their training at our two German sites. Of these, we hired 18 (2012: 21) as permanent employees. During the year under review, one of our trainees in Freiberg finished as one of the best trainees in process mechanics in Germany. However, a relatively low number of 5 young people started training at our Bonn and Freiberg sites in 2013. The trainee ratio in Germany was 3.5 (2012: 4.7) percent.

**SOLARWORLD APPEALS TO EMPLOYEES IN ALL AGE GROUPS.** Young and older employees are well represented at SOLARWORLD. The average age is 41. The sharing of ideas and experience between employees in different age groups helps to optimize our business performance and innovative power.

The proportion of women in the company remained nearly constant at 23.3 (2012: 23.5) percent. 49 (2012: 41) women currently work in management positions, a proportion of 19.4 (2012: 17.0) percent.

**CONTACT WITH UNIVERSITY RESEARCH AND TEACHING.** For a number of years, we have maintained consistent contact with students working on theoretical problems in photovoltaics research and development. At Freiberg in particular, we engage in extensive dialog with teaching staff and students. We conduct joint research projects in the fields of crystallization, wafers and systems, give various lectures for the photovoltaics master's degree program, and are involved in the postgraduate photovoltaics school, which we helped set up. Under various research projects, SOLARWORLD collaborates with many universities and research institutes in Germany and around the world. In this way, we give students and researchers an insight into industrial processes, and establish a close link between theory and practice. In 2013, joint workshops were organized with the University of Konstanz, Fraunhofer ISE in Freiburg, Fraunhofer CSP in Halle and the Palo Alto Research Center. SOLARWORLD has collaborated on a research project with Aalto University in Finland since 2013. SOLARWORLD is also represented on many advisory councils of non-university research institutions. These include Fraunhofer IISB in Erlangen, Fraunhofer IKTS in Dresden, and Fraunhofer ISE in Freiburg.

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**HEALTH AND SAFETY OF EMPLOYEES.** Safety is as important to us as the health of our employees. We promote improvements in both areas to help avoid accidents and reduce time lost to sickness. The accident rate in 2013 was 12.5 (2012: 12.1) per thousand employees. In Freiberg, the corporate health management team organizes three health days each year. To maintain our employees' performance – including with regard to demographic change – health courses such as back training, pilates and yoga are offered at all sites. We also offer fitness classes, various health check-ups and nutrition courses.

**EMPLOYEES INVOLVED IN PROCESS OPTIMIZATION.** Constant improvement of our production processes was a focus of change measures in 2013. Particularly given the need for cost savings, and following the guiding idea of the “green idea”, our employees tracked down incidences of potential waste and loss in production. In 2013, 28 teams from production, logistics, the technical service and administration were actively involved in the practical implementation of the Total Productive Management (TPM) process. Their main focus for the year was the fast, effective and quality-assured roll-out of our newly developed products into series production. In this way, they made an active contribution to strengthening SOLARWORLD's market position. During the year under review, at the Freiberg site in Germany alone, our employees identified further potential savings worth around € 2 million. Their commitment was acknowledged when external auditors presented SOLARWORLD with the Silver Award for Operational Excellence. In addition, at the Freiberg site alone, the company suggestions scheme yielded more than 65 proposals in 2013 for minimizing costs as well as improving processes and working conditions.

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## ECONOMIC POSITION 2013

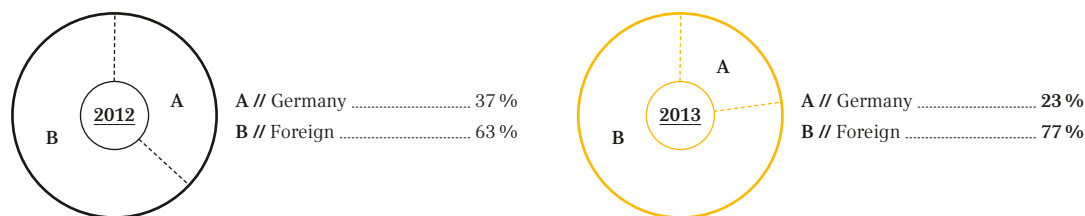
### INCOME POSITION

#### DEVELOPMENT OF REVENUE AND PROFIT OR LOSS

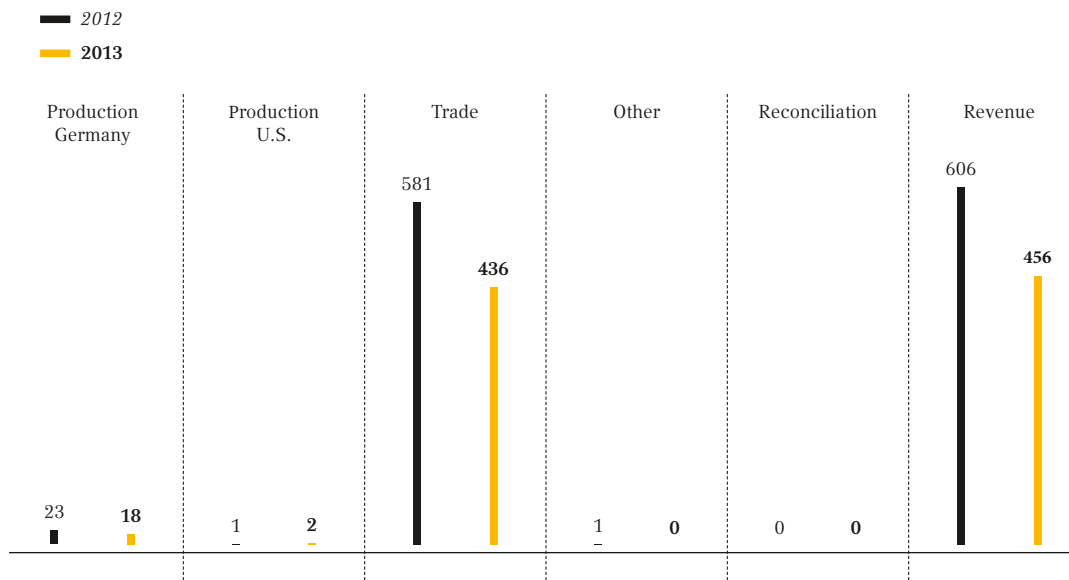
In the 2013 financial year, group-wide shipments of solar modules and kits fell by 3 percent to 548 (2012: 567) MW. Hence, SOLARWORLD did not achieve its target of increasing shipments in the “Trade” segment compared with the previous year. Developments in Germany were the main reason behind this. The German solar market shrank by more than half compared with 2012. <sup>(16)</sup> *New solar power installations in Germany* • p. 046// Apart from this general trend, the financial restructuring process at SOLARWORLD AG had a negative impact on the company’s business in Germany. Private customers in particular were reluctant to make a purchase because of the uncertain financial position of the SOLARWORLD group. Above all, this particularly affected the market for small and medium-sized roof-mounted systems and kits. Another reason why SOLARWORLD AG did not reach its shipment targets was because, contrary to plans, it was not able to implement any new large-scale projects owing to the restructuring. <sup>(35)</sup> *Trade* • p. 049//

Total group-wide shipments of wafers, solar modules and kits in the 2013 financial year reached 588 (2012: 608) MW. Our group-wide foreign sales quota rose 14 percentage points to 77 (2012: 63) percent as a result of weak demand in Germany and stable to very dynamic business in our other markets. The sharp decline in shipments, especially kits, and the low price level in general caused consolidated revenue to fall considerably by 25 percent or € 150.2 million to € 455.8 (2012: 606.0) million. The proportion of foreign revenue in 2013 totaled 70.6 (2012: 50.4) percent.

#### <sup>(35)</sup> SHIPMENTS DIVIDED INTO DOMESTIC AND FOREIGN SALES



### 36 REVENUE BY SEGMENT // IN M€



Revenue in the “Trade” segment fell much more sharply than shipments. It fell € 146 million to € 436 (2012: 582) million. Here too, SOLARWORLD had targeted an increase in 2013 compared with the previous year. The main reasons for the drop in revenue were the continuing low price level on international markets and a lower proportion of kits as opposed to solar modules, compared with the previous year. This in turn was due to the substantial decline in shipments in Germany, where in previous years SOLARWORLD always sold a higher than average proportion of kits. Shipments of solar wafers in 2013 totaled 40.5 (2012: 40.9) MW. Revenue in the “Production Germany” segment, which is primarily influenced by our wafer business, fell by € 5 million to € 18 (2012: 23) million. In the “Production U.S.” segment, revenue in 2013 amounted to € 1.2 (2012: 1) million.

Group-wide consolidated earnings before interest, tax, depreciation and amortization (EBITDA) improved in 2013 by € 56.0 to € –146.8 (2012: –202.8) million. EBITDA in the “Trade” segment increased by € 96.8 million to € –57.1 (2012: –153.9) million. EBITDA in our “Production Germany” and “Production U.S.” segments in the past financial year amounted to € –74.9 (2012: 9.1) million and € –28.9 (2012: –47.1) million respectively.

The substantial measurement assumptions and premises were reviewed and adapted in the course of the updates made to the impairment tests as part of the consolidated financial statements for the fiscal year 2012, which was prepared as at January 23, 2014. During the preparation of the consolidated

financial statements for the fiscal year 2013 the substantial measurement assumptions and premises were reviewed and adapted again. They did not lead to further impairment losses or reversal of impairments on fixed assets.

Group-wide consolidated earnings before interest and tax (EBIT) improved in 2013 by € 431.6 to € –188.7 (2012: –620.3) million. The improvements can partly be attributed to comprehensive restructuring measures to reduce costs. The main reason, however, is that no impairments on fixed assets were necessary (2012: –330) million. In the “Trade” segment, EBIT was € –59.3 (2012: –164.7) million. This is mainly due to cost reductions in procurement and high write-down on inventories in the previous year. We also improved our operating result compared with the previous year in the “Production Germany” and “Production U.S.” segments. EBIT increased to € –97.2 (2012: € –241.2) million and € –39.9 (2012: –194.3) million respectively.

The group-wide financial result in 2013 came to € –76.7 (2012: –67.5) million.

The consolidated result for the 2013 financial year amounted to € –228.3 (2012: –606.3) million.

#### DEVELOPMENT OF MATERIAL INCOME STATEMENT ITEMS

In the 2013 financial year, the cost of materials fell 49 percent to € 272.7 (2012: 534.5) million. This was primarily due to decreased production, cost cuts through optimization of the group-wide purchasing processes and improvements in the use of materials. The cost of materials ratio amounted to 74.8 (2012: 98.7) percent.

At the start of the first quarter of 2013, at both SOLARWORLD production sites in Freiberg and Hillsboro, we adjusted our production volumes in line with weak demand. At the Freiberg site, reduced working hours were implemented in the first quarter of 2013 to safeguard jobs while retaining the well-trained core workforce. Mainly as a result of staff cutbacks in the previous year, personnel expenses fell 13 percent or € 17.0 million to € 112.4 (2012: 129.4) million. However, the personnel cost ratio increased to 30.8 (2012: 23.9) percent due to decreased overall output.

Depreciation and amortization declined 90 percent or € 375.8 million to € 41.9 (2012: 417.7) million due to the recognition of impairment losses at the end of 2012.

Other operating expenses fell by € 61.6 million to € 185.5 (2012: 247.1) million. This reduction results in particular from group-wide cost reduction measures in the course of restructuring, especially regarding external personnel, maintenance and repair, and marketing. Impairment losses on prepayments amounted to € 76.0 (2012: 88.7) million in the 2013 fiscal year. The need to recognize impairment losses was mainly due to a revaluation of prepayments and repayment claims resulting from

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long-term raw materials supply contracts, which became necessary particularly because of an agreement with one of our long-term raw materials suppliers. In 2013, the expense ratio was 50.9 (2012: 45.8) percent.

Compared with the previous year, other operating income fell by € 107.2 million to € 59.3 (2012: 166.5) million. This decrease is primarily due to the previous year's higher earnings effects from the non-fulfillment and termination of long-term supply contracts with wafer customers. Furthermore, revenue from the reversal of accrued investment grants was reduced on account of the unscheduled reversal at the end of 2012 relating to the impairment tests on fixed assets which were performed as of December 31, 2012.

### 37 FIVE-YEAR COMPARISON OF INCOME POSITION // IN K€

	2009	2010	2011	2012	2013
Revenue	1,012,575	1,304,674	1,044,935	606,394	455,821
Changes in inventories	48,830	8,434	72,054	-64,666	-91,925
Own work capitalized	3,117	1,025	14,349	65	542
Other operating income	69,934	100,791	260,499	166,459	59,287
<b>Operating performance</b>	<b>1,134,456</b>	<b>1,414,924</b>	<b>1,391,837</b>	<b>708,252</b>	<b>423,725</b>
Cost of materials	-691,062	-834,780	-819,152	-534,568	-272,666
Personnel expenses	-99,783	-126,282	-138,224	-129,378	-112,366
Amortization and depreciation	-63,659	-88,503	-452,514	-417,564	-41,877
Other operating expenses	-127,127	-172,607	-225,805	-247,066	-185,480
<b>Operating result</b>	<b>152,825</b>	<b>192,752</b>	<b>-243,858</b>	<b>-620,324</b>	<b>-188,664</b>
Financial result	-21,073	-44,131	-59,492	-67,489	-76,739
Taxes of income	-72,779	-61,309	-5,592	81,522	37,096
Result from discontinued operations (after tax)	0	0	1,808	0	0
<b>Consolidated net result</b>	<b>58,973</b>	<b>87,312</b>	<b>-307,134</b>	<b>-606,291</b>	<b>-228,307</b>

### 38 INDICATORS OF INCOME POSITION // IN PERCENT

	2009	2010	2011	2012	2013
<b>Return on sales</b> (Consolidated net result/revenue)	5.8	6.7	n. a.	n. a.	n. a.
<b>Cost of materials ratio</b> (Cost of materials/revenue plus changes in inventory and own work capitalized)	64.9	63.5	72.4	98.7	74.8
<b>Personnel expenses ratio</b> (Personnel expenses/revenue plus changes in inventory and own work capitalized)	9.4	9.6	12.2	23.9	30.8

## FINANCIAL POSITION

### PRINCIPLES AND OBJECTIVES OF FINANCIAL MANAGEMENT

We align our financial management with the requirements of our operational business in the short and medium term, and with our corporate strategy in the long term. Thanks to close contacts with our creditors, and following extensive negotiations, we successfully restructured our financial liabilities in 2013, adjusting them in line with changes in market trends and the company's development. ➔ Group strategic financing • p. 031//

Our main financial instruments consist of bonds and structured loans. Central cash management invests liquidity positions almost exclusively in fixed deposits (day-to-day, weekly and monthly deposits) in the public and private German banking sector on a daily basis. Derivative financial instruments are used only as hedging instruments. ➔ Note 64b Principles and objectives of financial risk management • p. 202//

Most of SOLARWORLD's international financing instruments mature in 2019. Follow-up financing will not be necessary until 2019 at the earliest. An overview of long-term loans and repayment arrangements is provided in the notes, see ➔ Note 64e Liquidity risks • p. 204//.

### FINANCING ANALYSIS

As compared to December 31, 2012, equity decreased by € 231.7 million to € -243.1 (December 31, 2012: -11.4) million by the end of 2013, which can be attributed in particular to the high consolidated loss. As at the balance sheet date, our financial liabilities increased to € 1,022.1 (December 31, 2012: 1,004.8) million, mainly due to accrued interest. On the cut-off date, 52.2 (December 31, 2012: 53.5) percent of our financial liabilities were classified as non-current.

Investment grants and subsidies recognized in non-current liabilities decreased to € 31.1 (December 31, 2012: 38.2) million per end of the period. These public funds accrued on the liabilities side of the balance sheet are reversed over the period of utilization of subsidized investments through profit or loss.

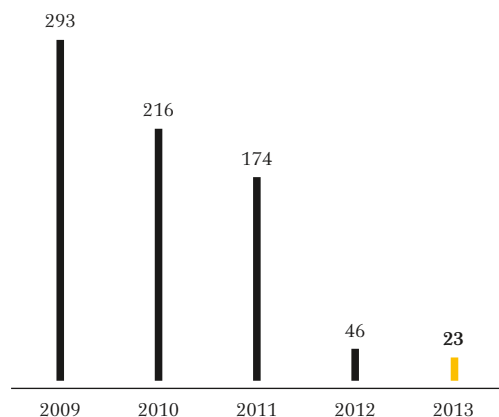
Other non-current liabilities decreased by € 26.7 million to € 0.3 (December 31, 2012: 27.0) million. This was due in particular to the reclassification to other current liabilities of non-current portion of customer advances for supply contracts (December 31, 2012: € 26.3 million), which in the previous year was shown under the position other non-current liabilities.

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**INVESTMENT ANALYSIS**

In the 2013 financial year, we invested a total of € 22.8 (2012: 46.5) million in intangible assets and property, plant and equipment. Of this total amount, € 6.0 million concerned wafer production, € 4.8 million cell production and a further € 0.9 million module production at our German Freiberg site, with the result that total investment in the “Production Germany” segment in 2013 amounted to € 11.7 million.

Another € 6.5 million were invested in cell and module production at our Hillsboro/U.S. site in the “Production U.S.” segment. Investment in the “Trade” segment amounted to € 1.8 million. We invested € 1.7 million in our research and development entity SOLARWORLD INNOVATIONS GMBH, which is part of the “Other” segment.

**③ DEVELOPMENT OF INVESTMENTS // IN M€****LIQUIDITY ANALYSIS**

At the cut-off date, liquid funds amounted to € 163.7 (December 31, 2012: 224.1) million and included cash and cash equivalents that mainly consisted of day-to-day money and fixed deposits.

Cash flow from operating activities in 2013 amounted to € 17.3 (2012: –47.2) million.

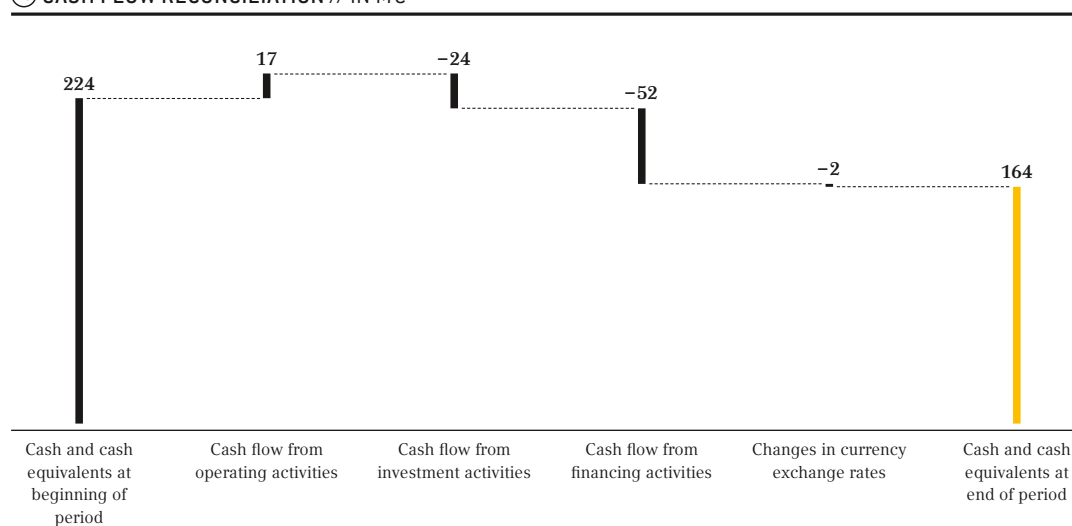
Cash flow from investment activities amounted to € –23.9 (2012: 13.0) million. This is attributable almost completely to investments in fixed assets.



Cash flow from financing activities amounted to € -52.2 (2012: -294.7) million on the cut-off date and consists almost entirely of interest payments made at the start of the year, in particular for the two outstanding bonds.

SOLARWORLD group failed to meet agreed covenants at December 31, 2012, with the result that certain creditors of borrowed funds in a nominal amount of € 404.5 million (mostly from issued assignable note loans) in principle had an extraordinary right to demand early redemption. At this point, we entered into negotiations with the creditors of the financing agreements in question. In a restructuring agreement, these creditors refrained from exercising their rights to demand early redemption and deferred their principal and interest claims. ➔ [Note 64e Liquidity risks](#) • p. 204//

#### ④0 CASH FLOW RECONCILIATION // IN M€



#### ④1 FIVE-YEAR COMPARISON OF FINANCIAL POSITION // IN K€

Capital	31/12/09	31/12/10	31/12/11	31/12/12	31/12/13
Equity	865,462	914,372	614,391	-11,409	-243,084
Non-current liabilities	1,119,411	1,340,349	1,339,273	634,669	600,023
Current liabilities	232,177	341,637	282,108	568,970	574,896
<b>Total</b>	<b>2,217,050</b>	<b>2,596,358</b>	<b>2,235,772</b>	<b>1,192,230</b>	<b>931,835</b>

## ④2 FINANCIAL POSITION INDICATORS // IN PERCENT

	2009	2010	2011	2012	2013
<b>Return on equity</b> (Consolidated net income/equity)	6.8 %	9.5 %	n. a.	n. a.	<b>n. a.</b>
<b>ROCE (key date)</b> (EBIT/Capital Employed*)	13.7 %	14.4 %	n. a.	n. a.	<b>n. a.</b>
<b>First degree liquidity</b> (Liquid funds + other financial assets/current liabilities)	2.2	2.1	2.1	0.7	<b>0.4</b>
<b>Second degree liquidity</b> (Liquid funds + means available on short notice/ current liabilities)	3.2	2.6	2.8	0.8	<b>0.5</b>
<b>Third degree liquidity</b> (Current assets/current liabilities)	4.3	3.6	4.1	1.2	<b>0.8</b>

\* Intangible assets and property, plant and equipment less investment subsidies plus net current assets excluding financial means and financial liabilities

## ASSETS POSITION

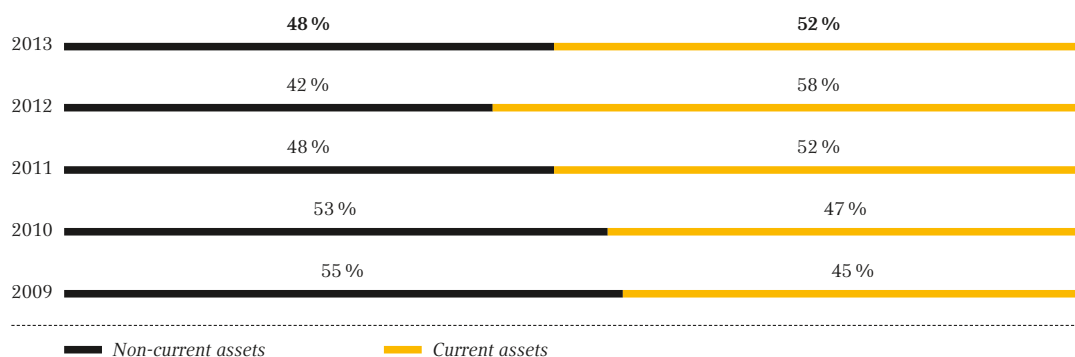
## ASSET STRUCTURE ANALYSIS

As compared to December 31, 2012, SOLARWORLD group's total assets decreased by € 260.4 million to € 931.8 (December 31, 2012: 1,192.2) million.

Non-current assets decreased by € 18.0 million to € 483.0 (December 31, 2012: 501.0) million. Particularly as a result of the sale of two projects in the United States, our inventories (excluding short-term advance payments made) decreased by € 109.6 million to € 102.2 (December 31, 2012: 211.8) million. This was also the main reason for the reduction in working capital by € 101.2 million to € 133.6 (December 31, 2012: 234.8) million. Receivables fell by € 6.7 million to € 48.9 (December 31, 2012: 55.6) million and trade payables decreased by € 15.1 million to € 17.5 (December 31, 2012: 32.6) million. Advance payments made on short notice rose to € 17.0 million (December 31, 2012: 10.7) million and income tax credits increased € 0.3 million to € 1.4 (December 31, 2012: 1.1) million.

## ④③ FIVE-YEAR COMPARISON OF THE ASSETS POSITION // IN K€

Assets	31/12/09	31/12/10	31/12/11	31/12/12	31/12/13
Non-current assets	1,211,471	1,364,377	1,068,447	501,001	<b>483,003</b>
Current assets	1,004,743	1,231,981	1,167,326	689,917	<b>441,800</b>
Assets held for sale	836	0	0	1,312	<b>7,032</b>
<b>Total assets</b>	<b>2,217,050</b>	<b>2,596,358</b>	<b>2,235,773</b>	<b>1,192,230</b>	<b>931,835</b>



## ④④ ASSETS POSITION INDICATORS // IN PERCENT

	31/12/09	31/12/10	31/12/11	31/12/12	31/12/13
<b>Equity ratio</b> (Equity/total assets)	39.0 %	35.2 %	27.5 %	n. a.	<b>n. a.</b>
<b>Investment intensity</b> (Non-current assets/total assets)	54.6 %	52.5 %	47.8 %	42.0 %	<b>51.8 %</b>
<b>First degree equity-to-fixed assets ratio</b> (Equity/non-current assets)	0.7	0.7	0.6	n. a.	<b>n. a.</b>
<b>Second degree equity-to-fixed assets ratio</b> (Equity + non-current liabilities/ non-current assets)	1.6	1.7	1.8	1.2	<b>0.7</b>

## OFF BALANCE SHEET FINANCIAL INSTRUMENTS

Off balance sheet financial instruments have no impact on the group's asset position.

## ASSETS NOT SHOWN IN THE BALANCE SHEET

The group had no assets not shown in the balance sheet as at December 31, 2013.

# SUPPLEMENTARY REPORT

## DISCLOSURE AND IMPACT OF EVENTS OF PARTICULAR IMPORTANCE

**FINANCIAL RESTRUCTURING SUCCESSFULLY COMPLETED.** On January 13, 2014, the Cologne Higher Regional Court approved the applications for summary judgments which SOLARWORLD AG filed in October 2013. As a result, it was possible to implement the noteholders' and shareholders' resolutions that were adopted in August 2013. Furthermore, in January 2014, all creditor groups and noteholder representatives as well as the new investor Qatar Solar S.P.C. signed the final restructuring agreement. This agreement contains the individual financial restructuring steps and makes them legally binding on all parties to the agreement. On January 20, 2014, the capital reduction in the ratio of 150:1 that was approved by shareholders on August 7, 2013, was entered in the commercial register. On January 27, 2014, the German Federal Financial Supervisory Authority (BaFin) approved the prospectuses for the new shares and bonds that were issued as part of the financial restructuring program. On February 24, 2014, the implementation of the capital increase by contribution in kind for SOLARWORLD AG was entered in the commercial register of the local court of Bonn. As a result, the financial liabilities of SOLARWORLD AG were reduced from around € 1 billion by € 570 million to € 427 million and the financial restructuring which began in January 2013 was completed. Finally, QATAR SOLAR TECHNOLOGIES Q.S.C. has provided us with a loan of € 50 million.

After issuing 14,151,200 new shares from the contribution in kind amounting to a total of € 570 million less expenses resulting from the reversal of deferred taxes on tax loss carryforwards of around € 114 million, the carrying amount of equity after implementing the capital increase is € 212 million. This does not take account of other effects resulting from business operations since January 1, 2014.

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#### ④5 PRO-FORMA OVERVIEW OF SELECTED BALANCE SHEET ITEMS AFTER FINANCIAL RESTRUCTURING

in k€	Non-current and current financial liabilities	Equity	Total assets
As at Dec. 31, 2013	1,022,137	-243,084	931,835
Debt to equity swap (closing)	-569,877	569,877	0
Repayment immediately after closing	-33,181	0	-33,181
Deferred taxes (projected)	0	-114,701	-114,701
Super Senior Facility	50,000	0	50,000
As at Feb. 24, 2013	<b>469,078</b>	<b>212,092</b>	<b>833,953</b>

The capital stock of SOLARWORLD AG was increased from € 744,800.00 by € 14,151,200.00 to € 14,896,000.00. It is now divided into 14,151,200 no-par value shares to which a pro-rata amount of the capital stock of € 1.00 per share is attributed (new shares, ISIN: DE000A1YDED6), and 744,800 no-par value shares to which a pro-rata amount of the capital stock of € 1.00 per share is attributed (old shares, ISIN DE000A1YCMM2).

The new no-par value shares have a full entitlement to participate in profits only as of January 1, 2014. They were listed on the stock exchange on March 5, 2014. After SOLARWORLD AG holds its next Annual General Meeting (AGM), which is expected to be on May 30, 2014, the new shares will be listed together with the old shares as ISIN DE000A1YCMM2.

**EXERCISE OF ACQUISITION RIGHTS.** Within the acquisition period of February 3 to 21, 2014, noteholders in each case made use of more than 80 percent of their rights to acquire new shares and notes of the new secured bonds. New shares and notes of the new secured bonds for which noteholders did not exercise their acquisition rights were offered to existing noteholders and entitled existing shareholders of SOLARWORLD AG for additional subscriptions.

Applications for additional purchases of the notes of the new secured bonds were allotted the full amount of the respective order. The allocation price was € 265.00 for each note of the new secured bond SOLARWORLD FRN IS. 2014/2019 series 1116 (ISIN DE000A1YDDX6) and € 316.73 for each note of the new secured bond SOLARWORLD FRN IS. 2014/2019 series 1017 (ISIN DE000A1YCN14).

The remaining new shares were several times over-subscribed, which meant that each application could only be allocated 50 shares plus just over 10 percent of the order volume above that amount. The allocation price was € 12.50 per share.

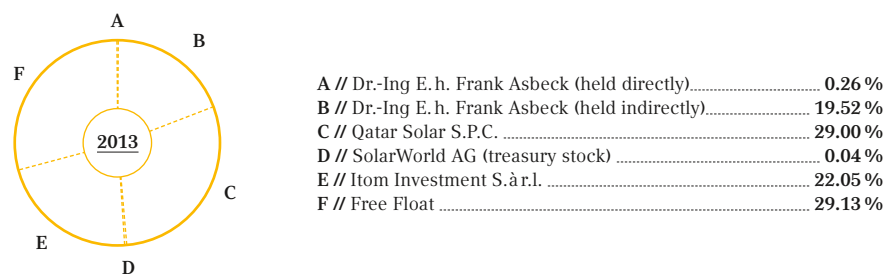
**SHAREHOLDERS' STRUCTURE SUBSTANTIALLY REVISED.** Implementing the financial restructuring program caused fundamental changes in the shareholder structure of SOLARWORLD AG. The strategic investor Qatar Solar S.P.C. acquired a stake of 29.00 percent in the new capital stock of SOLARWORLD AG. Itom Investment S.à.r.l., a company formed specifically to handle the technical implementation of the financial restructuring, reported to us that it held 22.05 percent of the voting rights in SOLARWORLD AG as of March 12, 2014. Furthermore, the share of voting rights held by CEO Dr.-Ing. E.h. Frank Asbeck on the cut-off date March 12 was 19.78 percent. 19.52 percent of voting rights are held indirectly by the controlled companies Solar Holding Beteiligungsgesellschaft mbH and Eifelstrom GmbH and are attributable to Dr.-Ing. E.h. Frank Asbeck pursuant to § 22 (1) Sentence 1 No. 1 WpHG. <sup>(46)</sup> Shareholders' structure after financial restructuring • p. 082 //

In the course of issuing the new SOLARWORLD shares, the company received numerous voting rights announcements pursuant to §§ 21, 25 and 25a WpHG, which SOLARWORLD AG immediately published in accordance with § 26 of the German Securities Trading Act (WpHG). All publications can be accessed on the website of the ad-hoc notification service dgap at @ [www.dgap.de//](http://www.dgap.de//).

In addition, SOLARWORLD AG published several notifications of directors' dealings pursuant to § 15a of the German Securities Trading Act (WpHG), which took place after the cut-off date December 31, 2013. The corresponding information is provided on the company's website at @ [www.solarworld.de/en/directors-dealings//](http://www.solarworld.de/en/directors-dealings//). <sup>(47)</sup> Directors' Dealings pursuant to § 15a WpHG • p. 083 //

#### <sup>(46)</sup> SHAREHOLDERS' STRUCTURE AFTER FINANCIAL RESTRUCTURING

as at March 12, 2014





## ④7 DIRECTORS' DEALINGS PURSUANT TO § 15a WpHG

Communicator	Date of transaction	Date of notification	Kind of transaction	Financial instrument	Quantities	Location
Dr.-Ing. E. h. Frank Asbeck (CEO)	08/01/14	14/01/14	Sale	SOLARWORLD share (DE0005108401)	812,886	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	09/01/14	14/01/14	Sale	SOLARWORLD share (DE0005108401)	1,402,352	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	10/01/14	14/01/14	Sale	SOLARWORLD share (DE0005108401)	635,396	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	13/01/14	14/01/14	Sale	SOLARWORLD share (DE0005108401)	1,252,543	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	14/01/14	14/01/14	Sale	SOLARWORLD share (DE0005108401)	1,850,000	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	15/01/14	21/01/14	Sale	SOLARWORLD share (DE0005108401)	1,762,000	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	16/01/14	21/01/14	Sale	SOLARWORLD share (DE0005108401)	1,736,829	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	17/01/14	21/01/14	Sale	SOLARWORLD share (DE0005108401)	2,429,400	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	20/01/14	21/01/14	Sale	SOLARWORLD share (DE0005108401)	2,000,000	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	21/01/14	21/01/14	Sale	SOLARWORLD share (DE0005108401)	1,200,000	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	22/01/14	27/01/14	Sale	SOLARWORLD share (DE0005108401)	1,300,000	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	23/01/14	27/01/14	Sale	SOLARWORLD share (DE0005108401)	2,400,000	Xetra, Stuttgart
Dr.-Ing. E. h. Frank Asbeck (CEO)	24/01/14	27/01/14	Sale	SOLARWORLD share (DE0005108401)	2,000,000	Xetra, Stuttgart
Event on Jan. 27, 2014:	Technical implementation of capital reduction at a ratio of 150:1 – Renaming of former SOLARWORLD share to ISIN DE000A1YCM2					
Event on Feb. 24, 2014:	Commercial registration of implementation of capital increase – Issuing of new shares of SOLARWORLD AG ISIN DE000A1YDED6					
Solar Holding Beteiligungsgesellschaft mbH (controlled by CEO)	24/02/14	28/02/14	Purchase	new SOLARWORLD share (DE000A1YDED6)	2,904,720	off-market
Eifelstrom GmbH (controlled by CEO)	28/02/14	06/03/14	Purchase	new SOLARWORLD share (DE000A1YDED6)	1,499	off-market
Solar Holding Beteiligungsgesellschaft mbH (controlled by CEO)	28/02/14	06/03/14	Purchase	new SOLARWORLD share (DE000A1YDED6)	1,499	off-market
Dr.-Ing. E. h. Frank Asbeck (CEO)	28/02/14	06/03/14	Purchase	new SOLARWORLD share (DE000A1YDED6)	11,339	off-market
Philipp Koecke (CFO)	28/02/14	06/03/14	Purchase	new SOLARWORLD share (DE000A1YDED6)	8,000	off-market

**TRADE VOTE AGAINST UNFAIR COMPETITION IN THE UNITED STATES.** On February 14, 2014, the International Trade Commission (ITC) made unanimous affirmative preliminary determinations that the solar industry in the United States continues to be injured by imports from China and Taiwan as a third country. SOLARWORLD INDUSTRIES AMERICA INC. had filed cases against illegal trade practices on December 31, 2013. The determination by ITC is the first of four steps in a procedure, which could lead to an extension of duties imposed in 2012. ➔ International trade conflicts • p. 047//

**PRODUCTION LINES ACQUIRED FROM BOSCH SOLAR ENERGY AG.** On March 12, 2014, as planned, SOLARWORLD INDUSTRIES-THÜRINGEN GMBH, a wholly owned subsidiary of SOLARWORLD AG, acquired cell and module production assets from Bosch Solar Energy AG in Arnstadt, Thuringia. SOLARWORLD INDUSTRIES-THÜRINGEN GMBH will employ around 800 people when production begins in mid-March 2014. The acquisition increases production capacities at the cell and module stages of the value chain, and strengthens the group's technological foundation. ➔ Future development in production • p. 114//

## OVERALL STATEMENT BY THE MANAGEMENT BOARD ON THE ECONOMIC POSITION AT THE TIME OF THE REPORT

The management of SOLARWORLD AG rates the economic position of the group as difficult. This assessment is based on the earnings, financial and asset position resulting from the consolidated financial statements for 2013 as outlined above, and ongoing business trends in 2014 at the time of drawing up this Group Management Report. Although the financial restructuring of SOLARWORLD AG was closed on February 24, 2014, the position of the group is to be considered challenging because the consolidation of the solar industry is not over yet and it cannot be ruled out that difficulties arise in the implementation of the planned operational restructuring measures.

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# #3: GROUP MANAGEMENT REPORT FORECAST



REAL VALUE – FOR OUR CUSTOMERS, THIS MEANS:

**A SECURE INVESTMENT – GUARANTEED  
RETURNS FOR A MODULE LIFETIME**

# #3 GROUP MANAGEMENT REPORT FORECAST

## **087** RISK REPORT

- 087** *Opportunity and risk management system*
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in relation to the group accounting process*
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## **108** OPPORTUNITY REPORT

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# RISK REPORT

087

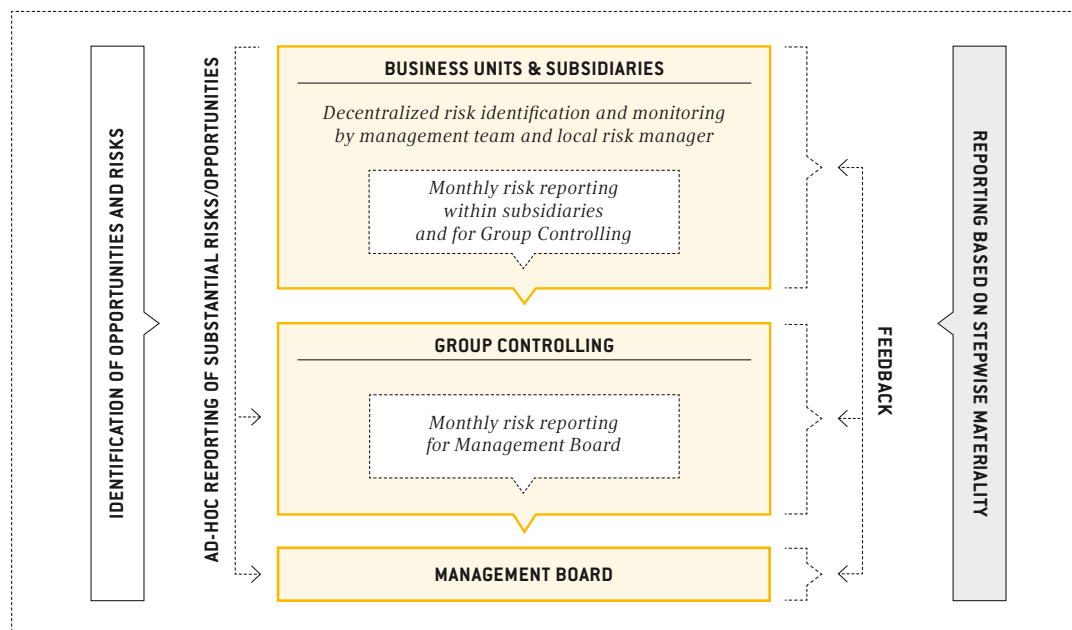
## OPPORTUNITY AND RISK MANAGEMENT SYSTEM

An opportunity and risk management system is necessary to enable the prompt identification and analysis of risks and as far as possible the proactive introduction of counter-measures. It is equally important to identify and exploit market opportunities at an early stage. Thus a strong opportunity and risk management system helps to safeguard the group's ongoing existence in the long term and enhance corporate value.

Based on the corporate strategy, the Management Board defines the essential features of the risk policy and manages the company accordingly. Group controlling, which is responsible for global opportunity and risk reporting, together with local risk managers supports the Management Board in assessing the probability of occurrence and effect on earnings of major opportunities and risks. One particular purpose of the opportunity and risk management system is to identify risks that could in principle threaten the continued existence of the company. Taking into account the acceptable overall risk level, the Management Board assesses all options available to the company to counteract the risks identified as being a threat to the company's survival. The Supervisory Board is involved in an advisory capacity in all decisions concerning fundamental structural measures. The measures to be introduced are defined, implemented and controlled with the involvement of the Management Board, group controlling and local business management as well as risk managers. Insurance policies are taken out for the purpose of risk management where possible and economically justifiable.

All fully consolidated companies in the SOLARWORLD group are included in the opportunity and risk management system. Responsibility for identifying and monitoring risks primarily resides locally with managers in the first and second management levels. They are assisted by local risk managers, who produce monthly opportunity and risk management reports for group controlling. This reporting is prepared taking materiality limits into account in respect of the impacts of opportunities and risks. In the case of risks and opportunities which are considered to have a highly material potential impact, reporting takes place immediately and directly to the Management Board.

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Local reports are made available to the Management Board by group controlling in consolidated form. In addition, the Management Board is continuously informed about current market trends and receives regular competitor analyses. In Management Board meetings, this market and competitor information is considered, material opportunities and risks are discussed, trends and measures to be implemented are examined. ➞ Strategic group management • p. 033 //

## INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM IN RELATION TO THE GROUP ACCOUNTING PROCESS

The objective of the internal control and risk management system with regard to the (group) accounting process is to make sure that accounting is uniform and in line with legal requirements, generally accepted accounting principles, the International Financial Reporting Standards (IFRS), as to be



applied in the European Union, and internal group guidelines so as to provide recipients of the consolidated financial statements with true and reliable information. To this end, SOLARWORLD AG has principles, processes and measures in place whose essential characteristics can be described as follows:

Within the SOLARWORLD group, there is a clear-cut management and enterprise structure in which the various group companies enjoy a large measure of independence and individual responsibility. Based on this structure, however, the functions of finance and accounting, controlling, and investor relations essential to the accounting process are controlled throughout the group by corresponding departments.

The functions and responsibilities of finance and accounting, controlling, and investor relations are clearly separated and allocated mutual control processes that ensure a continuous exchange of information.

The basis of the internal control system is provided by precisely defined preventive and monitoring control mechanisms such as systematic and manual coordination processes, predefined approval processes, the separation of functions, and adherence to guidelines.

The financial systems used are protected against unauthorized access by appropriate installations in the IT system. We use standard software wherever possible.

Uniform accounting is guaranteed in particular by accounting guidelines that apply groupwide and by a standardized reporting format. The guidelines and the reporting format are regularly reviewed and updated by members of the group accounting department.

Group companies prepare their financial statements locally and communicate these in the prescribed format to group accounting. The companies themselves are responsible for adherence to group accounting guidelines as well as the proper and timely management of all accounting-related processes and systems. In this context they are fully supported by group accounting throughout the entire accounting process.

Adherence to the accounting guidelines as well as the time and process requirements are monitored by group accounting. In addition to systems technology controls, manual controls and analytical audit procedures are in place. Here, the appropriate control environment is taken into consideration as much as the relevance of certain accounting facts regarding the contents of the financial statements.

Group accounting acts as the central point of contact for special technical questions and complex accounting issues. If required, external experts (auditors, qualified accounting specialists, etc.) will be consulted.

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On the basis of data supplied by the group companies, consolidation takes place centrally in group accounting. In general, as a minimum, the principle of dual control applies at every level.

Independently of group accounting, a monthly analysis of target/actual and actual/actual deviations is carried out by group controlling, as a result of which an examination of major or implausible changes takes place at an early point in time.

RISK MANAGEMENT SYSTEM IN RELATION TO FINANCIAL INSTRUMENTS

The task and objective of risk management with regard to financial instruments is to continually monitor market, liquidity and default risks and limit them if necessary by means of operational and financial measures. Rules and regulations have been established to control the use and handling of financial instruments, thus ensuring that no material financial transactions can take place without consulting the Management Board of SOLARWORLD AG. Risk monitoring is the responsibility of the respective boards and managing directors of the subsidiaries, who directly report existing and newly emerging financial risks to the Management Board of SOLARWORLD AG.

Derivatives are also used alongside financial instruments as a way of controlling financial risks. Derivative financial instruments are used exclusively for hedging purposes and not for trading or speculative purposes. Financial risks such as price, currency, and interest rate risks arising from our international business operations are countered by means of framework agreements, deadlines and hedges. We also refer to the following information on the respective individual risks and the disclosures in the notes. ➞ Note 64b Principles and objectives of financial risk management • p. 202 //

INDIVIDUAL RISKS

Legend:

Risk assessment		Time horizon of effects	
↑	Up versus previous year	short-term	one to three years
↓	Down versus previous year	medium-term	three to five years
→	Flat versus previous year	long-term	more than five years

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**Preliminary note:** For the purposes of risk analysis and the disclosed counter-measures, we do not distinguish between the reportable operative segments “Production Germany” and “Production U.S.” in our in-house production, except in the case of risk factors which need to be assessed differently by region. Counter-measures may serve to reduce the risk › **reduce**, transfer the risk to third parties › **transfer**, e. g. by taking out insurance, or consciously assume the risk › **assume**.

49 MACRO-ECONOMIC RISKS →

Risks
<p>1. <b>Sovereign debt crisis and/or recession:</b> Tighter financing terms and instable economic conditions; lower private consumption, increased inflation risk</p> <p>2. <b>Falling domestic electricity prices:</b> Delays in solar power becoming competitive/reaching grid parity; slowdown in tapping new markets</p>
Probability
<p>1. <b>High:</b> The existing levels of national debt in the euro area may further threaten the stability of the euro. This could negatively influence the economic and financial position. Restrictive fiscal policy could slow down the economy and reduce the private sector's propensity to invest. Overall, we expect continued high risk with regard to tighter financing terms. In the short term, credit bottlenecks could occur for large-scale investment projects and especially for project financing.</p> <p>2. <b>Low:</b> Since falling costs of primary sources of energy were hardly passed on to customers in the past, and energy prices are expected to tend to rise in the future due to the further increase in energy demand, we assess the risk as low.</p>
Effect (strength, time horizon)
<p>1. <b>Medium, short-term to long-term:</b> A decline in demand by end customers might have a medium effect on our group revenue and earnings. Large-scale projects would be worst affected by a tougher financing environment.</p> <p>2. <b>Medium, medium-term:</b> Over the medium term, domestic electricity prices will impact on our business since end customers may choose between self-produced solar power or power from a utility company, i. e. the electricity generation costs of a solar power system are compared with domestic electricity prices.</p>
Counter-measures
<p>• <b>Trade:</b> Our internationalization strategy helps us spread the risk of a decline in consumption among various regional markets › <b>reduce</b>. By offering a diversified range of products, we appeal to various customer groups in order to spread the financing risk and compensate for shifts in demand › <b>reduce</b>. ➞ <i>Future sales markets</i> • p. 113//</p> <p>• <b>Production; Other:</b> Ongoing cost reductions and efficiency enhancements along the entire value chain have already enabled us to undercut domestic electricity prices in a number of markets, and we continue to get closer elsewhere › <b>assume</b>.</p>

## 50 POLITICAL AND REGULATORY RISKS ↑

### Risks

1. **Changes in laws promoting solar power:** Slower market growth due to a reduction in or even abolition of financial incentives in individual countries
2. **EEG levy exemptions:** Risk of subsequent payments due to the ongoing formal investigation procedure of the German Renewable Energy Sources Act (*EEG*) by the EU Commission

### Probability

1. **High:** Economic incentives for solar power are discussed time and again by policymakers in important sales markets such as Germany, the United States, Italy and France. Further changes to legislation can be expected in these countries in 2014. For example, the new German government coalition once again intends to amend the Renewable Energy Sources Act. Overall, government financial incentives for solar power will be further reduced. ➞ *The future solar power market • p. 110 //*
2. **Low:** The German federal government does not assume a violation of EU state aid legislation and would lodge an appeal against a different decision by the EU Commission.

### Effect (strength, time horizon)

1. **High, short-term to medium-term:** Declines in demand due to changes in the regulatory framework in individual regions may temporarily have a negative impact on our revenue and earnings. As long as grid parity has not been achieved in individual markets, SOLARWORLD will be exposed to this risk.
2. **Medium, long-term:** If the EU Commission concluded that the exemptions for electricity-intensive enterprises violates the EU state aid legislation, the German subsidiary DEUTSCHE SOLAR GMBH will possibly be obliged to pay back up to a two-digit million amount.

### Counter-measures

- **Trade:** We spread this risk across several markets by means of our international presence › **reduce**. ➞ *Future sales markets • p. 113 //*
- **All segments:** Continuous cost reductions and efficiency enhancements facilitate faster achievement of grid parity and thus progressive independence from incentives with long-term competitive pricing › **assume**.
- **All segments:** We engage in dialog with politicians and society, are active in several industrial associations and are committed at a socio-political level to increasing the percentage of photovoltaics in the energy supply › **assume**.

51 RISKS ARISING FROM ALTERNATIVE SOLAR POWER TECHNOLOGIES →

Risks
Technological breakthrough or sharp cost reductions in alternative solar power technologies: Risk of substitution for crystalline technologies
Probability
<b>Low:</b> Due to current silicon price levels, few manufacturers of alternative solar power technologies have cost benefits versus crystalline manufacturers. This particularly applies to the roof-mounted systems market as alternative solar power technologies only have low module efficiency, making optimum use of limited roof space more difficult.
Effect (strength, time horizon)
<b>Medium, long-term:</b> Successful competitors might reduce our market share and increase price competition, thus placing stronger pressure on margins. This might adversely affect our revenue and earnings.
Counter-measures
<ul style="list-style-type: none"><li>• <b>Production; Other:</b> Ongoing investments in research and development to enhance efficiency and optimize costs › <i>assume</i>.</li><li>• <b>Production; Other:</b> Regular, analytical observation of the development of alternative technologies in the market › <i>reduce</i>. → <i>Opportunity and risk management system</i> • p. 087 //</li></ul>

## ⑤2 RISKS FROM TOUGHER COMPETITION ↓

## Risks

**Intensification of competitive pressure:** Continuation of consolidation at all stages of the value chain in the solar industry; increased competition from state-sponsored manufacturers; unfair pricing practices; excess capacities; dumping

## Probability

**Medium:** The consolidation wave is slowing down, but the competitive pressure persists and could prevent a lasting stabilization of sales prices. In spite of the legal measures in the EU and the U.S. (countervailing duties and undertaking concerning minimal prices) against the infringements of international trade law, the danger of unfair competition still exists. It rises as competitors sell below production costs on a long-term basis to drive competitors out of the market → [The future solar power market](#) • p. 110 //

## Effect (strength, time horizon)

**High, medium-term to long-term:** Loss of market share, failing profitability and increased negative margin trends due to unfair trade practices and stronger international price competition may weigh down revenue and earnings. The longer the consolidation of the solar industry continues in such a way, the more difficult it is for companies to implement successful measures to restore business profitability.

## Counter-measures

- **Trade:** Differentiation of our products through innovation, quality, service and design › **reduce**; customer retention programs › **reduce**. → [Brand and marketing](#) • p. 051 //
- **Other:** Legal steps to guard against dumping and unfair competition by Chinese solar manufacturers in Europe › **assume**. → [International trading disputes](#) • p. 047 //
- **Other:** Strategic alliances and acquisitions to reach synergy effects and thus to strengthen the market position of the group › **transfer**. → [Production lines acquired from Bosch Solar Energy AG](#) • p. 084 //
- **Production; Other:** Optimization of production along the entire value chain to improve our cost structure; research and development › **assume**
- **Production; Other:** Measures to make capacity utilization more flexible › **reduce** → [Future development in production](#) • p. 114 //

## 53 PROCUREMENT RISKS →

## Risks

1. **Varying opinions in regard to the fulfillment of long-term silicon contracts:** Silicon manufacturers insist on fulfillment of unfavorable purchase terms from older long-term contracts; supplier relationships could be burdened.
2. **Costs of purchasing other raw materials (silver, copper, aluminum, etc.) on the rise:** Higher procurement costs, strong speculative fluctuations – particularly for silver, aluminum and copper, inaccurate hedging for forward transactions
3. **Deterioration of procurement conditions:** Suppliers could reduce their payment terms/credit limits for SOLARWORLD, or only deliver after advance payments.

## Probability

1. **High:** According to external legal opinions, these long-term silicon supply contracts violate EU anti-trust laws and are more likely than not null and void. Therefore, SOLARWORLD intends to demand the return of the prepayments and/or to achieve consensus-based commercial solutions.
2. **High:** A rise in the international demand for raw materials in all industries could cause raw material prices to rise.
3. **Medium:** Owing to SOLARWORLD's uncertain economic position in 2013, some suppliers were unable to insure receivables from companies in the SOLARWORLD group. This caused some suppliers to reduce their credit limits and payment terms for SOLARWORLD, or only make deliveries subject to advance payment. After completion of the financial restructuring, the probability that this occurs has decreased. It can be expected that SOLARWORLD is able to agree on usual payment terms with its suppliers because of its improved balance sheet structure.

## Effect (strength, time horizon)

1. **High, short-term to medium-term:** As a rule, our silicon supply contracts are take-or-pay contracts. However, the company assumes that these contracts are null and void and that claims for restitution in regard to these prepayments exist. Nevertheless, a partial or a total loss of the prepayments or further claims for damages cannot be completely excluded if the company cannot agree with its suppliers or courts make different assessment.
2. **High, short-term:** Higher prices for other raw materials could negatively impact earnings and margins.
3. **Medium, short-term:** Temporary lockup of liquid funds. Deliveries subject to advance payment could mean that the SOLARWORLD group has to bear the corresponding supplier's risk of default, defective performance or non-performance.

## Counter-measures

- **Production; Trade:** Expansion of our supplier networks and maintenance of our good, long-term supplier relationships; renegotiations with suppliers; flexibilization of purchase terms › **assume** ⊕ *Future Development in the Global Supply chain – Procurement* • p. 116//
- **Production; Trade:** Use of alternative products reduces dependence on individual suppliers › **reduce**.
- **Other:** Strategic alliances and acquisitions to reach synergy effects and thus to strengthen the bargaining position with suppliers › **assume** › **transfer** ⊕ *Production lines acquired from Bosch Solar Energy AG* • p. 084//



## 54 CORPORATE STRATEGY RISKS →

Risks
<p>1. <b>Misjudgments concerning future developments:</b> Bad strategic decisions with regard to investments, disinvestments, technology development, location decisions, acquisitions and joint ventures, financing, organizational structure, and business model</p> <p>2. <b>Industrial espionage:</b> Loss of intellectual property, technological advantages, patents, etc. as a result of systematic industrial espionage</p>
Probability
<p>1. <b>High:</b> The solar power industry is currently experiencing rapid market changes and tough competition. In this critical market environment, it is more difficult to design long-term strategies that can also withstand the consolidation phase. Owing to the prevailing state of cut-throat competition, market participants are acting in an increasingly irrational and unpredictable way. This increases the risk of making wrong strategic decisions.</p> <p>2. <b>High:</b> The strong competitive pressure increases the danger of industrial espionage.</p>
Effect (strength, time horizon)
<p><b>High, short-term to long-term:</b> Losses of market shares, image, and capital due to wrong strategic decisions might erode the group's economic position further. Lack of acceptance of new products might impact on our revenue and earnings. Loss of intellectual property might diminish our pioneering role and mean the loss of competitive advantages. Bad decisions could threaten the company's survival.</p>
Counter-measures
<ul style="list-style-type: none"> <li>• <b>Other:</b> Make use of external consultants › <i>reduce</i> › <i>transfer</i></li> <li>• <b>Production; Other:</b> Strategic alliances to diversify the investment risk › <i>transfer</i> › <i>assume</i></li> <li>• <b>Other:</b> Production-related research and development activities, and cooperation schemes with universities and research centers › <i>reduce</i></li> <li>• <b>All segments:</b> Identify market trends by means of market analyses in all business segments and long-term relation with customers, suppliers and political decision-makers › <i>reduce</i> › <i>assume</i></li> <li>• <b>All segments:</b> Stricter security precautions, particularly in IT › <i>reduce</i></li> <li>• <b>All segments:</b> More global orientation of structures and functions in the group; exchange best practices between individual group locations › <i>assume</i></li> </ul>

55 DEFAULT RISKS →

Risks
Insolvency of individual customers: Loss of receivables outstanding
Probability
<b>Low:</b> Under the effects of the consolidation wave, the majority of our wafer customers have now pulled out of the market or terminated their contracts with us. Our customers in the “Trade” segment are mainly wholesalers, who are not affected by the solar industry crisis. Therefore, we assess the general risk of bad debt loss in this area to be low.
Effect (strength, time horizon)
<b>Low, short-term:</b> Any contractual default or non-performance of payment obligations by our wafer customers now could only have a limited negative impact on earnings and liquidity. The loss of receivables from individual customers in the “Trade” segment would only have a small impact on our business as we have a very broad customer base and none of our customers accounts for more than 10 percent of our revenue.
Counter-measures
<ul style="list-style-type: none"><li>• <b>Production; Trade:</b> Ongoing monitoring and analysis of receivables and selective conclusion of credit insurance policies › <i>reduce</i> › <i>transfer</i></li><li>• <b>Production; Trade:</b> Cash in advance and down-payment arrangements › <i>reduce</i></li><li>• <b>Trade:</b> Spread risk across a wide customer base of more than 1,200 customers, including international system integrators, specialized wholesalers and installers › <i>reduce</i></li></ul>

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## 56 SALES AND PRICE RISKS →

## Risks

1. **Continuing or further increases in price pressure and supply surplus:** Lower demand for our products
2. **Large-scale projects remain unsold after completion:** Cash is tied up long-term.

## Probability

1. **High:** Price pressure in the market may intensify as a result of competition and changes in the legal framework in core markets. Less favorable funding and financing conditions for purchasing solar power systems could lead to drops in demand on the market. Customers could decide to buy products from competitors
2. **Medium:** The profitability of large-scale projects remains at an attractive level with constantly falling production costs for solar power, higher quality of planning and technology in solar farms, and continuing low interest rates with a lack of lucrative alternative investment options for investors. Focusing more on international markets, we expect stable demand for solar projects. However, investors may withdraw their investment commitment during construction.

## Effect (strength, time horizon)

1. **High, short-term:** If less than the agreed volumes of our products are purchased or if prices fall drastically, this could mean that we continue to be unable to sell our products at a cost-covering price. Furthermore, impairments on inventories may be necessary, which would adversely affect earnings. Not only could a steep drop in demand diminish revenue, it could also result in a lower utilization of our production that negatively impacts unit costs as well as margins and affect the intrinsic value of the production facilities. It could also increase our storage costs.
2. **High, short-term to medium-term:** Large-scale projects that remain unsold after construction would tie up liquid funds. In a worst case scenario, these parks would have to be carried as assets in our balance sheet. Owing to the current tight liquidity situation in the group, any longer-term lockup of liquid funds could seriously limit the company's ability to act.

## Counter-measures

- **Trade:** Identify changing customer needs at an early stage and target them specifically with new products › *assume*; enhance the value added of the SOLARWORLD brand; increase customers' loyalty to the company and affirm their decision to buy from SOLARWORLD › *assume*
- **Trade:** Spread risk across a wide customer base of more than 1,200 customers, including international system integrators, specialized wholesalers and installers › *reduce*.
- **Other:** Keep unsold large-scale projects as own inventory and generate revenue from electricity production; sell at a later point in time › *assume*

## 57 RISKS FROM LARGE-SCALE PLANT BUSINESS →

Risks
<p><b>1. Non-realization of projects:</b> Large-scale projects are not continued beyond the planning stage.</p> <p><b>2. Regional shortage of suitable land:</b> Limited availability of land that can be profitably developed in core markets</p>
Probability
<p><b>1. Medium:</b> Owing to the current tight liquidity situation in the group, SOLARWORLD cannot pre-finance large-scale projects itself and relies on borrowing. However, this was not possible in 2013 because of the restructuring process. After completion of the financial restructuring in early 2014, SOLARWORLD has improved its creditworthiness. However, it could still prove difficult to find financing opportunities – in addition to the general planning risks.</p> <p><b>Medium:</b> Furthermore, the following prerequisites have to be fulfilled for successful realization of a large-scale project: conclusion of a usage agreement for a suitable piece of land, obtaining the construction permit and the physical construction of the project. There is a general risk that these prerequisites cannot be fulfilled.</p> <p><b>2. Medium:</b> Depending on the region, subsidy conditions and solar radiation values, the supply of suitable land for the construction of profitable large-scale plants may become limited.</p>
Effect (strength, time horizon)
<p><b>1. High, short-term to medium-term:</b> The further the planning process has advanced, the more heavily expenditures resulting from abandoning a project would weigh down earnings. Project planning ties up liquid funds in the short to medium term, which are therefore not available for the company to use elsewhere. If a project is not fully completed, in addition to start-up costs and consequential costs, opportunity costs may be incurred through the provision of funding.</p> <p><b>2. Medium, medium-term:</b> Less favorable location conditions have to be taken into account in the planning and realization of new projects, and/or more capital has to be invested to secure suitable sites. This may reduce the profitability of the project and therefore lower the sale price.</p>
Counter-measures
<ul style="list-style-type: none"> <li>• <b>Trade:</b> Careful project management with particular attention to project and financial planning › <i>assume</i></li> <li>• <b>Trade:</b> Spread risk by developing selected international markets › <i>reduce</i></li> <li>• <b>Trade:</b> By forming strategic partnerships, the financial burden of pre-financing projects can be shared between partners › <i>transfer</i> › <i>reduce</i></li> </ul>

58 HUMAN RESOURCES RISKS →

Risks
Shortage of highly-skilled technical and executive staff: Difficulties in filling key positions, high employee attrition
Probability
<b>High:</b> The availability of highly qualified technical and executive staff in the labor market is declining, while competition for talent is growing. The strong trend toward consolidation in the solar industry negatively affects the solar market's appeal to young people just starting out in their careers or those entering the market from other industries.
Effect (strength, time horizon)
<b>Medium, medium-term:</b> Potential erosion of our technological edge and slowdown in corporate growth due to a shortage of skilled technical staff might adversely affect revenue and earnings
Counter-measures
<ul style="list-style-type: none"><li>• <b>All segments:</b> Selective, needs-oriented skills development for our existing staff; strengthening our image as an attractive employer; implementation of a Change Program to support employees in the operative restructuring › <i>reduce › assume</i> → <i>Employees • p. 066 //</i></li><li>• <b>All segments:</b> Defining deputy roles and powers within the scope of our quality management system › <i>reduce</i></li></ul>

## 59 IT RISKS →

Risks
1. <b>Disturbances in the operation of IT systems and networks:</b> Endangerment of availability of IT services at international sites
2. <b>Hacker attacks:</b> Risks by data loss and industrial espionage
3. <b>Implementation of SAP as central ERP system of the group:</b> Delays or interruptions due to the implementation process of the ERP system
Probability
1. <b>Medium:</b> Our IT systems undergo regular maintenance and are adapted so that they meet professional, organizational and safety-related demands.
2. <b>High:</b> Attacks on IT infrastructure cannot be influenced by the company. Regular security updates, controls and action plans prevent and limit the effects on our operative business.
3. <b>Medium:</b> Because of complex IT structures in production and sales, delays and unpredictable interruptions with regard to the groupwide implementation to SAP cannot be ruled out.
Effect (strength, time horizon)
1. <b>Medium, short to medium-term:</b> Interruption of production and workflows might cause productivity losses.
2. <b>High, long-term:</b> Industrial espionage and theft of intellectual property could result in the loss of competitive advantages.
3. <b>High, short to medium-term:</b> Interruptions of the ERP system can lead to interruptions of work and possibly to threats for data security and to interruptions in production processes and in the supply chain.
Counter-measures
<ul style="list-style-type: none"> <li>• <b>All segments:</b> Regular investments in updates, software and hardware systems; up-to-date virus scanners and firewalls reduce the risk of virus and hacker attacks; certified systems enhance security and reliability; encryption protects our data › <i>reduce</i></li> <li>• <b>All segments:</b> Separation of production and administration IT systems to minimize potential failure risks › <i>reduce</i></li> <li>• <b>All segments:</b> Regular data backups several times per day › <i>reduce</i></li> <li>• <b>All segments:</b> Thorough project management for implementation of ERP system › <i>assume</i></li> </ul>

## ⑥0 LIQUIDITY RISKS ↓

Risks
1. <b>Longer-term negative earnings position:</b> Increased outflow of funds; negative operating cash flow
2. <b>Longer and more extensive capital lockup:</b> Expanding large-scale plant business locks up liquidity.
3. <b>Breach of covenants:</b> Notice of redemption of loan capital
Probability
1. <b>Medium:</b> Ongoing price deterioration and falling shipments could further worsen the earnings position and accelerate the outflow of liquid funds from the company.
2. <b>High:</b> SOLARWORLD intends to increase its involvement in the large-scale project segment. However, intensification of the project business brings the risk of more extensive cash resources being tied up for longer periods of time.
3. <b>Low:</b> SOLARWORLD considers the occurrence of this risk as low due to the adaptation of the covenants in the context of the financial restructuring.
Effect (strength, time horizon)
1. <b>Strong, short-term to medium-term:</b> Ongoing negative operating cash flow could have a strong negative impact on the group's liquidity situation, strongly limiting our ability to act and to pay. If the company is exposed to this situation in the longer term, refinancing with borrowed capital would become even more difficult.
2. <b>Strong, short-term to medium-term:</b> Any longer and more extensive lockup of cash resources could seriously affect the company's solvency.
3. <b>Strong, short-term to medium-term:</b> Creditors' special right of termination, implying the potential need for renegotiation of credit agreements.
Counter-measures
<ul style="list-style-type: none"> <li>• <b>All segments:</b> Regular meetings with all of our creditors; closer control of liquidity using active working capital management; measures to appraise assets › <i>reduce</i> › <i>assume</i></li> <li>• <b>All segments:</b> ➔ <a href="#">Note 64e Liquidity risks</a> • p. 204//</li> </ul>



61 OTHER FINANCIAL RISKS →

Risks
Currency, interest rate and price risks
Probability
<b>Medium:</b> Due to the procurement of raw materials, in particular in U.S. dollars, and the sale of U.S. products in other currency regions, we are exposed to currency risks. As a global player, we are also exposed to interest rate and price risks.
Effect (strength, time horizon)
<b>Medium, long-term:</b> Impact on the financial result of our business operations; thanks to pro-active, regular, careful review of our financial instruments, we assess these risks as being medium.
Counter-measures
<ul style="list-style-type: none"><li>• <b>All segments:</b> Selective use of derivative and non-derivative financial instruments › <i>transfer</i> › <i>reduce</i> → <u>Note 64 Capital management and financial instruments</u> • p. 201 //</li></ul>

## 62 LEGAL RISKS →

Risks
<p><b>1. Litigation in connection with notices of redemption for the former notes:</b> Courts could order SOLARWORLD AG to immediately repay the nominal amounts with interest of those former notes for which noteholders have given notices of redemption.</p> <p><b>2. Litigation between silicon suppliers and our subsidiary DEUTSCHE SOLAR GMBH:</b> Claims for damages resulting from the failure to purchase silicon under various silicon supply contracts.</p> <p><b>3. Litigation in connection with using brands:</b> Damages payments because a particular brand was used.</p> <p><b>4. Other legal risks:</b> There is a wide range of tax, competition, patent, anti-trust, labor law, trade mark, and environmental regulations within the scope of our international business operations, infringement of which may cause costs</p>
Probability
<p><b>1. Low:</b> SOLARWORLD AG considers that the submitted notices of redemption for the existing notes do not take effect, since according to external legal opinion, no right to demand early redemption exists in accordance with the note terms and conditions or for good cause. In a first hearing, the Regional Court (<i>Landgericht</i>) Frankfurt am Main also held the view that the declared redemption does not take effect because there are no grounds for redemption. However, there is a possibility, which cannot be ruled out, that (other) courts may have a different opinion or assume that the European</p> <p><b>2. Low:</b> According to an external legal opinion, there are anti-trust concerns under European law regarding the underlying silicon contracts, which could mean that the purchasing obligations of DEUTSCHE SOLAR GMBH are invalid, and possibly that the supply contracts are null and void. As a result, according to external legal opinion, the suppliers are not entitled to damage claims. However, there is a possibility, which cannot be ruled out, that courts, especially in foreign countries, may have a different opinion or consider European anti-trust legislation not applicable.</p> <p><b>3. Medium:</b> Due to court decisions, SOLARWORLD AG is no longer allowed to use a particular brand for photovoltaic systems. For the time being, an actual damage has neither been quantified nor made pending in court.</p> <p><b>4. Low:</b> Beyond this, SOLARWORLD is currently not aware of any material risks from litigation, patent infringement, or other legal risks that might significantly impact the business situation of the company. As a result of our global sales presence, however, risks could in principle arise in connection with legal disputes relating to trademark usage.</p>
Effect (strength, time horizon)
<p><b>1. Low, long-term:</b> If courts should decide, contrary to our opinion, that noteholders have an extraordinary right to demand early redemption, SOLARWORLD would have to repay the redeemed notes at the full nominal amount plus accrued interest. This would have a negative impact on the company's liquidity situation amounting to the nominal value of the notes for which notice of redemption has been given.</p> <p><b>2. High, long-term:</b> If courts should decide that silicon suppliers are entitled to damages from our subsidiary DEUTSCHE SOLAR GMBH, this would have a considerable negative impact on the company's liquidity situation up to threatening its continued existence.</p> <p><b>3. High, short-term:</b> Being sentenced to pay damages could have a negative impact on the assets, financial and earnings position of SOLARWORLD.</p> <p><b>4. Medium, long-term:</b> Litigation might impact on the result of our business operations since it would tie up financial resources, jeopardize the company's reputation and brand, and cause losses of tangible and intangible corporate property.</p>
Counter-measures
<p>• <b>All segments:</b> Legal advice from several specialized external legal experts › <i>assume</i> › <i>reduce</i></p>

63 GUARANTEE AND OTHER LIABILITY RISKS →

Risks
1. <b>Guarantee risks:</b> Granting a linear performance guarantee of up to 30 years for solar modules sold by us
2. <b>Other liability risks (e. g. product safety)</b>
Probability
1. <b>Low:</b> Based on careful examination of our process and product quality, we assess the risk of claims being made against our performance guarantee as low.
2. <b>Low:</b> Thanks to pro-active regular controls concerning protection against hazards and health as well as safety protection at our sites, we assess the probability of these risks as low.
Effect (strength, time horizon)
1. <b>Medium, long-term:</b> Potential negative impact on our earnings, financial and asset position in the event of guarantee claims
2. <b>Medium, long-term:</b> Production losses, loss of assets, potential claims for damages
Counter-measures
<ul style="list-style-type: none"><li>• <b>All segments:</b> Risk provisioning in the balance sheet for the company's guarantee commitment through the formation of a provision › <b>assume</b> (⇒ <i>Note 58 Non-current and current provisions • p. 197</i>) //</li><li>• <b>All segments:</b> Securing other risks via comprehensive insurance cover based on conventional concepts › <b>transfer</b>; regular review of the extent of insurance cover for risks, based on site inspection › <b>reduce</b>; compliance with legal provisions and voluntary adherence to more far-reaching standards (e. g. ISO 9001 and ISO 14001, codes of conduct) › <b>assume</b></li><li>• <b>All segments:</b> Analysis of complaints and improvement of product quality › <b>reduce</b> › <b>assume</b></li></ul>

## 64 ENVIRONMENTAL AND OTHER RISKS →

Risks
<p>1. <b>Environmental risks:</b> Higher insurance premiums due to more frequent storms/fires/drought periods caused by progressive climate change; punishment for infringement of environmental laws</p> <p>2. <b>Conflicts with stakeholders:</b> For example because of inconvenience caused by noise and light emissions for residents living in the direct vicinity of our production sites</p>
Probability
<p>1. <b>High:</b> Climate experts forecast an increase in extreme weather incidents.</p> <p><b>Low:</b> Fines or compensation payments are less probable since we ensure compliance with standards by means of our environmental management system.</p> <p>2. <b>Low:</b> There are many stakeholders with many different needs. By facilitating direct dialog with our stakeholders we reduce the probability of conflict.</p>
Effect (strength, time horizon)
<p>1. <b>Low, medium-term:</b> Potential damage due to more frequent storms/fires or costs in the wake of drought periods and floods will not affect us more than other companies.</p> <p><b>Medium, medium-term:</b> Fines or compensation payments might impact on the financial position of our company.</p> <p>2. <b>Medium, long-term:</b> Should any serious conflicts with stakeholders arise, this might impact on our company (via damage to our image and follow-up costs) over the very long term.</p>
Counter-measures
<ul style="list-style-type: none"> <li>• <b>All segments:</b> Current risks are largely covered by insurance policies › <i>transfer</i></li> <li>• <b>All segments:</b> Further development of the company's environmental management system › <i>reduce</i></li> <li>• <b>All segments:</b> Stakeholder dialog, for instance through discussions with residents at neighborhood meetings and the joint preparation of measures, e.g. to reduce noise and light emissions › <i>reduce</i></li> </ul>

## OVERALL STATEMENT BY THE MANAGEMENT BOARD ON THE GROUP'S RISK POSITION

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The overall risk position resulting from the combination of individual risks has improved in comparison to the previous year, in particular because the financial restructuring was successfully closed on February 24, 2014. Nevertheless, the Management Board considers the group's risk position as high especially because competitive pressure as well as price pressure and pressure to reduce costs are still strong and the regulatory environment of the solar market might change for the worse. The individual risks presented above can influence each other and thus worsen the overall risk position of the group. Assessing the risk position, we have not taken any opportunities into account.

The going concern of the company is not endangered at the time of setting up the financial reporting at hand. However, the occurrence of the risks presented above would have substantial impacts on the assets, financial and earnings position of the SOLARWORLD group. A failure to fulfill the business plans on which the restructuring program is based and/or difficulties concerning the implementation of operative restructuring measures could put a burden on the financial position of the SOLARWORLD group.

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# OPPORTUNITY REPORT

## OPPORTUNITIES FROM THE DEVELOPMENT OF GENERAL CONDITIONS

Despite the industry crisis, 2013 was a year that showed the enormous growth potential of photovoltaics. Experts predict that solar power will become established as an energy source in nearly every region on earth. In addition to mature markets such as Germany and the United States, a series of emerging markets will develop. Sarasin Bank expects an average annual growth rate of around 17 percent to the year 2016.

A decentralized supply using renewable energies, as enshrined in our vision, is becoming possible for a broad consumer base – particularly through intelligent combination with other energy sources and storage systems. The technology for storing solar power, and thereby optimizing self-consumption, will improve still further in the years ahead. This development opens up new prospects for established solar markets such as Germany and the United States, but also for countries which do not offer solar incentive schemes. Regions with high solar radiation levels are most attractive, as photovoltaics can be used particularly cost-effectively in these regions.

The acquisition of cell and module capacities of Bosch Solar Energy AG, which was closed on March 12, 2014, will enable SOLARWORLD to add monocrystalline solar cells and 72 cell modules to its portfolio. SOLARWORLD wants to grasp the opportunity to position itself with new products as a premium provider for solutions that enable customers to use homemade solar power.

## STRATEGIC OPPORTUNITIES

SOLARWORLD plans to position itself more strongly at the end of the value chain, which means that in sales we will focus on the market for complete solar power solutions in all size classes. Higher revenues can be realized here than by selling individual components such as modules and wafers. By acquiring the cell and module production of Bosch Solar Energy AG, we plan to take over their customers, too. This will open new sales channels for our group. In addition, we expect to achieve synergy effects in research and development and to reach a better negotiating position with suppliers by integrating the new production capacities into the group of companies.

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Since March 2011, we have been involved in mining lithium, one of the raw materials used in lithium-ion batteries, in order to benefit in the future from the high interest in storage systems. We secured exploration rights in the eastern Ore Mountains (*Zinnwald*) on the German-Czech border. This lithium deposit is among the ten largest in the world. In this project, we closely work together with TU Bergakademie Freiberg (TUBAF). In this context, on March 31, 2013, we completed a feasibility study, which assessed the costs and benefits of exploring and processing the deposit. A second round of exploration will be carried out to obtain a better resource estimate for the deposit. SOLARWORLD will also initiate the necessary approval procedures and carry out technological optimization to reduce costs. Once this work is complete, talks will be held with potential strategic partners in the second quarter of 2014.

## PERFORMANCE-RELATED OPPORTUNITIES

We adjusted our procurement structures in fiscal year 2012. In the new delivery contracts, instead of negotiating the purchase of absolute quantities, we agreed on supplying a pro-rata portion of our material requirements. We are therefore able to extend the flexibilization of our production to our supply chains and purchasing processes, and realize further savings potential. This will enable us to react more quickly to changes in market conditions in a way that is more in line with our needs. ➞ *Global Supply Chain – Procurement • p. 056*// By selecting the right suppliers and pooling order quantities, we will continue to optimize our procurement costs and reduce our bill of materials. Our new procurement structure shall also help to reduce our costs for indirect materials ➞ *Future Development in the Global Supply Chain – Procurement • p. 116*//

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# FORECAST REPORT

## THE FUTURE MARKET 2014

**ECONOMIC ENVIRONMENT.** According to forecasts by the Kiel Institute for the World Economy (IfW), 2014 will see a strong upturn in the global economy. Even at the start of the new year in 2014, global business prospects were noticeably brighter. According to IfW, compared with 2013, global output growth should be appreciably higher at 3.7 (2013: 2.9) percent in 2014. The eurozone is likely to emerge from recession in 2014. Even in the crisis countries, the economy should gain momentum, although consolidation processes in those countries will continue to weigh on domestic demand. IfW predicts that total economic output will increase 0.9 (2013: -0.4) percent in 2014.

IfW forecasts a particularly strong performance by Germany. Its economy is on an expansionary trajectory in 2014. IfW anticipates GDP growth of 1.7 (2013: 0.4) percent in 2014. Economic activity is being stimulated by an upturn in the investment cycle. Consumer spending is also likely to increase significantly. According to IfW, the German economy is likely to experience a boom toward the end of 2014, which could push inflation up to 1.7 percent in 2014.

Looking to the United States, IfW anticipates that monetary stimulus will have an increasingly strong effect. Consolidation has come a long way since the financial crisis. For example, private household indebtedness has now fallen considerably, the level of loan defaults in the financial sector is continuously declining and the housing market situation has significantly improved. According to IfW, gross domestic product will grow 2.3 (2013: 1.6) percent in 2014.

**THE FUTURE SOLAR POWER MARKET.** The solar industry should enter the final phase of consolidation in 2014. However, this process could take some time if Chinese banks continue to provide their domestic manufacturers with cheap loans worth billions of dollars, distorting global competition.

As previously, the overall market trend can be described as volatile and is dependent to a high degree on possible regulatory changes in the various markets, which makes it difficult to give a reliable forecast. Market analysts agree, however, that there will be a sharp upturn in global demand in 2014. For example, Deutsche Bank AG and Greentech Media Inc. expect demand to grow between 27 and 29 percent to 46 to 48 GW in 2014. At the same time, global production capacities are set to fall to 61 GW as a result of consolidation, which would create a better balance between supply and demand.

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**FURTHER CONTRACTION IN GERMAN MARKET.** Deutsche Bank expects demand to fall sharply in Germany in 2014 compared with 2013, probably by as much as 15 percent to around 2.8 (2013: 3.3) GW. These estimates do not take potential amendments to the German Renewable Energy Sources Act (EEG) into account, which could have a strong impact on demand for solar power systems in Germany, as happened in the past. In its coalition agreement of December 2013, the new German federal government announced plans for a comprehensive overhaul of the EEG by Easter 2014. The Federal Cabinet approved the key elements of the reform in January 2014.

**EUROPEAN MARKET OVERALL IN DECLINE.** Analysts at Deutsche Bank anticipate a further decline for the European market as a whole of around 12.6 percent in 2014 – from an expected 9.5 GW in 2013 to 8.3 GW in 2014. Not only the German but also the Italian market is likely to contract. New installations in these markets look set to halve again compared with 2013, to 0.75 GW. Deutsche Bank expects appreciable growth in France of 25 percent to around 1.35 GW in 2014. In the rest of Europe, new installations in 2014 will probably remain at 2013 levels.

**U.S. MARKET VERY DYNAMIC.** According to Deutsche Bank, the U.S. market is set to add 8 GW of new installations in 2014 – this would equate to 60 percent growth compared with 2013. This strong trend is forecast to continue in 2015, with a further 12 GW of new installations. Increasing numbers of U.S. states are developing into promising new sales regions, with the result that growth is not concentrated on just a few states such as California and New Jersey. Hence, the market as a whole is growing more consistently and sustainably.

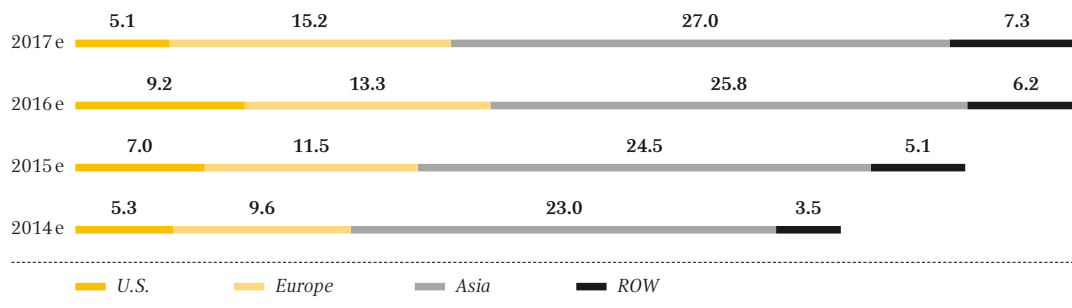
**STRONG GROWTH ANTICIPATED IN CHINA AND JAPAN.** In 2013, China and Japan were already the world's largest solar markets. According to Deutsche Bank, new installations in China are likely to increase 50 percent to 12 GW in 2014. Unfortunately this does not present any opportunity for non-Chinese manufacturers, as the Chinese market is inaccessible to them. A continuing high level of new installations is also expected in Japan. Unlike China, the Japanese market does offer attractive possibilities for foreign companies such as SOLARWORLD. Newly installed capacity in the Japanese market will total 7.0 GW in 2014, according to Mercom Capital Group.

**SOLAR MARKET IN EMERGING ECONOMIES AND OIL EXPORTING COUNTRIES GAINING IMPORTANCE.** In sunny, off-grid regions of Africa, Latin America and Asia, solar power is already more economical than electricity from conventional diesel generators. In these countries, where energy scarcity is a key challenge and power grids are insufficiently developed, solar power is increasingly developing as a low-cost alternative for the electricity supply.

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### 65 EXPECTED DEVELOPMENT OF SOLAR MARKETS BY REGION // IN GW

Source: Greentech Media, 2014



By contrast, the solar market in the Middle East region offers new opportunities for Western companies as well. Oil-exporting countries such as Saudi Arabia and Qatar want to increase their use of solar in future as a power source. Analysts expect that solar power systems having a total capacity of 3.5 GW will be installed in Saudi Arabia alone by the year 2015. In this region, the Turkish solar market is expected to see rapid growth, too.

## FUTURE STRATEGIC ALIGNMENT OF THE GROUP

Over the next two financial years, the SOLARWORLD group plans to continue the systematic implementation of its operational restructuring concept. In our established markets Germany and the United States, we will strengthen links between customers and wholesalers and installers.

We want to expand our position as a system provider in the international solar market. Therefore, in future, we will focus more strongly on the market for complete systems and less on sales of individual components such as wafers and cells. Our planned process and product innovations are intended to further optimize the price-performance ratio of SOLARWORLD products for our customers. Here, we utilize the advantages of close-to-production research and development to swiftly transfer newly developed processes into manufacturing. ➞ Future research and development activities • p. 115 //

Our location policy will continue to be geared to customer proximity. We will flexibly adjust the capacity utilization of our production facilities in line with current market demand. ➔ Future development in production • p. 114// In future, projects of all sizes will play a larger role in our business. To this end, we are systematically leveraging the experiences of our subsidiaries SOLARPARC AG.

## EXPECTED BUSINESS DEVELOPMENT 2014

### FUTURE SALES MARKETS

**EXPANSION OF PORTFOLIO AND DISTRIBUTION CHANNELS.** Our acquisition of cell and module production facilities in Arnstadt, which was announced in November 2013, was finalized on March 12, 2014. ➔ Production lines acquired from Bosch Solar Energy AG • p. 084// Like our existing plants, these additional production facilities also incorporate top-quality German manufacturing technology. They strengthen our position as a quality provider. Moreover, SOLARWORLD will maintain existing contacts with customers of Bosch Solar Energy AG, integrating these customers into SOLARWORLD's distribution structures. At the Arnstadt site, we plan to produce also 72-cell modules in the future. By adding these to our product portfolio, we are able to gain additional customers in the large-scale project business, where these modules are in demand. We also want to appeal to Bosch's existing customer base for solar cells and integrate this business area into our global supply chain.

**TARGETING GROWTH WITH COMPLETE SOLAR POWER SOLUTIONS AND LARGE-SCALE PROJECTS.** Analysts predict that global demand for solar power products will continue to grow in 2014. Prices, however, are expected to persist at a low level. 65 Expected Development of solar markets by region • p. 112// Market growth will have a positive impact on SOLARWORLD's sales trend. In 2014, SOLARWORLD aims to significantly increase shipments of complete solar power solutions internationally – both in the private and commercial roof-mounted systems segment, and in the large-scale project business.

Following the completion of restructuring measures in February 2014, SOLARWORLD will once again be able to implement new large-scale projects. Our subsidiary SOLARPARC AG prepared the way in 2013 by working hard to develop an international project pipeline. Using the expertise of SOLARPARC AG, we want to expand this segment in the future. We see key opportunities in the U.S. and selected export markets, for instance Latin America, Turkey and the Arabian Peninsula – i. e. in regions where solar power is cost-effective today without incentive mechanisms. We will work together with local partners to expand the project business.

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In 2014, SOLARWORLD will continue to work on developing emerging solar markets. We want to increase our shipments particularly in European export markets. In Asia, we have high expectations about the dynamic development in the Japanese market. The Middle East and North Africa (MENA) region is also promising. In sub-Saharan Africa, we primarily see opportunities in the market for large roof-mounted systems used for commercial self-consumption.




FUTURE DEVELOPMENT IN PRODUCTION

**NEW CELL AND MODULE CAPACITIES ADDED.** On March 12, 2014, following the successful closure of the purchase agreement with Robert Bosch GmbH, our newly formed subsidiary SOLARWORLD INDUSTRIES-THÜRINGEN GMBH acquired assets of the cell and module production facilities of Bosch Solar Energy AG at Arnstadt in Thuringia, Germany. This increases our cell capacity by 700 MW and our module capacity by 200 MW. Particularly the extra cell capacity fills a gap in our value chain and allows the group to continue growing.

By transferring research and development outcomes into production, thereby increasing our manufacturing efficiency, we have successfully increased our module and cell production capacity at Freiberg as well as our module production capacity in the United States. These capacities will be fully available to us from 2014 onward.

As a result, the SOLARWORLD group will reach nominal capacities of more than one gigawatt at each of the wafer, cell and module stages of the value chain. Of those capacities, we plan to actively utilize the following production capacities in 2014:

66 ACTIVE PRODUCTION CAPACITIES 2014 // IN MW

	 Wafer	 Cell	 Module
Germany (Freiberg)	750	330	530
Germany (Arnstadt)	-	700	200
U.S. (Hillsboro)	(250)*	330	380
SolarWorld group	750	1,360	1,110

\* not actively utilized nominal production capacities

**TECHNOLOGY PORTFOLIO EXPANDED.** Besides increasing capacities, acquisition of the former Bosch plant in Arnstadt will boost SOLARWORLD's technological competitiveness. At the Freiberg production site, SOLARWORLD mainly produces multicrystalline wafers and cells. At SOLARWORLD's Hillsboro site in the United States, we already focus on monocrystalline cells with rear passivation (PERC concept). At the new SOLARWORLD site in Arnstadt, we will be able to use a similar process to manufacture highly efficient mono cells. In doing so, we will reach a significant advantage over competitors.

**REORGANIZATION OF PRODUCTION UNITS.** The existing production subsidiaries of SOLARWORLD AG at the Freiberg site will be merged into one company by mid-2014 to increase the efficiency of production processes along the solar value chain. Within the same timeframe, we will combine production and sales in the United States at our Hillsboro, Oregon site.

## FUTURE RESEARCH AND DEVELOPMENT ACTIVITIES

Our future research and development activities will focus on further improvements to our core product, the module, in respect of performance, quality and cost criteria. We will also continue to work intensively on system solutions for intelligent load management and storage.

Our research and development activities with regard to monocrystalline solar cells are being pooled at the new site in Arnstadt, where we have a state-of-the-art pilot line at our disposal. SOLARWORLD INNOVATIONS GMBH will continue to be in charge of research and development within the SOLARWORLD group of companies. The integration of parts of the former Bosch solar division also significantly expands our intellectual property portfolio.

## FUTURE PRODUCTS AND BRAND STRATEGY

Marketing activities in 2014 will focus on strengthening our brand in a targeted way and supporting measures to boost shipments in international core markets. As before, we will concentrate on emphasizing the customer benefits of our products. We will continue to determine our customers' needs at an early stage, so they can be integrated into new product developments and services.

At the same time as the successful completion of the financial restructuring and the acquisition of cell and module production facilities in Arnstadt, SOLARWORLD revised its branding with the message "Real Value". We have updated the company logo to reflect the group's stronger international orientation. In March 2014, we launched the logo with the international claim REAL VALUE. From now on, the company name will be associated with REAL VALUE in all communications and on all products. The launch of the new brand logo is being accompanied by a broad-based, strategic communication campaign in the core markets. ➞ Real Value • p. 012 //

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## FUTURE DEVELOPMENT IN THE GLOBAL SUPPLY CHAIN – PROCUREMENT

Expanding production capacities to more than one gigawatt at wafer, cell and module stages will strengthen SOLARWORLD's negotiating position with suppliers. We also aim to identify and exploit further potential savings. For example, further savings will result from increased design to cost measures, global sourcing, standardization, and further optimization of our specifications. In future, therefore, global procurement management at SOLARWORLD must collaborate even more closely with product management and with research and development to identify better performing and cost-saving alternatives for materials. We will also involve our suppliers in new developments at a particularly early stage. In this way, we plan to take the costs and properties of materials into account from the very beginning of the product life cycle.

As before, we are aiming to reach agreements with our suppliers to enable our materials to be supplied in line with our requirements on a long-term basis, and reduce our default risks. Sustainability also remains important to us in every respect on the procurement side.

## FUTURE HUMAN RESOURCES DEVELOPMENT

**ABOUT 800 NEW EMPLOYEES AT THE ARNSTADT SITE IN THE FUTURE.** Following the acquisition of cell and module production facilities from Bosch Solar Energy AG in March 2014, the SOLARWORLD group intends to continue to employ about 800 workers in Arnstadt. We want to integrate these future employees of our newly formed subsidiary SOLARWORLD INDUSTRIES-THÜRINGEN GMBH into the group of companies quickly.

**CONTINUATION OF HR STRATEGY AND CHANGE PROGRAM.** Developing our group into a global organizational unit continues to be the central objective of our human resources strategy. Our change program began in 2013 and will continue in 2014. As part of the program, we will keep working to increase SOLARWORLD employees' understanding of the necessary transformations in our structures and processes, so that they can play an active part in shaping changes in their areas of activity in the future as well. Our employees' experience and motivation are key for the success of the planned reconfigurations. Looking to the future, therefore, we intend to work on strengthening our corporate culture as a common basis for our locations to grow together, and developing additional areas for action based on our existing guiding principles. We will continue our talent management program in 2014 to prepare talented junior staff who represent and live our values for regional and global management positions.

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SOLARWORLD will conduct a global employee survey in 2014. The objective is to reassess employee commitment levels following the implementation of the first operational restructuring measures. The survey will be used to identify potential areas of improvement for SOLARWORLD as an employer, and to determine appropriate action plans and metrics. We plan to implement these during 2015. Annual global employee surveys allow us to monitor the success of the measures. SOLARWORLD wants to enable its employees to optimize their performance in the group and grow with SOLARWORLD. We aim to make sure that the right person is always employed in the right job, as this boosts employee motivation and productivity in the group as a whole.

## EXPECTED EARNINGS AND FINANCIAL POSITION

### EXPECTED REVENUE AND EARNINGS DEVELOPMENT

The continuing crisis in the solar industry and political developments make it difficult to forecast future business development. As basic premise for its forecast, SOLARWORLD is assuming that during 2014 the solar industry will have reached the final stage of consolidation. Whilst global demand for solar energy products will presumably continue to grow in 2014, prices will probably remain at the current level. SOLARWORLD expects that market growth will also have an effect on its own sales development.

For the current 2014 fiscal year, SOLARWORLD AG is expecting to increase its group-wide shipments of modules and kits by at least 40 percent compared with 2013 through higher shipments in all core markets (2013: 548 MW). SOLARWORLD AG also reckons on growth in consolidated revenue to more than € 680 million in 2014. The expected trend in sales and revenue already takes the acquisition of production lines from Bosch Solar Energy AG at the Arnstadt/Thuringia site into account, which took place on March 12, 2014.

In addition, SOLARWORLD AG is expecting positive earnings before interest, tax, depreciation and amortization (EBITDA) in 2014 of more than € 10 million. This does not take into account the special effects from the successfully completed financial restructuring as well as the positive special effects from the initial consolidation of assets that were taken over from Bosch Solar Energy AG. The operating result (EBIT) before consideration of these special effects is likely to range between € –35 million and € –20 million.

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For 2015, the SOLARWORLD group is expecting a positive operating result as well as further increases in revenues of over 20 percent. For 2016 the group expects revenues of more than € 1 billion.

In this context, the Management Board of SOLARWORLD AG would expressly like to point out that the assumptions and framework conditions used for the corporate planning might be subject to changes.

## EXPECTED DIVIDEND AND DISTRIBUTION

Owing to the losses incurred over the last two financial years, there are no plans to distribute a dividend for financial years 2012 and 2013.

According to current plans, the priority for any future profits will be to repay liabilities and finance the company's further growth. For this reason, no distribution of dividends to shareholders is anticipated for the foreseeable future.

## SCHEDULED FINANCING MEASURES

On February 24, 2014, SOLARWORLD AG completed its financial restructuring. With the registration of the implementation of a capital increase by contribution in kind of € 14,151,200.00 in the commercial register, the financial liabilities of SOLARWORLD AG fell by € 570 million to € 427 million. In connection with this, SOLARWORLD issued 14,151,200 new shares and two new bonds with respective nominal values of € 52 million and € 175 million and a term of 5 years. ➔ *Financial restructuring successfully completed • p. 080//*

In addition, SOLARWORLD AG took up a new loan of € 50 million in February 2014.

No further financing measures are currently planned for 2014.

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## PLANNED INVESTMENTS

In the 2014 financial year, we are expecting to make investments totaling a low two-digit million euro amount. Our investment activities will focus on achieving further cost savings in our production facilities.

## EXPECTED LIQUIDITY DEVELOPMENT

On December 31, 2013, the group's liquid funds totaled € 163.7 (December 31, 2012: 224.1) million. Expected liquidity development is influenced to a large degree by scheduled financing measures and by the operating result. We currently anticipate positive cash flow from operating activities in the current 2014 financial year.

## OVERALL STATEMENT BY THE MANAGEMENT BOARD ON FUTURE GROUP DEVELOPMENT

In February 2014, SOLARWORLD AG successfully completed the restructuring of its financial liabilities, which had become necessary as a result of the solar industry crisis, and in doing so established a fundamental condition for the group's positive future development. In parallel, SOLARWORLD continued an operational restructuring program last financial year (2013) and has already implemented extensive measures to cut costs and boost efficiency. In the opinion of management, the financial and operational measures have already considerably improved the SOLARWORLD group's competitiveness and ability to act, and hence its business prospects.

The Management Board expects that the solar industry will have entered its final phase of consolidation in 2014. One condition for permanently overcoming the solar industry crisis is the restoration of fair competition. SOLARWORLD will continue its proactive involvement in this regard, particularly in the U.S. and the European Union.

While global demand for solar power products is likely to see further growth in 2014, prices are likely to remain at current levels. The Management Board believes that market growth will have a positive impact on SOLARWORLD's sales trend. For 2014 to 2016, the group plans to increase shipments and revenue significantly and improve the operating result. SOLARWORLD group plans to return to a positive operating result in 2015.

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The acquisition of cell and module production facilities at Arnstadt in Thuringia in March 2014 will make the SOLARWORLD group one of the world's ten largest solar manufacturers. It also strengthens SOLARWORLD's technological foundations. Synergies and economies of scale resulting from the acquisition create opportunities for the group to return to profitability sooner and win new customers.

The group's strategy is to offer solar power solutions that provide customers real added value and to play a technologically leading role on the international solar market. SOLARWORLD intends to further enhance its positioning in the future and use its core brand to distinguish itself even more clearly than before from the broad mass of solar manufacturers.

# #4: CORPORATE GOVERNANCE



REAL VALUE – FOR OUR CUSTOMERS, THIS MEANS:

**FINELY TUNED SYSTEMS –  
TAILOR-MADE TO CUSTOMER-NEEDS**

# #4 CORPORATE GOVERNANCE

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## CORPORATE GOVERNANCE AT SOLARWORLD

We are endeavoring to gear the management and control of SOLARWORLD towards long-term, sustainable value creation, especially against the background of a young and dynamic global market and its current distortions. We are continuously working on further developing Corporate Governance within the company as well as on adequately integrating all stakeholders. In the process, we are guided by the German Corporate Governance Code (GCGC), which represents the major provisions on the management and monitoring of German listed companies and contains both nationally and internationally recognized standards for good and responsible corporate management. Therefore, pursuant to section 4.1.1 GCGC, our management philosophy takes into consideration the interests of our investors, business partners, employees and the public in order to continuously confirm the trust placed in us by our stakeholder groups.

The Management Board and the Supervisory Board of SOLARWORLD AG cooperate closely and confidently to successfully guarantee corporate management and control.

## CORPORATE GOVERNANCE REPORT 2013

**DECLARATION OF COMPLIANCE FROM THE MANAGEMENT BOARD AND SUPERVISORY BOARD.** The Management Board and the Supervisory Board of SOLARWORLD AG had first issued an unlimited compliance statement on August 10, 2012 regarding the recommendations in the version of the German Corporate Governance Code (GCGC) of May 15, 2012 published on June 15, 2012, which was made permanently available on our website in accordance with § 161 German Stock Corporation Act (AktG). As a result of the restructuring, a limitation declaration followed on this subject on March 18, 2013 with regard to the deviation from the publication of the group accounts 90 days after the end of the fiscal year that had become necessary. In line with the new version of the GCGC of May 13, 2013, a corresponding restricted compliance statement for the 2013 fiscal year was then issued on December 20, 2013. @ [www.solarworld.de/declarationofcompliance//](http://www.solarworld.de/declarationofcompliance//)

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**MANAGEMENT AND CONTROL CHANGED IN 2013.** SOLARWORLD AG as a German stock corporation has a dual management and control structure with segregation between management and monitoring function. Compliant with the law (§§ 77, 78 AktG), the Articles of Association (§§ 5, 6) and the Rules of Procedure, the Management Board manages the company under its own responsibility and develops the strategic direction. The Management Board is appointed by the Supervisory Board. The latter, pursuant to § 95 Sec. 1, § 96 Sec. 1, § 101 Sec. 1 AktG, is made up of shareholder representatives and is appointed by the Annual General Meeting (AGM), which in turn, is not bound by election proposals. The Supervisory Board works on the legal basis of the German Stock Corporation Act, the Articles of Association, and the Rules of Procedure. It appoints, monitors, and controls the Management Board and is also involved in fundamental decisions, which require the approval of the Supervisory Board.

Insofar as section 4.1.5 GCGC states that the Management Board, when staffing management functions in the company, has to observe the principle of diversity and must particularly strive to give more consideration to women, concrete plans to increase the proportion of women in management and key positions are pursued jointly by the Management Board and Supervisory Board.

In 2013, the Management Board initially consisted of five members. Distribution of business had been adjusted groupwide in line with global requirements. In February 2013, the appointment of Boris Klebensberger, Chief Operating Officer, was terminated by mutual consent. His responsibilities were distributed among the other members of the Management Board. Consequently, the Management Board of SOLARWORLD AG has consisted of four members since February 2013. Responsibilities are distributed as follows:

- **Frank Asbeck, Dr.-Ing. E. h.** (Chief Executive Officer)  
 Founder of the company, responsible for strategic group development, production and technology development, procurement, supply chain management as well as public relations/public affairs including energy and environmental policy  
 Initial appointment: 1999  
 End of current period of office: January 9, 2019
  - **Frank Henn, Dipl.-Wirtschaftsing.** (Chief Sales Officer)  
 Responsible for international sales, global quality management and product engineering  
 Initial appointment: 2004  
 End of current period of office: January 31, 2016
  - **Philipp Koecke, Dipl.-Kfm. tech.** (Chief Financial Officer)  
 Responsible for the areas of controlling, finance, accounting, and investor relations  
 Initial appointment: 2003  
 End of current period of office: April 30, 2015
  - **Colette Rückert-Hennen, attorney-at-law** (Chief Information, Brand & Personnel Officer)  
 Responsible for the areas of human resources, brand management, marketing, sustainability and IT  
 Initial appointment: 2011  
 End of current period of office: June 30, 2014
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**Parted with SOLARWORLD AG as of February 7, 2013:**

- **Boris Klebensberger, Dipl.-Ing.** (Chief Operating Officer)

Responsible for the group divisions IT, supply chain management, group procurement, quality management, investment management/technology transfer, production planning as well as research and development

Initial appointment: 2001

The composition of the Supervisory Board changed in fiscal year 2013. The election of the new Supervisory Board took place at the extraordinary shareholders' meeting of SOLARWORLD AG on August 7, 2013. Shareholders re-elected Dr. Claus Recktenwald, Chairman of the Supervisory Board, and his deputy, Dr. Georg Gansen. Dr. Alexander von Bossel, who did not stand for re-election, left the Supervisory Board and resigned his post effective the end of the extraordinary shareholders' meeting. In his place, Marc M. Bamberger was newly elected to the Supervisory Board. The appointment of Dr. Recktenwald and Mr. Bamberger ends with the conclusion of the next ordinary Annual General Meeting. Dr. Gansen was elected to his position until the conclusion of the general meeting which decides on the approval of the Supervisory Board's actions and Management Board's actions for fiscal year 2017.

At the time of producing this report, the Supervisory Board of SOLARWORLD AG had three members:

- **Dr. Claus Recktenwald**, born 1959 (Chairman)

**Attorney-at-law and partner in the law firm of Schmitz Knoth Rechtsanwälte in Bonn**

Initial appointment: December 18, 1998

End of current appointment: until Annual General Meeting which grants approval for fiscal year 2012

Dr. Recktenwald additionally holds the following appointments on legally required Supervisory Boards and similar controlling bodies:

- Supervisory Board of SOLARPARC AG, Bonn (Chairman since incorporation)
- Supervisory Board of VEMAG Verlags- und Medien AG, Cologne (member since April 7, 2006)
- Advisory Board of Grünenthal GmbH and Grünenthal GmbH & Co. KG, Aachen (member since January 1, 2010)

- **Dr. Georg Gansen**, born 1959 (Deputy chairman)

**Attorney-at-law/Corporate legal counsel at Deutsche Post AG located in Bonn**

Initial appointment: December 18, 1998

End of current appointment: until Annual General Meeting which grants approval for fiscal year 2017

Dr. Gansen additionally holds the following appointments on legally required Supervisory Boards or similar controlling bodies:

- Supervisory Board of SOLARPARC AG, Bonn (Deputy chairman since incorporation)

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- **Marc M. Bamberger**, born 1957 (member since August 7, 2013)

**Management consultant in Wiesbaden**

Initial appointment: August 7, 2013

End of current appointment: until Annual General Meeting which grants approval for fiscal year 2012

Currently, Mr. Bamberger does not hold any other appointment on a legally required Supervisory Board nor a similar controlling body.

**Parted with SOLARWORLD AG as of August 7, 2013:**

- **Dr. Alexander von Bossel**, born 1965 (member until August 7, 2013)

**Attorney-at-law and partner in the law firm of Sozietät CMS Hasche Sigle in Cologne**

Initial appointment: December 18, 1998

Dr. von Bossel did not hold any further appointment on legally required Supervisory Boards and similar controlling bodies.

Taking into consideration the two appointments of the Chairman of the Supervisory Board that count double, Dr. Recktenwald held seven mandates – out of a basically permissible total of ten mandates (since the registration of the squeeze-out on July 5, 2012, the position of the Supervisory Board Chairman at SOLARPARC AG, however, has increased the permissible total number of mandates to twelve, § 100 Sec. 2 sentence 2 AktG). Dr. Gansen held two mandates, and Dr. von Bossel, since his retirement from the Supervisory Board of SOLARPARC AG on May 23, 2012, was only a member of the Supervisory Board of SOLARWORLD AG. At the moment, Mr. Marc M. Bamberger does not hold any other appointment on any legally required Supervisory Board nor on a similar controlling body. The recommendations under section 5.3 GCGC on the formation of committees has not applied to SOLARWORLD AG due to the fact that the Supervisory Board has consisted of only three members previously and has performed all tasks in plenary session. The Supervisory Board in its entirety deals with Management Board issues, including the remuneration system, and performs the required audit and monitoring functions. In this context, the ruling on the capping of management severance pay pursuant to section 4.2.3 is also observed. The age limits to be stipulated pursuant to sections 5.1.2 and 5.4.1 GCGC for the Management Board and Supervisory Board of SOLARWORLD AG are 68 years.

**TRANSPARENCY FOR OUR SHAREHOLDERS AND THE PUBLIC.** To meet our legal obligations, we publish all relevant information transparently and promptly via the relevant media channels in line with the principle of fair disclosure. On our website @ [www.solarworld.de/en/investorrelations](http://www.solarworld.de/en/investorrelations), this information is provided in its most recent version in both German and English pursuant to section 6.8 GCGC.

At the AGM or extraordinary shareholders' meetings, our shareholders can exercise their rights and cast votes. All relevant information concerning the AGM can be found on our webpage well ahead of time.

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If shareholders are prevented from attending the AGM personally, it is possible to have a voting right exercised through a personally selected, duly authorized representative or through an accountable proxy appointed by the company. This proxy will also be accessible to our shareholders during the AGM. Pursuant to sections 2.3.1 and 2.3.3 GCGC, the company gives the shareholders the opportunity of casting their votes by postal vote.

**CAPITAL MARKET LAW AND COMPLIANCE.** Observing capital market laws and reporting obligations is an important function of the Management Board of SOLARWORLD AG. The Board is advised in this capacity by an external legal clearing office that checks groupwide facts and transactions with respect to their ad-hoc relevance. Management Board members, employees, as well as service providers and project participants are specially trained regarding the ban on insider trading pursuant to § 14 German Securities Trading Act (*Wertpapierhandelsgesetz, WpHG*), and are registered in a special insider list.

Pursuant to section 6.6 GCGC, the Corporate Governance Report must include information about the ownership of shares in the company or related financial instruments by Management Board and Supervisory Board members, if these directly or indirectly exceed 1 percent of the shares issued by the company. If the entire holdings of all members of the Management Board and Supervisory Board exceed 1 percent of the shares issued by the company, these shall be reported separately by the Management Board and Supervisory Board. Share ownership of the members of the Management Board of SOLARWORLD AG amounted to a total of 27.84 percent as at December 31, 2013. Share ownership of the members of the Supervisory Board of SOLARWORLD AG amounted to 0.0045 percent as at December 31, 2013. Pursuant to § 15a WpHG, members of the Management Board and of the Supervisory Board as well as persons close to them are obliged by law to disclose the acquisition and disposal of shares of SOLARWORLD AG or of financial instruments based on them, if the value of the transactions exceeds the total sum of € 5,000.00 within one calendar year. During the year covered by the report the following notifications were made in accordance with § 15a WpHG (Directors' Dealing): Eifelstrom GmbH, a company affiliated with the Chairman of the Board Dr.-Ing. E.h. Frank Asbeck, disposed of the following shares in SOLARWORLD AG: 686,038 on October 1, 2013, 407,880 on October 2, 2013, 2,200 on October 3, 2013, 23,166 on October 8, 2013, 470,000 on October 8, 2013, 77,587 on October 9, 2013, 115,130 on October 10, 2013, 1,045,000 on November 26, 2013 and 218,000 on November 27, 2013. In addition, Solar Holding Beteiligungsgesellschaft mbH, with which Dr.-Ing. E.h. Frank Asbeck is also closely associated in a legal sense, disposed of 70,000 shares on November 27, 2013, before Dr.-Ing. E.h. Frank Asbeck personally sold additional shares in SOLARWORLD AG, namely the following amounts: 320,000 on November 27, 2013 itself, 580,234 on November 28, 2013, 1,293,139 on November 29, 2013, 900,512 on December 2, 2013 and 6,178 on December 3, 2013. The corresponding notifications were made available to the public on the website of SOLARWORLD AG, which also applies to the share dealings after the key date of December 31, 2013. @ [www.solarworld.de/en/directors-dealings//](http://www.solarworld.de/en/directors-dealings//)

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In order to promote a culture of integrity within the entire Group as part of good Corporate Governance, a comprehensive expansion of the group-wide Compliance Management System had already taken place the previous year, which communicated both with the Supervisory Board as well as the Management Board during the year covered by the report. → [\*Corporate management and control\*](#) • p. 033//

## REMUNERATION REPORT

With the Remuneration Report, the Supervisory Board and the Management Board of SOLARWORLD AG also comply with the German Corporate Governance Code (GCGC). While section 3.10 GCGC makes provision for the Corporate Governance Report, which is contained separately in this annual report under an appropriate headline, and apart from that is also covered in the Report by the Supervisory Board, section 4.2.5 GCGC stipulates the explanation of the remuneration system for members of the Management Board, including the disclosure of individual remuneration. Section 5.4.6 GCGC – also as part of the notes or the Management Report – requires individualized reporting of Supervisory Board remuneration subdivided according to components, and including compensation paid or advantages extended for services provided individually, in particular, advisory or agency services. Insofar as Section 4.2.5 GCGC in its new version of May 13, 2013 envisages a third paragraph on minimum and maximum information, additional accrual sub-division and pension benefits, this applies only as of the 2014 fiscal year and will therefore not be explained in greater detail here yet, particularly as there was no variable remuneration or retirement pensions during the year covered by the report.

**MANAGEMENT BOARD REMUNERATION.** The annual Management Board remuneration fixed in terms of its structure by the Supervisory Board and agreed with all Management Board members of SOLARWORLD AG is composed of fixed and variable compensation components. It is guided by § 87 AktG, according to which the total remuneration for an individual Management Board member must be in appropriate relation to his/her tasks and the situation of the company. Where the Act on the Appropriateness of Management Board Remuneration (*Gesetz zur Angemessenheit der Vorstandsvergütung, VorstAG*), passed by the Bundestag on June 18, 2009, also provides for medium- and long-term remuneration components, these were taken into consideration in new management contracts and in the extension of expiring contracts. Even regardless of this, Management Board remuneration meets all appropriateness limits as well as the recommendations of the GCGC; account is taken of the special conditions of the company in the context of the group as well as the individual connection in the personal and professional field, taking into consideration the relevant environmental conditions. In doing so, the financial situation of the SOLARWORLD group is taken into account. The financial situation, in turn, determines the profit distribution possibilities which form the basis for the variable components of Management Board remuneration. The latter does not occur for 2013 covered by the report, during which the Chairman of the Board has also continued the waiver he declared in July 2012 of fixed remuneration with

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approval of the Supervisory Board. The Chairman of the Board also did not participate to this extent in the special remuneration with incentives for the remaining members of the Board, which the Supervisory Board had decided on at its meeting of April 29, 2013 and which was due following the extraordinary restructuring shareholders' meeting of August 7, 2013.

Ultimately, the management remuneration also complies in all other respects with the requirements of the VorstAG. Both the individual performance of board members and the customariness in the industry are taken into account, as well as its orientation towards a sustainable corporate development. The deductible for members of the Management Board of at least ten percent of the losses in question and up to at least one and a half times the fixed annual compensation was already agreed upon with respect to D&O insurance as of January 1, 2010. Incidentally, Management Board remuneration at SOLARWORLD AG was already determined according to these principles before the VorstAG came into force.

As fringe benefits, all members of the Management Board receive the costs respecting their accident and D&O insurance, as well as a company car in the upper medium range for their own use. Furthermore, business-related payments, expenditure and expenses are reimbursed pursuant to § 670 German Civil Code (*Bürgerliches Gesetzbuch, BGB*). In addition, the board members in charge of finance (CFO), operations (COO), sales (CSO), and IT, brand and personnel (CIBPO) receive grants towards their health insurance. Since the full consolidation of SOLARPARC AG in 2012, the CEO's remuneration as Chief Executive Officer of SOLARPARC AG must also be taken into account. The relevant amounts are shown in the following table.

Management contracts do not contain any severance provision for the case of premature termination of an employment relationship.

There is no separate pension entitlement, which is why Management Board members are permitted to convert parts of their remuneration into pension provisions.

The fixed annual compensation is to be paid to the Management Board members in twelve monthly installments at the end of each month. In addition, insofar as the requirements are met, every Management Board member receives variable, performance-related special compensation that amounts to an individually negotiated euro amount per eurocent and share of the dividend distributed to shareholders. The amount is paid within four weeks of the AGM during which the dividend payment to be used as a basis has been decided upon. In the following individualized statement of Management Board remuneration, only variable compensation for the 2011 fiscal year is shown, while no variable compensation is paid for the current fiscal year. Otherwise, variable compensation is capped in such a way that, per year, a member of the Management Board cannot receive more than a multiple of the fixed compensation that has been agreed with the Supervisory Board. The sustainability component, stipulated by section 4.2.3 GCGC and § 87 Sec. 1, sentence 3 AktG for variable compensation of the Management Board, is complied with as follows with regard to an assessment basis of several years: Initially, only

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75 percent of the bonus for the last fiscal year is paid out. Then, based on a three-year assessment, an average value is determined. If this is below the initial payment of 75 percent, no additional amounts are paid. If this value is higher, a relevant back payment is made.

In accordance with a resolution of the AGM in 2009, the total management compensation per member of the Management Board is capped to 20 times the average employee remuneration. On May 20, 2010, the AGM also declared the approval of the system of remuneration for members of the Management Board pursuant to § 120 Sec. 4 AktG. The Chairman of the Supervisory Board outlined the salient points of the compensation system and any changes thereto at the subsequent Annual General Meetings (section 4.2.3 GCGC).

67 MANAGEMENT BOARD REMUNERATION IN 2013 // IN €

	Non-performance related		Performance-related	Total
	Fixed salary	Other remuneration	Variabel	
<b>Dr.-Ing. E. h. Frank Asbeck</b> CEO	<b>0.00*</b> <b>10,843.32</b> (company car private use)	<b>254,054.04</b> (CEO remuneration SOLARPARC AG incl. fixed portion: 120,000.00; variable portion: 120,000.00; company car private use: 14,054.04) 182.00 (SOLARWORLD INNOVATIONS GMBH inventor's fees)	<b>0.00</b>	<b>265,079.36*</b>
Prior year	157,500.00* 10,843.32 (company car private use)	254,054.04 (CEO remuneration SOLARPARC AG incl. fixed portion: 120,000.00; variable portion: 120,000.00; company car private use: 14,054.04) 1,322.00 (SOLARWORLD INNOVATIONS GMBH inventor's fees)	0.00	423,719.36*
<b>Frank Henn</b> CSO	<b>294,819.67</b> <b>11,905.20</b> (company car private use)	<b>150,000.00</b> (special remuneration/incentive) <b>3,933.60</b> (Grants towards health insurance)	<b>0.00</b>	<b>460,658.47</b>
Prior year	186,751.88 11,905.20 (company car private use)	3,686.52 (Grants towards health insurance)	0.00	202,343.60
<b>Philipp Koecke</b> CFO	<b>305,508.00</b> <b>23,800.80</b> (company car private use)	<b>300,000.00</b> (Special remuneration/incentive) <b>3,569.40</b> (Grants towards health insurance)	<b>0.00</b>	<b>632,878.20</b>
Prior year	260,565.32 25,028.11 (company car private use)	3,468.54 (Grants towards health insurance)	0.00	289,061.97
<b>Colette Rückert-Hennen</b> CIBPO	<b>240,000.00</b> <b>8,157.00</b> (company car private use)	<b>150,000.00</b> (special remuneration/incentive) 3,644.88 (Grants towards health insurance)	<b>0.00</b>	<b>401,801.00</b>



	Non-performance related		Performance-related	Total
	Fixed salary	Other remuneration	Variabel	
Prior year	240,000.00 8,157.00 (company car private use)	3,546.36 (Grants towards health insurance)	0.00	251,703.36
<b>Boris Klebensberger**</b> COO (member of Management Board until Feb. 7, 2013)	<b>45,511.30</b> <b>2,563.57</b> (company car private use)	<b>349.56</b> (Grants towards health insurance)	<b>0.00</b>	<b>48,424.43</b>
Prior year	376,743.23 25,159.20 (company car private use)	3,351.72 (Grants towards health insurance) 1,219.00 (SOLARWORLD INNOVATIONS GMBH inventor's fees)	0.00	406,473.15
<b>Total</b>	<b>943,108.86</b>	<b>865,733.48</b>	<b>0.00</b>	<b>1,808,842.34</b>
<b>Prior year</b>	<b>1,302,653.26</b>	<b>270,648.18</b>	<b>0.00</b>	<b>1,573,301.44</b>

\*waiving of remuneration since July 2012

\*\* The activity of Mr. Klebensberger in his function as Board Member was terminated in February 2013. Because his contract was still in effect, remuneration payments were continued in 2013 amounting to € 345,898.72.

**SUPERVISORY BOARD REMUNERATION.** The AGM on May 24, 2011 modified the Supervisory Board remuneration, which was approved earlier at the AGM of May 25, 2005. It still consists of fixed remuneration, performance-related special remuneration, fringe benefits and reimbursement of out-of-pocket expenses. Current Supervisory Board remuneration has been applicable since January 1, 2011 and also applies to the following years, unless a new AGM passes different resolutions for the future. Fixed remuneration for a member amounts to € 35,000.00, for the Deputy Chairman to € 52,500.00 and for the Chairman to € 70,000.00. A lump sum of € 500.00 for every meeting attended is paid as reimbursement of expenses. In addition, the company pays variable remuneration in relation to a basic amount of € 2,639.055; this basic amount is to be multiplied by each dividend cent if a dividend has been adopted. Ultimately, the company assumes the premium payments for insurance cover concerning legal liability arising from Supervisory Board activities (D&O insurance). In accordance with the GCGC, the Supervisory Board has also agreed upon the deductible that is compulsory for the Management Board pursuant to the VorstAG, effective as per July 1, 2010.

The Supervisory Board remuneration is net so that turnover tax is added if a member of the Supervisory Board is liable to pay turnover tax. Fixed annual remuneration is paid retroactively for the closed fiscal year. Variable remuneration also refers to the fiscal year ended and becomes due upon the AGM that passes the resolution on a dividend to be distributed. As regards the meeting attendance fees, 14 flat-rate fees, each of € 7,000.00 net, were charged for one AGM and 13 Supervisory Board meetings. With respect to further details, we refer to the table.

In connection with the new version of section 5.4.6 GCGC, the Supervisory Board intends to propose to the AGM that only fixed remuneration for the Supervisory Board be approved and that an additional budget for training and professional development be provided.

With regard to the disclosures recommended in the last paragraph of section 5.4.6 GCGC, it is pointed out that the Chairman of the Supervisory Board of SOLARWORLD AG is a partner in the law firm of Schmitz Knoth Rechtsanwälte. Essentially, this firm provides legal advice and representation for the SOLARWORLD group through other partners and employees of the law firm as well as the required international coordination.

With regard to the provision of own services during the year of 2013 covered by the report, Sozietät Schmitz Knoth (*Rechtsanwälte*) charged SOLARWORLD AG € 672,203.04 for consultancy services without turnover tax and tax-free expenditure. Added to this are fees for court proceedings totaling € 31,279.90, which are mainly recoverable. The consultancy fee for the subsidiaries of SOLARWORLD AG stands a further € 175,571.49 and was accounted for with the relevant net amounts of € 1,800.07 by SOLARPARC AG, € 130,861.20 by DEUTSCHE SOLAR GMBH, € 12,684.46 by DEUTSCHE CELL GMBH, € 1,540.06 by SOLAR FACTORY GMBH, € 1,299.99 by SOLARWORLD INDUSTRIES DEUTSCHLAND GMBH, € 2,730.86 by SOLARWORLD SOLICIUM GMBH and € 24,654.85 by SOLARWORLD INNOVATIONS GMBH. Therefore the Group expenditure on consultancy fees totaled € 847,774.53 (2012: € 825,996.80). In the field of court representation of subsidiaries of SOLARWORLD AG, a further € 545,742.20 net was incurred, which was divided as follows: € 715.00 for DEUTSCHE CELL GMBH, a further € 3,481.40 for SOLARWORLD INDUSTRIES DEUTSCHLAND GMBH and the remainder of € 541,545.80 for DEUTSCHE SOLAR GMBH, chiefly for pursuing claims for damages arising from long-term contracts. Therefore overall legal fees of € 577,022.10 (2012: € 424,592.55) were incurred for legal representation, which are counterbalanced by substantial claims for refunds, which is correspondingly less of a burden for the Group.

All individual items within the group amount to a total of € 1,424,797.17 (2012: 1,250,589.30, of which € 703,482.94 (2012: 501,333.15 €) were subject to approval by SOLARWORLD AG. All individual items and the total sum accepted by the group were discussed and approved by the Supervisory Board of SOLARWORLD AG, both during the year and at the meeting on January 20, 2014. At a meeting on February 26, 2014, they were discussed with the auditors and then together with this remuneration report approved. Commissioning was approved in each individual case, and the necessity for and appropriateness of the measures were confirmed after completion of the services. This was based on a new framework agreement, dated February 7, 2012, which also provides for the adoption of an approval resolution by the Supervisory Board prior to the relevant cost settlement and a decision in the individual case that the consulting and representation activities provided by the law firm of Schmitz Knoth Rechtsanwälte, evidenced by the cost invoices including time statements submitted, only relate to those Management Board tasks that are not part of the original area of tasks of the Supervisory Board.

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The Supervisory Board has convinced itself of the relevant facts so as to simultaneously confirm the proper mandate by the Management Board. Moreover, the Management Board has induced an annual overhaul of their own.

As in the previous year, the remuneration from SOLARPARC AG must be taken into account of those members of the Supervisory Board of SOLARWORLD AG who are also members of the Supervisory Board of SOLARPARC AG. The relevant amounts are shown in the following table.

**68 SUPERVISORY BOARD REMUNERATION IN 2013 // IN €**

		Non-performance related			Performance-related	Total
		Fixed annual remuneration	Meeting attendance fee	Other remuneration	Variable special remuneration	
<b>Dr. Claus Recktenwald</b> Chairman	For 2013 paid in 2014	70,000.00	7,000.00	31,000.00 (SOLARPARC AG Supervisory Board remuneration incl. meeting attendance fee of 1,000.00)	0.00	108,000.00
	For 2012 paid in 2013	70,000.00	6,000.00	32,500.00 (SOLARPARC AG Supervisory Board remuneration incl. meeting attendance fee of 2,500.00)	0.00	108,500.00
<b>Dr. Georg Gansen</b> Deputy Chairman	For 2013 paid in 2014	52,500.00	7,000.00	23,500.00 (SOLARPARC AG Supervisory Board remuneration incl. meeting attendance fee of 1,000.00)	0.00	83,000.00
	For 2012 paid in 2013	52,500.00	6,000.00	24,750.00 (SOLARPARC AG Supervisory Board remuneration incl. meeting attendance fee of 2,250.00)	0.00	83,250.00
<b>Marc. M. Bamberger</b> Member (since Aug. 7, 2013)	For 2013 paid in 2014	14,095.89	2,000.00	0.00	0.00	16,095.89
<b>Dr. Alexander von Bossel</b> Member (until Aug. 7, 2013)	For 2013 paid in 2013	20,416.67	6,000.00	0.00	0.00	26,416.67
	For 2012 paid in 2013	35,000.00	6,000.00	7,126.70 (SOLARPARC AG Supervisory Board remuneration incl. meeting attendance fee of 1,250.00 until May 23, 2012)	0.00	48,126.70
<b>Total</b>	For 2013 paid in 2013 and 2014	157,012.56	22,000.00	54,500.00	0.00	233,512.56
	For 2012 paid in 2013	157,500.00	18,000.00	64,376.70	0.00	239,876.70

**DR. CLAUS RECKTENWALD**  
CHAIRMAN OF THE SUPERVISORY BOARD OF SOLARWORLD AG

## **REPORT BY THE SUPERVISORY BOARD OF SOLARWORLD AG ON THE 2013 FISCAL YEAR**

Dear shareholders, dear employees and dear friends of SOLARWORLD AG,

It was not until January 24, 2014 that we were able to adopt the report by the Supervisory Board of SOLARWORLD AG on the 2012 fiscal year and publish it together with the Annual Group Report. Now, the Supervisory Board, made up of the same members, provides its report on the 2013 fiscal year, with the relevant accounts review meeting held on March 17, 2014. In between, the restructuring was closed and the acquisition of solar activities of the Bosch group was completed. The higher requirements for all corporate bodies of SOLARWORLD AG resulting from this were also reflected in the frequency of meetings of the Supervisory Board, which met formally 15 times since January 1, 2013 up to the accounts review meeting for this fiscal year. The meetings took place on January 24, February 22, March 18, April 18 and 29, May 15 and 27, July 8 and 18, September 30, November 21 and December 20, 2013 as well as on January 20, February 26 and March 17, 2014. 15 sets of minutes were prepared of these meetings, which were submitted, both during the year and in total, to the company's auditors for inspection and inclusion in their audit. This meant that until the extraordinary shareholders meeting on August 7, 2013, all the Supervisory Board minutes were signed by Dr. Recktenwald, Dr. Gansen and Dr. von Bossel, the members who were re-elected at the Annual General Meeting on May 21, 2008, and subsequently, due to the departure of the founding Supervisory Board member, Dr. Alexander von Bossel and appointment of Mr. Marc Bamberger as financial expert, they were signed by Mr. Marc Bamberger and the re-appointed Dr. Recktenwald and Dr. Gansen. The latter was confirmed as Deputy Chairman and re-appointed for a further five years, whilst Dr. Recktenwald and Mr. Bamberger put forward their candidatures and were appointed correspondingly only until the end of the General Meeting, which shall be held on May 30, 2014. The Supervisory Board shall be extended to 6 members and provide a better representation of creditors. The Supervisory Board in its role as finding committee will also welcome that there will be thus additional versatility and internationality. If it is not possible to meet the gender-specific diversity requirements of the German Corporate Governance Code (GCGC), which was otherwise complied with, this would have to be tolerated as a result of the creditor's requirements under the restructuring agreements. On the other hand, at the Supervisory Board meeting of August 10, 2012, the members also passed the resolution regarding the modified composition and independence regulation set forth in section 5.4 GCGC, this being connected with the corresponding Supervisory Board meeting of SOLARPARC AG. In the meantime, this company has been integrated fully into the SOLARWORLD group, but it has still maintained its legal independence until today with a Supervisory Board of its own.



**Supervisory Board of SolarWorld AG (from left to right):**

Dr. Georg Gansen: Deputy Chairman

Dr. Claus Recktenwald: Chairman

Marc M. Bamberger: Member

The Financial Expert of this company is Mrs. Dr. Kristin Neumann. The following consensus was reached as regards the determination of targets for the relevant Supervisory Board composition:

- *“one of the Supervisory Board members shall have an international professional background, which is recognized at SOLARPARC AG for Dr. Neumann with her activities as international Supervisory Board member and as Chief Financial Officer and at SOLARWORLD AG for Dr. Gansen with his international management activity in the legal department of an international group of companies,*
- *two Supervisory Board members shall not maintain any contractual relations with the company, which is, except for the Supervisory Board member Dr. Recktenwald and the engagement of his law firm in legal matters, true for the other members of the Supervisory Board,*
- *two Supervisory Board members shall also be independent in this sense, i. e. in both private and professional respects, which is also recognized for Dr. Gansen and Dr. von Bossel as well as Dr. Neumann,*
- *no member of the Supervisory Board should be older than 68 years, whereby this requirement has been fulfilled by all previous Supervisory Board members.”*

On August 7, 2013, Mr. Marc Bamberger replaced Dr. Alexander von Bossel, LL.M. (attorney-at-law). Until May 2012, Dr. von Bossel, jointly with Dr. Recktenwald and Dr. Gansen, also formed the Supervisory Board of SOLARPARC AG, where he was replaced by Dr. Neumann. He was also thanked in this report for the work he had undertaken in the Supervisory Board since the company was founded, which he had carried out with full commitment and maximum professionalism up to the restructuring shareholders' meeting of August 7, 2013.

During the period covered by this report, the Supervisory Board also performed the tasks that it is obligated to do according to the law, the articles of association and the rules of procedure. Since the inception of the company on December 18, 1998 and its constitution on January 12, 1999, the Supervisory Board has always been granted discharge. The last resolution on discharge, which was passed at SOLARWORLD AG's Annual General Meeting on May 24, 2012 for the 2011 fiscal year, was also not challenged. To the extent that the previous year's resolution for the 2010 fiscal year was contested for the first and only time, the Cologne Regional Court initially dismissed the action for annulment by its judgment of January 12, 2012 under file number 91 O 77/11. However, upon an appeal of the plaintiffs challenging the resolution, the Cologne Higher Regional Court modified this judgment of dismissal under file number 18 U 21/12 and in doing so also cancelled the resolution to discharge the Management Board, which had been objected to in connection with approval of formalities on attorneys' costs. This was associated with fees of € 2,340.00, which the Chairman of the Supervisory Board had been granted with the approval of the Supervisory Board as part of the drawing-up of guidelines for the General Meeting in 2010. To this extent, a full internal Group audit therefore took place regarding all accounting procedures for the 2010 financial year, a joint meeting of the Management Board and Supervisory Board was held on March 18, 2013 as well as the precautionary repayment of the disputed amount as early as February 2013 plus a cost position of € 390.00 for the additional work concerning a Management Board interview regarding the remuneration structure, which was also forwardly cancelled. Moreover, approval was again granted by the Supervisory Board, whereby it was stated on this matter in the minutes of the Management Board on March 19, 2013: *"The remaining audit resulted in no further findings. Also as a result it was confirmed by the Management Board that with the exception of the drawing-up of guidelines, for which the fees had already been re-paid, and that of the above-mentioned procedure, for which the fee is still to be requested, exclusively operating Management Board matters, which are not Supervisory Board matters, were included in the handling of the case. To this extent, the Management Board also confirms today the justification of the relevant instruction of the attorney."*

The Supervisory Board was and is in a continuous dialog with the Management Board of the company, which it both advised and supervised in the management of the company pursuant to § 111 German Stock Corporation Act (AktG). At the same time, the Supervisory Board dealt with the examination of its own efficiency. On the whole, no objections resulted from its activities and especially from the supervision of the Management Board. Also for this reason, the Supervisory Board will recommend to the Annual General Meeting that the Management Board be discharged for the 2013 fiscal year. The Management Board kept the Supervisory Board informed about all Management Board meetings through the written agenda, and thereafter by way of minutes of the meetings. The same applies to the Group Committee Meetings, which serve to stimulate a comprehensive exchange of views among the executive staff of the SOLARWORLD group.

The Supervisory Board was directly and on a timely basis involved in all decisions that were of fundamental importance to the company. The Management Board informed the Supervisory Board regularly, both in writing and verbally, without delay and comprehensively, about all issues relevant to the company regarding strategy, planning, business development, risk situation, risk management and compliance. The Management Board has pointed out and will point out deviations from previously formulated plans and/or targets, indicating the reasons therefor. In addition, comprehensive compliance regulations for the SOLARWORLD group were adopted, and Dr. Felicia Müller-Pelzer was appointed as “Global Compliance Officer”. She also reports to the Supervisory Board, the last time being at the meeting of February 26, 2014 for the 2013 fiscal year. The Supervisory Board itself complies with the reporting duties both of § 90 AktG and of the GCGC. Its recommendations have been and will be observed. On August 10, 2012, both the Management Board and the Supervisory Board of SOLARWORLD AG passed the following resolution and, thereafter, published it on the company’s website: *“that the recommendations of the ‘Government Commission of the German Corporate Governance Code’ in the formerly valid version have been complied with since the last declaration of compliance on December 13, 2011 and that the current version of May 15, 2012, which was published on June 15, 2012, is being and shall continue to be complied with.”* Due to the restructuring, a modification declaration followed in this respect on March 18, 2013 with regard to the change in the publication of the Group accounts beyond 90 days after the end of the financial year, which had become necessary. With regard to the new GCGC version, it was then stated in conclusion still in the same year: *“At the relevant meeting of December 20, 2013, the Management Board and the Supervisory Board of SOLARWORLD AG decided on the continued validity of their compliance declaration of August 10, 2012 with its limitation of March 18, 2013 also for the version of the GCGC of May 13, 2013, which was published on June 10, 2013. Hence the Management Board and the Supervisory Board declare that the recommendations of the German Corporate Governance Code taking into account the above-mentioned restriction were complied with in 2013 and will be further complied with.”* This declaration has also been made permanently available pursuant to § 161 AktG on the website of the company.

The section “Corporate Governance Report” in this Business/Group Report 2013 contains further details, unless the present report by the Supervisory Board already includes the information as required by section 3.10 GCGC.

Insofar as the Supervisory Board pursuant to section 5.1.2 GCGC has to make sure that there is diversity in the composition of the Management Board with particular emphasis on an adequate representation of women, this was taken up on July 1, 2011, when Mrs. Colette Rückert-Hennen was appointed as Management Board member for the Personnel and Brand executive division. Insofar as section 5.4.1 also provides for a corresponding diversity for Supervisory Board members, we have already referred to the external influences regarding the next election to the Supervisory Board. From the Group’s point of view, there is also no need to provide a declaration of deviation in this respect, since one third of, at least, the Supervisory Board of SOLARPARC AG is composed of women. The present Supervisory Board of SOLARWORLD AG will presumably not yet be able to make a corresponding election proposal for this. On the other hand, in line with the new regulation of section 5.4.6, a proposal for a purely



fixed remuneration for the Supervisory Board will be submitted at the next Annual General Meeting. The performance-related compensation, which is no longer included as a recommendation, is not applicable due to the results.

The tasks related to accounting and auditing are performed by the Supervisory Board as a group. The audit company BDO AG Wirtschaftsprüfungsgesellschaft, which was appointed to audit the financial statements and the consolidated financial statements of SOLARWORLD AG for the 2012 fiscal year, first renewed its declaration of independence as defined in section 7.2.1 GCGC, and thus confirmed that no business, financial, personal or other relationships exist between the auditor and its executive bodies and head auditors on the one hand, and the enterprise and the members of its executive bodies on the other hand, that might give rise to doubts about the auditor's independence. It was also verified that the overall period of seven years of the authorization to issue an auditor's certificate had not been exceeded for any of the auditors involved in the audit – and that applies groupwide. On the other hand, since the 2012 financial statements were not adopted before January 24, 2014, it was not possible to appoint the auditors for the 2013 fiscal year so that they had to be appointed by way of a court decision.

The report to be given by the Supervisory Board on the results of its own examination should, according to § 171 Sec. 2 AktG, also include a statement on which committees it has formed. As, however, the Supervisory Board of SOLARWORLD AG is limited to three members, an extensive formation of committees was not necessary again in the 2013 fiscal year. To the extent that § 175 Sec. 2 AktG requires an explanatory report on the information pursuant to § 289 Sec. 4, § 315 Sec. 4 HGB (German Commercial Code), the Supervisory Board adopts the relevant report by the Management Board fully subscribing to the statements made in it. The management and consolidated management reports affected by this were also audited by BDO AG Wirtschaftsprüfungsgesellschaft, Bonn, which extended the audit to the accounting as well. The annual financial statements for the fiscal year from January 1, to December 31, 2013, drawn up by the Management Board according to the HGB accounting rules and the management report of SOLARWORLD AG were awarded an unqualified auditor's certificate. The latter was issued on March 14, 2014, presented in the joint accounts review meeting on March 17, 2014, and taken up in the Supervisory Board's resolution concerning the adoption of the financial statements. At the same time, the auditor awarded an unqualified auditor's certificate to the group management report and the consolidated financial statements of SOLARWORLD AG, which pursuant to § 315a HGB were again drawn up on the basis of the international accounting rules IFRS. The Supervisory Board approved the financial statements, too, on March 17, 2014.

After its own examination of the annual financial statements, the consolidated financial statements, the management report and the group management report, the Supervisory Board approved the audit result presented by the auditors. It did not see any reasons for objections. No doubts concerning the correctness of the results produced by the auditors were raised, which is why any further investigation was not required and the resolutions concerning the adoption and approval of the annual financial statements as well as the consolidated financial statements could be passed. Previously, the Supervisory Board discussed the audit results of the auditors and the financial statements prepared by the Management Board in the final meeting on February 26, 2014. The Chief Financial Officer attended the meeting. He had also attended the preliminary discussions and meetings pursuant to section 7.1.2

GCGC regarding the relevant publication of the quarterly and half-yearly financial reports. Pursuant to section 3.6 of the GCGC, Supervisory Board meetings without the participation of the Management Board took only place on April 18 and May 15, 2013, whilst the Supervisory Board also integrated additional executive staff of the Group, for example, from the research field, into the two events for training and professional development on June 25 and December 20, 2013, which both took place at SOLARWORLD INNOVATIONS GMBH in Freiberg, Saxony. In this way, the relevant requirements of section 5.4.5 GCGC were also adhered to. Here, the topic of further training and professional development was established as a mutual obligation of the company and of the Supervisory Board.

The Supervisory Board thanks all staff of the Group, who have reacted to the market fluctuations and restructuring requirements in such a professional and committed way. The Supervisory Board is confident that these efforts will also ensure the long-term success of the company.

This report was unanimously approved by the Supervisory Board of Solar World AG immediately following the accounts review meeting on March 17, 2014, and the minutes were signed by all members.

Bonn, March 18, 2014

A handwritten signature in black ink, appearing to read 'Claus Recktenwald', written in a cursive style.

For the Supervisory Board  
**Dr. Claus Recktenwald**  
Chairman



# #5: CONSOLIDATED FINANCIAL STATEMENTS



REAL VALUE – FOR OUR CUSTOMERS, THIS MEANS:

**DURABLE, ESTHETIC, MODERN – OUR  
SYSTEMS CHECK ALL THE RIGHT BOXES**

# #5 CONSOLIDATED FINANCIAL STATEMENTS

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# CONSOLIDATED FINANCIAL STATEMENTS

FOR THE BUSINESS YEAR JANUARY 1, 2013 TO DECEMBER 31, 2013

## 69 CONSOLIDATED INCOME STATEMENT // IN K€

	Notes	2013	2012
1. Revenue	25, 27, 39	455,821	606,394
2. Change in inventories of finished goods and work in progress	13, 25, 48	-91,925	-64,666
3. Own work capitalized	28	542	65
4. Other operating income	25, 29	59,287	166,459
5. Cost of materials	30	-272,666	-534,568
6. Personnel expenses	31	-112,366	-129,378
7. Amortization and depreciation	9, 32, 40	-41,877	-417,564
8. Other operating expenses	25, 33	-185,480	-247,066
<b>9. Operating result</b>		<b>-188,664</b>	<b>-620,324</b>
10. Result from investments measured at equity	11, 35, 44	-5,309	-14,638
11. Interest and similar financial income	25, 35	373	2,406
12. Interest payable and similar financial expenses	25, 35	-70,286	-73,515
13. Other financial result	25, 35	-1,517	18,258
<b>14. Financial result</b>		<b>-76,739</b>	<b>-67,489</b>
<b>15. Result before taxes on income</b>		<b>-265,403</b>	<b>-687,813</b>
16. Taxes on income	26, 36	37,097	81,522
<b>17. Consolidated net result</b>		<b>-228,307</b>	<b>-606,291</b>
Of which attributable to:			
- Shareholders of SOLARWORLD AG		-228,307	-606,291
<b>18. Earnings per share</b>	37		
a) Weighted average number of shares outstanding (in 1,000)		110,795	110,795
<b>b) Consolidated net result (in €)</b>		<b>-2.06</b>	<b>-5.47</b>

## ⑦⑩ STATEMENT OF CONSOLIDATED COMPREHENSIVE RESULT // IN K€

Note 38	2013	2012*
<b>Consolidated net result</b>	<b>-228,307</b>	<b>-606,291</b>
Actuarial losses		
Actuarial losses, before tax	-271	-875
Deferred taxes on actuarial losses	81	262
<b>Actuarial losses, net of tax</b>	<b>-190</b>	<b>-613</b>
<b>Items not to be reclassified to profit or loss</b>	<b>-190</b>	<b>-613</b>
Exchange differences from currency translations		
Unrealized currency translation losses	-4,085	-4,737
Deferred taxes relating to exchange differences on translating foreign operations	906	2,331
<b>Exchange differences from currency translations, net of tax</b>	<b>-3,179</b>	<b>-2,406</b>
Cash flow hedges		
Fair value changes recognized in other comprehensive result	0	-5,671
Deferred taxes on cash flow hedges	0	1,730
<b>Cash flow hedges, net of tax</b>	<b>0</b>	<b>-3,941</b>
<b>Items that may be reclassified subsequently to loss</b>	<b>-3,179</b>	<b>-6,347</b>
<b>Other comprehensive net result</b>	<b>-3,369</b>	<b>-6,960</b>
Of which:		
Other comprehensive result before tax	-4,356	-11,283
Deferred taxes relating to other comprehensive result	987	4,323
<b>Total comprehensive result</b>	<b>-231,676</b>	<b>-613,251</b>
Of which attributable to:		
- Shareholders of SOLARWORLD AG	-231,676	-613,251

\* Comparative figures were adjusted in accordance with IAS 8.22. We refer to our comments in note 1.



## 71 CONSOLIDATED BALANCE SHEET AS AT DECEMBER 31, 2013 // IN K€

ASSETS	Notes	31/12/13	31/12/12*	01/01/12*
<b>A. Non-current assets</b>		<b>483,003</b>	<b>501,001</b>	<b>1,068,447</b>
I. Intangible assets	7, 9, 40, 41	8,425	8,154	20,521
II. Property, plant and equipment	8, 9, 40, 42	306,866	330,459	744,681
III. Investment property	10, 40, 43	15,106	24,967	27,231
IV. Investments measured at equity	11, 44	18,891	23,368	37,842
V. Other financial assets	16, 45, 64	360	672	790
VI. Other non-current assets	12, 47	11,977	34,938	235,133
VII. Deferred tax assets	26, 36, 46	121,378	78,442	2,248
<b>B. Current assets</b>		<b>441,800</b>	<b>689,917</b>	<b>1,167,326</b>
I. Inventories	13, 48	119,151	222,523	378,395
II. Trade receivables	14, 49, 65	48,859	55,569	123,021
III. Current income tax assets	26, 36, 50	1,353	1,054	35,472
IV. Other receivables and assets	15, 51	25,234	29,068	32,984
V. Other financial assets	16, 20, 52, 64	83,541	157,593	44,109
VI. Liquid funds	17, 53, 64, 65	163,662	224,109	553,345
<b>C. Assets held for sale</b>	18, 53	<b>7,032</b>	<b>1,312</b>	<b>0</b>
		<b>931,835</b>	<b>1,192,230</b>	<b>2,235,773</b>
EQUITY AND LIABILITIES	Notes	31/12/13	31/12/12*	01/01/12*
<b>A. Equity</b>	55	<b>-243,084</b>	<b>-11,409</b>	<b>614,566</b>
I. Equity attributable to shareholders of SOLARWORLD AG		-243,084	-11,409	612,588
1. Subscribed capital		110,795	110,795	110,795
2. Capital reserve		68	296,562	296,562
3. Other reserves		7,369	10,738	17,698
4. Accumulated results		-361,317	-429,504	187,533
II. Non-controlling shares		0	0	1,978
<b>B. Non-current liabilities</b>		<b>600,023</b>	<b>634,669</b>	<b>1,339,099</b>
I. Non-current financial liabilities	19, 20, 56, 64	536,629	537,555	1,150,888
II. Accrued investment grants	21, 57	31,105	38,176	56,773
III. Non-current provisions	22, 23, 58	29,414	29,646	32,021
IV. Other non-current liabilities	24, 59	302	27,029	83,774
V. Deferred tax liabilities	26, 36, 60	2,573	2,262	15,643
<b>C. Current liabilities</b>		<b>574,896</b>	<b>568,970</b>	<b>282,107</b>
I. Current financial liabilities	19, 20, 56, 64	485,508	467,226	120,981
II. Trade payables	19, 64	17,456	32,632	64,433
III. Income tax liabilities	26, 36, 61	6,345	4,757	18,159
IV. Current provisions	23, 58	9,987	19,411	13,004
V. Other current liabilities	24, 59	55,601	44,944	65,531
		<b>931,835</b>	<b>1,192,230</b>	<b>2,235,773</b>

\* Comparative figures were adjusted in accordance with IAS 8.22. We refer to our comments in note 1.

72 CONSOLIDATED STATEMENT OF CHANGES IN EQUITY // IN K€

Notes 4, 55	Sub- scribed capital	Capital reserve	Other reserves			Accumu- lated results	Non- control- ling interests	Total
			Cur- rency trans- lation reserve	Reserve from hedging of cash flows*	IAS 19 reserve**			
As at Dec 31, 2011	110,795	296,562	13,582	3,941	0	187,533	1,978	614,391
Adjustment in accor- dance with IAS 8.22					175			175
As at Jan 1, 2012, adjusted**	110,795	296,562	13,582	3,941	175	187,533	1,978	614,566
Increase of the majority interest in SOLARPARC AG (transaction between owners)						-774	-1,978	-2,752
Dividend distribution						-9,972		-9,972
Total comprehensive result			-2,406	-3,941	-613	-606,291		-613,251
As at Dec 31, 2012 adjusted**	110,795	296,562	11,176	0	-438	-429,504	0	-11,409
Allocation to revenue reserves		-296,494				296,494		0
Total comprehensive result			-3,179	0	-190	-228,307	0	-231,676
As at Dec 31, 2013	110,795	68	7,997	0	-628	-361,317	0	-243,084

\* Hereinafter "hedging reserve"

\*\* Comparative figures were adjusted in accordance with IAS 8.22. We refer to our comments in note 1.

## 73 CONSOLIDATED CASH FLOW STATEMENT // IN K€

Note 65	2013	2012
Result before tax	-265,403	-687,813
+ Amortization and depreciation	41,877	417,564
+ Financial result (excluding profits and losses from currency translation)	75,668	67,026
- Profit from disposal of assets	-470	-6,024
- Reversal of accrued investment grants	-6,522	-48,299
+ Other material non-cash expenses	83,025	129,779
= <b>Cash flow from operating result</b>	<b>-71,825</b>	<b>-127,767</b>
+ Decrease in inventories	93,266	10,382
+ Decrease in trade receivables	7,345	59,884
- Decrease in trade payables	-13,711	-28,925
+ Development in other net assets	9,640	19,732
= <b>Cash flow from operating result and changes in net assets</b>	<b>24,714</b>	<b>-66,694</b>
+ Interest received	336	2,935
-/+ Taxes on income paid/received	-7,726	16,518
= <b>Cash flow from operating activities</b>	<b>17,324</b>	<b>-47,241</b>
- Cash payments for investments in fixed assets	-24,221	-52,543
+ Cash receipt investment grants	10	27,508
+ Cash receipts from the disposal of fixed assets	302	32,469
+ Cash receipts from financial investments	0	7,871
- Cash payments from the acquisition of consolidated entities	0	-2,304
= <b>Cash flow from investing activities</b>	<b>-23,909</b>	<b>13,001</b>
- Cash payments from the repayment of loans	-1,778	-214,823
- Interest and restructuring expenses paid	-50,454	-69,949
- Cash payments due to dividend distributions	0	-9,972
= <b>Cash flow from financing activities</b>	<b>-52,232</b>	<b>-294,744</b>
- Net changes in cash and cash equivalents	-58,817	-328,984
- Currency and consolidation-related change of cash and cash equivalents	-1,630	-252
+ Cash and cash equivalents at the beginning of the period	224,109	553,345
= <b>Cash and cash equivalents at the end of the period</b>	<b>163,662</b>	<b>224,109</b>

# CONSOLIDATED NOTES

## GENERAL DISCLOSURES

### 1. BASIC PRINCIPLES, ACCOUNTING POLICIES

SOLARWORLD AG is a listed corporation domiciled at Martin-Luther-King-Straße 24, Bonn, Germany. SOLARWORLD AG's Management Board prepared the consolidated statements on March 14, 2014.

SOLARWORLD group is one of the leading manufacturers of crystalline solar power technology worldwide. SOLARWORLD AG and its subsidiaries research, develop, produce and recycle on all levels of the solar value added chain. The focus of operations is on the production and international distribution of high-end solar energy facilities – from rooftop solar systems to components for outdoor solar parks. The products can be used both in the on- and off-grid area.

In accordance with § 315a HGB, SOLARWORLD AG prepared its consolidated financial statements per Dec. 31, 2013 pursuant to the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB) as applicable in the European Union ("EU-Endorsement") at balance sheet date as well as to the interpretations of the International Financial Reporting Interpretations Committee (IFRIC). In addition, the commercial law regulations further stated in § 315a para. 1 HGB were taken into account. All mandatory applicable standards and interpretations have been considered. IFRS that have not yet entered into force have not been adopted.

The consolidated financial statements are prepared in Euro. Unless otherwise stated, all amounts are rounded either up or down to the nearest full thousand (k€) in accordance with commercial rounding.

The income statement was prepared in accordance with the nature of expense method. Balance sheet classifications follow maturities. For the purpose of clear and more comprehensive presentation, individual items are combined on balance sheet and income statement. Additional details are given in the notes where those items are presented separately.

With regard to applied accounting policies, we refer to the illustration of the accounting principles below. They basically correspond with those principles applied last year except for those stated as an exception from that rule below.

#### First-time mandatory application of standards and interpretations in 2013

The following standards and interpretations or substantial amendments were to be applied in 2013 for the first time:

**IFRS 7 – OFFSETTING FINANCIAL ASSETS AND FINANCIAL LIABILITIES.** The amendments were published on December 16, 2011 and adopted into European law on December 13, 2012. The amendments of IFRS 7 require that, for financial instruments, information on rights of set-off and related agreements (e.g. hedging requirements) be disclosed in an enforceable set-off master agreement or a corresponding agreement. The amendments are mandatorily effective for accounting periods beginning on or after January 1, 2013. Entities shall provide the disclosures in the notes retrospectively for all comparative periods. As the Group does not have any offsetting arrangements in place, the application of the amendments has had no material impact on the disclosures or on the amounts recognized in the consolidated financial statements of SOLARWORLD AG.

**IFRS 13 – FAIR VALUE MEASUREMENT.** The standard was published by the IASB on May 12, 2011, adopted into European law on December 11, 2012 and is mandatorily effective for accounting periods beginning on or after January 1, 2013. IFRS 13 reflects the measurement regulations for determining the fair value and refers to almost all other

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standards (with the exception of IAS 2 “Inventories”, 17 “Leases”, and IFRS 2 “Share-based payment”). The standard itself does not contain any provisions as to when the fair value shall be used. The amendments will not affect the consolidated financial statements of SOLARWORLD AG.

**AMENDMENTS IAS 12 – DEFERRED TAXES.** The IASB issued the amendments on December 20, 2010. They were adopted into European law on December 11, 2012 and became effective on January 1, 2013. For the purpose of recognizing deferred taxes, it is presumed that the economic benefits from investment property measured at fair value in accordance with the option provided by IAS 40 are realized through sale, not collection over time. This, however, only applies if the presumption is not rebutted. The amendments are mandatorily effective for accounting periods beginning on or after January 1, 2013. The amendments do not affect the consolidated financial statements of SOLARWORLD AG, as investment property is measured at amortized cost. We refer to our statements in note 10.

**AMENDMENTS IAS 19 – EMPLOYEE BENEFITS.** The amendments published by the IASB on June 16, 2011 were adopted into European law on June 5, 2012 and are compulsory for accounting periods beginning on or after January 1, 2013. The amendments mainly concern the recognition of actuarial gains and losses. While previously an option regarding the recognition on the income statement or in “Other Comprehensive Income” existed, recognition in “Other Comprehensive Income” is now mandatory. The “corridor approach” that was possible in accordance with the former IAS 19 was eliminated. The group income statement will now stay clear of effects from actuarial gains and losses, as these have to be recognized in other comprehensive income in the future. The amended IAS 19 is applicable retroactively.

In accordance with IAS 8.22, the effects of the changes in accounting policies were considered retrospectively. The comparative amounts of the period 2012 as well as of January 1, 2012 were modified accordingly. Unredeemed actuarial losses as at December 31, 2012 (as at January 1, 2012: unredeemed actuarial gains) were recognized in other reserves in these consolidated interim financial statements. In addition to the adjustments made on the balance sheet, the statement of changes in equity as well as the statement of other comprehensive result have also been adjusted in this regard.

An adjustment of the measurement of partial retirement obligations to the amendments of IAS 19 was not conducted. This is especially due to the fact that most of the persons concerned are already on leave and thus only marginal changes with no material impact on these consolidated interim financial statements would come about.

The impacts of the mentioned adjustments on the items of the consolidated balance sheet are as follows:

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## Adjustment to the balance sheet

in k€	Assets	Equity and liabilities		
	A.VII. Deferred tax assets	A.I.3. Other Reserve	B.III. Non-current provisions	B.V. Deferred tax liabilities
Jan 1, 2012 prior to adjustment	2,248	17,523	32,270	16,568
Adjustment	0	175	-249	75
Jan 1, 2012 after adjustment	2,248	17,698	32,021	16,643
Dec 31, 2012 prior to adjustment	78,255	11,176	29,020	2,262
Adjustment	188	-438	626	0
Dec 31, 2012 after adjustment	78,442	10,738	29,646	2,262

**AMENDMENTS IAS 1 – PRESENTATION OF FINANCIAL STATEMENTS.** The IASB issued the amendments on July 16, 2011 and adopted it into European law on June 5, 2012. The amendments introduce new terminology, whose use is not mandatory, for the statement of comprehensive income and income statement. Under the amendments to IAS 1, the “statement of comprehensive income” is renamed as the “statement of profit and loss and other comprehensive result” [and the “income statement” is renamed as the “statement of profit and loss”]. The company has not applied this new terminology.

The amendments to IAS 1 retain the option to present profit or loss and other comprehensive income in either a single statement or in two separate but consecutive statements. The SOLARWORLD group decided to present all items of income and expense recognized in a period in two statements, a separate income statement and a statement of comprehensive income. The statement of comprehensive income directly follows the income statement.

However, the amendments to IAS 1 require items of “Other Comprehensive Income (OCI)” to be grouped into two categories in the other comprehensive income section:

- a. Items that will not be reclassified subsequently to profit or loss and
- b. Items that may be reclassified subsequently to profit or loss when specific conditions are met (so-called “Recycling”).

The amendments are mandatorily effective for accounting periods beginning on or after July 1, 2012. Hence, SOLARWORLD AG has modified the presentation of items of other comprehensive result to reflect the change. Other than the above mentioned presentation changes, the application of the amendments to IAS 1 does not result in any impact on profit or loss, other comprehensive result and total comprehensive result..

**IMPROVEMENTS TO IFRS.** On May 17, 2012, the IASB – in the scope of its annual improvement process – published updates of IFRS in terms of smaller and less urgent adjustments that were adopted into European law on March 27, 2013. As a basic rule, the amendments are mandatorily effective for accounting periods beginning on or after January 1, 2013. Most of the adjustments concern clarifications and substantiations of existing IAS/IFRS or amendments that result from IFRS modifications already conducted. The following selected contents of the collective standard regarding improvements of IFRS had to be taken into account upon preparing the consolidated financial statements for SOLARWORLD group:

- **IAS 1 – PRESENTATION OF FINANCIAL STATEMENTS.** IAS 1 requires that entities prepare a third balance sheet per the beginning of the comparative period if accounting principles are used retrospectively or balance sheet items are adjusted or reclassified retrospectively. The amendments of IAS 1 clarify that an obligations to prepare the third balance sheet only exists if the retrospective adjustments materially affect the information of the third balance sheet. In addition it is clarified that disclosures in the notes are not necessary with regard to the third balance

sheet. As the Group has applied the revised IAS 19 in the current year, a third balance sheet as at January 1, 2012 has presented in accordance with the amended standard. Disclosures in the notes that exceed the requirements of IAS 8 were not conducted.

- **IAS 16 – PROPERTY, PLANT AND EQUIPMENT.** The amendments of IAS 16 clarify that spare parts, replacement equipment and maintenance machines constitute property, plant and equipment if they meet the definition criteria; otherwise they have to be treated as inventories. This amendment does not affect the consolidated financial statements of SOLARWORLD AG, as the group already proceeds in accordance with the new regulation.
- **IAS 32 – FINANCIAL INSTRUMENTS: PRESENTATION.** The amendments of IAS 32 clarify that income taxes in connection with distributions to owners of equity instruments and costs of equity transactions shall be treated in accordance with IAS 12. Thus, income tax-related consequences from dividends and from transaction expenses (issuance or repurchase of equity instruments) have to be recognized on the income statement and in equity, respectively. These amendments do not affect the consolidated financial statements of SOLARWORLD AG.
- **IAS 34 – INTERIM FINANCIAL REPORTING.** The amendments of IAS 34 clarify that the presentation of changes in segment assets and liabilities in the interim report are mandatory only if they substantially changed as compared to the prior year's financial statements and such changes are periodically reported to the main decision making bodies. These amendments do not affect the consolidated financial statements of SOLARWORLD AG.

IFRIC 20 – Stripping Costs in the Production Phase of a Surface Mine. IFRIC 20 was published on October 19, 2011, adopted into European law on December 11, 2012 and is mandatorily effective for accounting periods beginning on or after January 1, 2013. The interpretation clarifies if and under what requirements stripping costs that are incurred in the scope of developing a surface mine constitute assets and how initial and subsequent measurement are to be carried out. The amendments do not affect the consolidated financial statements of SOLARWORLD AG.

#### Standards and interpretations not yet mandatory

In the current period, SOLARWORLD AG did not apply any non-mandatory standards early.

On May 12, 2011, the IASB published three new (IFRS 10, 11 and 12) and two revised (IAS 27 and 28) standards that comprise new consolidation regulations (so-called “consolidation package”). These were adopted into European law on December 11, 2012 and become operative for financial statements beginning on or after January 1, 2014. The amendments will not materially affect the consolidated financial statements of SOLARWORLD AG.

- **IFRS 10 – CONSOLIDATED FINANCIAL STATEMENTS.** This standard establishes a uniform basis for the definition of a parent-subsidiary relationship or the precise demarcation of the consolidated entity. The definition of control changes insofar as the same criteria applies for each entity upon determining the control relationship. This standard replaces the previously relevant provisions in IAS 27 (“Consolidated and separate financial statements”) and SIC 12 (“Consolidation – special purpose entities”).
- **IFRS 11 – JOINT ARRANGEMENTS.** This standard replaces the current provisions of IAS 31 (“Interests in joint ventures”) and SIC 13 (“Jointly controlled entities – non-monetary contributions by ventures”) and includes provisions regarding identification, classification and recognition of joint arrangements. Only two types of joint arrangements exist anymore: Joint Ventures that may only be accounted for using the equity method from now on (i.e. quota consolidation is no longer permitted) and Joint Operations that directly recognize in their consolidated financial statements all assets, liabilities, expenses and revenue from such joint operation in relation to their interest in such joint operation. The consolidated financial statements of SOLARWORLD AG recognize both investments in associates and joint ventures in accordance with the equity method. We refer to our corresponding statements in note 11.



- **IFRS 12 – DISCLOSURE OF INTERESTS IN OTHER ENTITIES.** IFRS 12 determines the necessary disclosures for entities that are required in accordance with the new standards IFRS 10 and 11. The standard replaces the disclosure requirements currently included in IAS 28 “Investments in Associates” and the disclosure requirements regarding consolidated financial statements included in IAS 27. The objective is to enable the user of financial statements to better evaluate the type, risks and financial consequences of interests in other entities.
- **IAS 27 – SEPARATE FINANCIAL STATEMENTS.** The newly issued IFRS 10 and 12 now provide separate regulations on consolidated financial statements. Thus, IAS 27 now only states the regulations regarding separate financial statements and was hence renamed accordingly.
- **IAS 28 – INVESTMENTS IN ASSOCIATES.** With the introduction of IFRS 10, 11 and 12, the adjusted IAS 28 governs accounting for investments in associates and the requirements for the application of the equity method upon recognition of investments in associates and joint ventures.

On June 28, 2012, amendments of IFRS 10, IFRS 11 and IFRS 12 were published to clarify the legislative content of certain transitional guidelines regarding their first time application. As a basic rule, entities shall apply the amendments of the transitional guidelines for accounting periods beginning on or after January 1, 2013. Initial application in the EU will probably only be mandatory for periods beginning on or after January 1, 2014. The amendments will not materially affect the consolidated financial statements of SOLARWORLD AG.

On October 31, 2012, amendments of IFRS 10, IFRS 12 and IAS 27 were published that become operative for accounting periods beginning on or after January 1, 2014. Herein, investment entities are defined as an independent type of companies and exempted from the consolidation regulations of IFRS 10. Instead, investment entities have to present interests held for investment purposes at fair value. The amendments will not affect the consolidated financial statements of SOLARWORLD AG.

**IAS 32 – OFFSETTING FINANCIAL ASSETS AND FINANCIAL LIABILITIES.** The standard was published on December 16, 2011 and was adopted into European law on December 13, 2012. The amendments of IAS 32 clarify existing application problems with regard to offsetting criteria for financial assets and financial liabilities. The amendments especially clarify the meaning of the terms “currently has a legally enforceable right of set-off” and “simultaneous realization and settlement”. The amendments of IAS 32 become operative for accounting periods beginning on or after January 1, 2014, and shall be applied retrospectively. We do not assume that these amendments will materially affect the consolidated financial statements of SOLARWORLD AG.

**AMENDMENTS TO IAS 36 – RECOVERABLE AMOUNT DISCLOSURES FOR NON-FINANCIAL ASSETS.** On May 29, 2013 the IASB issued “Recoverable Amount for Disclosures for Non-Financial Assets (Amendments to IAS 36)” that address changes of the disclosure requirements of IAS 36. They were adopted into European law on December 19, 2013. The amendments realize the IASB’s original intention that the scope of the disclosures is limited to the recoverable amount of non-financial assets for which an impairment loss has been recognized or reversed during the period if that amount is based on fair value less costs of disposal. In addition the disclosure requirements have been amended when the recoverable amount is based on fair value less costs of disposal. The amendments are effective retrospectively for accounting periods beginning on or after January 1, 2014, while earlier application is permitted in so far as IFRS 13 has already been applied. The EU has not yet endorsed the amendments. Currently, Management does not expect the amendments – if endorsed by the EU in the current version – to have a material impact on the Group’s consolidated financial statements.

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**AMENDMENTS TO IAS 39 – NOVATION OF DERIVATIVES AND CONTINUATION OF HEDGE ACCOUNTING.** On June 27, 2013 the IASB issued “Novation of Derivatives and Continuation of Hedge Accounting (Amendments to IAS 39)” that amends IAS 39 Financial Instruments. They were adopted into European law on December 19, 2013. The amendments allow hedge accounting to continue in a situation where a derivative, which has been designed as a hedging instrument, is novated to effect clearing with a central counterparty as a result of law or regulation, if specific conditions are met. The amendments are effective retrospectively for accounting periods beginning on or after January 1, 2014, while earlier application is permitted. The EU has not yet endorsed the amendments. Currently, Management does not expect the amendments – if endorsed by the EU in the current version – to have a material impact on the Group’s consolidated financial statements.

The following accounting standards were passed in 2013 however not yet adopted into European law by the EU as of December 31, 2013:

**IMPROVEMENTS TO IFRS.** On December 12, 2013, the IASB – in the scope of its annual improvement process – issued updates of IFRS in terms of smaller and less urgent adjustments that have not yet been adopted into European law. The following selected contents of the collective standard regarding improvements of IFRS had to be taken into account upon preparing the consolidated financial statements for SOLARWORLD group:

**Annual Improvements to IFRSs 2010-2012 Cycle:**

- **IFRS 2 – SHARE-BASED PAYMENT:** Amends the definitions of ‘vesting condition’ and ‘market condition’ and adds definitions for ‘performance condition’ and ‘service condition’ (which were previously part of the definition of ‘vesting condition’).
- **IFRS 3 – BUSINESS COMBINATIONS:** Clarifies that contingent consideration that is classified as an asset or a liability shall be measured at fair value at each reporting date.
- **IFRS 8 – OPERATING SEGMENTS:** Requires an entity to disclose the judgements made by management in applying the aggregation criteria to operating segments. Clarifies that an entity shall only provide reconciliations of the total of the reportable segments’ assets to the entity’s assets if the segment assets are reported regularly.
- **IFRS 13 – FAIR VALUE MEASUREMENT:** Clarifies that issuing IFRS 13 and amending IFRS 9 and IAS 39 did not remove the ability to measure short-term receivables and payables with no stated interest rate at their invoice amounts without discounting if the effect of not discounting is immaterial.
- **IAS 16 – PROPERTY, PLANT AND EQUIPMENT:** Clarifies that when an item of property, plant and equipment is revalued the gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount.
- **IAS 24 – RELATED PARTY DISCLOSURES:** Clarifies that an entity providing key management personnel services to the reporting entity or to the parent of the reporting entity is a related party of the reporting entity.
- **IAS 38 – INTANGIBLE ASSETS:** Clarifies that when an intangible asset is revalued, the gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount.

**Annual Improvements to IFRSs 2011-2013 Cycle:**

- **IFRS 3 – BUSINESS COMBINATIONS:** Clarifies that IFRS 3 excludes from its scope the accounting for the formation of a joint arrangement in the financial statements of the joint arrangement itself.

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- **IFRS 13 – FAIR VALUE MEASUREMENT:** Clarifies that the scope of the portfolio exception defined in paragraph 52 of IFRS 13 includes all contracts accounted for within the scope of IAS 39 Financial Instruments: Recognition and Measurement or IFRS 9 Financial Instruments, regardless of whether they meet the definition of financial assets or financial liabilities as defined in IAS 32 Financial Instruments: Presentation.
- **IAS 40 – INVESTMENT PROPERTY:** The acquisition of investment property can meet the definition of both the acquisition of an asset, a group of assets or a business combination in the scope of IFRS 3. It is clarified, that in case the conditions of a business combination in the scope of IFRS 3 are met and the business combination includes investment property, the separate application of both standards independently of each other is required.

The amendments of both cycles become mandatorily effective for accounting periods beginning on or after January 1, 2014. We do not assume that these amendments will materially affect the consolidated financial statements of SOLARWORLD AG.

**IFRS 9 – FINANCIAL INSTRUMENTS.** IFRS 9 was published on November 12, 2009. It reflects the first phase of the IASB project for the replacement of IAS 39 and concerns the classification and measurement of financial assets as defined in IAS 39. The standard was originally applicable for accounting periods beginning on or after January 1, 2013. Per December 16, 2011, however, the effective date of IFRS 9 was changed to accounting periods beginning on or after January 1, 2015. Moreover, the relief from restating comparative periods and associated disclosures in IFRS 7 was modified. In further phases, the IASB will expand IFRS 9 to add new requirements regarding the classification and measurement of financial liabilities, hedge accounting and impairments. The results of the initial phase of IFRS 9 will probably affect the classification and measurement of financial assets of SOLARWORLD group. To present a comprehensive picture of potential consequences, the group will quantify the consequences only in connection with the other phases once they are published.

**IFRIC 21 – LEVIES.** On May 20, 2013 the IASB issued IFRIC 21 “Levies”, an interpretation of IAS 37 “Provisions, Contingent Liabilities and Contingent Assets”. The interpretation determines the accounting for levies imposed by governments, other than income taxes according to IAS 12, and clarifies in particular when an entity should recognize a liability to pay a levy. The interpretation is effective for accounting periods beginning on or after January 1, 2014, while earlier application is permitted. The EU has not yet endorsed the interpretation. Currently, Management does not expect the interpretation – if endorsed by the EU in the current version – to have a material impact on the Group’s consolidated financial statements.

**AMENDMENTS TO IFRS 9 – FINANCIAL INSTRUMENTS (HEDGE ACCOUNTING AND AMENDMENTS TO IFRS 9, IFRS 7 AND IAS 39).** On November 19, 2013 the IASB issued amendments to IFRS 9 “Financial Instruments” (Hedge Accounting and Amendments to IFRS 9, IFRS 7 and IAS 39). The amendments establish a new model that represents a substantial overhaul of hedge accounting that will enable entities to better reflect their risk management activities in their financial statements. In addition extensive disclosures are required. Moreover recognizing fair value changes of liabilities due to credit rating within equity will be possible to be earlier adopted without applying the complete regulations of IFRS 9. Furthermore the IASB decided to abandon the mandatory date of January 1, 2015; a new date should be decided upon when the entire IFRS 9 project is closer to completion. The EU has not yet endorsed the standard including the amendments. Currently, Management is not able to finally assess the impact of the adoption of the standard including the amendments – if endorsed by the EU in the current version.

**AMENDMENTS TO IAS 19 – DEFINED BENEFIT PLANS: EMPLOYEE CONTRIBUTIONS.** On November 21, 2013 the IASB issued narrow-scope amendments to IAS 19 “Employee Benefits” titled “Defined Benefit Plans: Employee Contributions (Amendments to IAS 19)”. The amendments are applicable to recognizing contributions of employees or third parties to defined benefit plans. Hereby it will be allowed to recognize employees’ or third parties’ contributions as a reduction of current service costs in the period in which the corresponding servicing has been rendered if the contributions are independent of the number of years of employee service. The amendments to IAS 19 are to be applied for accounting periods beginning on or after July 1, 2014; earlier application is permitted. The EU has not yet endorsed the amendments. Currently, Management does not expect the amendments – if endorsed by the EU in the current version – to have a material impact on the Group’s consolidated financial statements.

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**Changes in accounting methods**

SOLARWORLD AG has applied all accounting principles endorsed by the EU and compulsory for accounting periods beginning before or on January 1, 2013, if affecting these consolidated financial statements. We refer to our comments stated above.

**2. CONSOLIDATED ENTITY AND LEGAL GROUP STRUCTURE**

The consolidated financial statements include SOLARWORLD AG and all domestic and foreign entities of which SOLARWORLD AG directly or indirectly owns the majority of the voting rights of the entity or can otherwise control the entity's activities. These entities are fully consolidated at the time SOLARWORLD AG is able to exert control. Consolidation ends at the time SOLARWORLD AG no longer controls the respective entity. Joint ventures and associates are capitalized using the equity method.

The figure below shows SOLARWORLD group's consolidated entities and their structure at December 31, 2013:

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SOLARWORLD 2013  
GROUP STRUCTURE

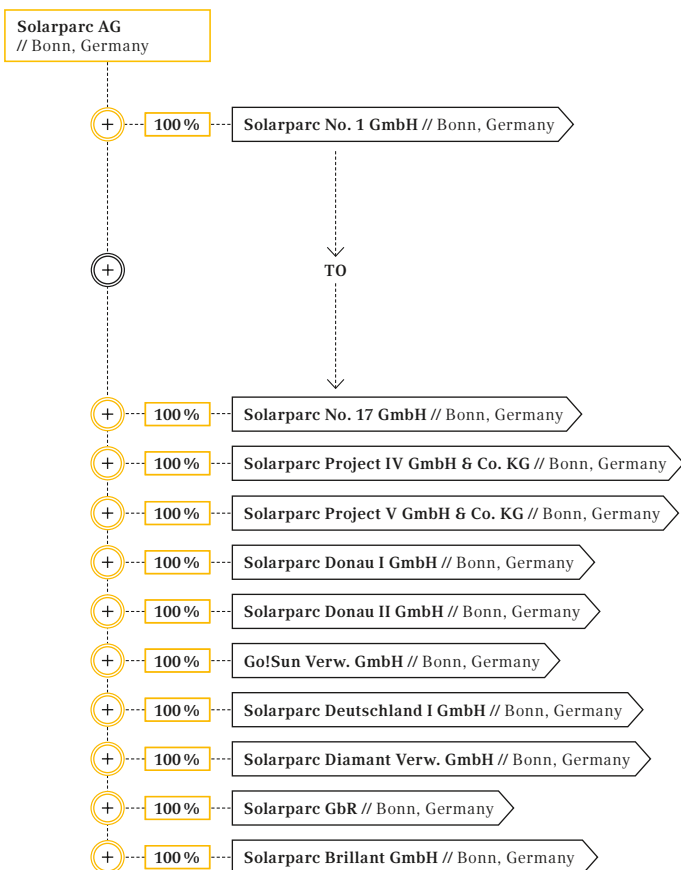
74 SOLARWORLD GROUP STRUCTURE AS AT DECEMBER 31, 2013



\* Structure of the subgroup on next page

\*\* Consolidated at equity

75 SOLARPARC SUB-GROUP STRUCTURE AS AT DECEMBER 31, 2013



Per the end of first quarter 2013, two solar projects and the respective project entities SEPV8 LLC and SEPV9 LLC were sold to an third party investor, which made for revenue of € 47,869k.

With contract under the law of obligation dated April 17, 2013, SOLARPARC DIAMANT GMBH & Co. KG was sold to a third party investor. Upon meeting substantial conditions precedent, the entity was deconsolidated in the reporting period, which made for revenue of € 30,739k.

With contract dated November 12, 2013, SOLARWORLD AG acquired SOLARPARC RUBIN VERWALTUNGS GMBH, Bonn, and SOLARPARC RUBIN GMBH & Co. KG, Bonn, from SOLARPARC AG, Bonn, Germany. On December 6, 2013, SOLARPARC RUBIN GMBH & Co. KG concluded a profit and loss transfer agreement with SOLARWORLD Industries Deutschland GmbH, Bonn, Germany. With the agreement of December 21, 2013, SOLARPARC RUBIN VERWALTUNGS GMBH left the limited partnership SOLARPARC RUBIN GMBH & Co. KG. Thus, SOLARPARC RUBIN GMBH & Co. KG merged into SOLARWORLD AG. Consequently, the profit and loss transfer agreement concluded with SOLARWORLD INDUSTRIES DEUTSCHLAND GMBH was transferred to SOLARWORLD AG.

On November 26, 2013, SOLARWORLD AG signed a contract on the purchase of parts of the solar business of Robert Bosch GmbH. For this purpose, the company SOLARWORLD INDUSTRIES-THÜRINGEN GMBH, a 100 percent subsidiary of SOLARWORLD AG, Bonn, was newly formed. In a so-called asset deal, SOLARWORLD INDUSTRIES-THÜRINGEN GMBH will take over a large part of manufacturing plants and further assets of Bosch Solar Energy AG. The transaction is still subject to the relevant antitrust approval as well as further closing conditions. Closing was on March 12, 2014.

In connection with the acquisition of the shares in SOLARWORLD AG & SOLAR HOLDING GMBH IN GbR AUERMÜHLE (AUERMÜHLE), SOLARWORLD AG and Solar Holding Beteiligungsgesellschaft mbH were each granted the right to acquire and dispose of up to 45% of the shares in the entity. The entity was thus fully consolidated per April 30, 2010.

JSSi GmbH, an associate accounted for using the equity method, in which SOLARWORLD AG has held a 49 percent investment, was sold by way of an agreement dated July 2, 2013.

In the reporting year, the associated entity SolarCycle GmbH that was recognized using the equity method and in which SOLARWORLD AG held a 24 percent investment was liquidated.

SOLARWORLD SCHALKE GMBH remains in liquidation.

DEUTSCHE SOLAR GMBH, DEUTSCHE CELL GMBH, SOLAR FACTORY GMBH, SOLARWORLD INNOVATIONS GMBH and SOLARWORLD SOLICIUM GMBH utilize the disclosure and preparation facilitations provided by § 264 para. 3 HGB.

### 3. CONSOLIDATION PRINCIPLES

Subsidiaries are fully consolidated once the group has control. Consolidation ends once the parent company does not have control any longer. The financial statements of domestic and foreign consolidated entities are reconciled to uniform accounting policies for the purpose of preparing the consolidated financial statements (we refer to notes 7 to 26). The financial statements of the subsidiaries are prepared for the same reporting period as those of the parent company. All intercompany balances, income and expenses as well as unrealized profits and losses and dividends from intercompany transactions are eliminated in full.

The following additions apply with regard to recognition of project entities that were or are specially established for the construction, operation and marketing of solar parks: Amongst other things, SOLARWORLD group's operations include the development, construction and marketing of solar parks. For this purpose, special project entities are founded that are fully consolidated in the consolidated financial statements if SOLARWORLD group controls them in terms of IAS 27 or SIC 12 or the substantial economic opportunities and risks lie with SOLARWORLD group. Deliveries and services rendered to the respective project entity by SOLARWORLD group within the consolidation period therefore do not result in revenue recognition but instead either result in an increase of inventories through work in progress or finished goods or of fixed assets in the case of external marketing not scheduled in the

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medium-term. Revenue recognition occurs at the time of deconsolidation, i.e. when SOLARWORLD group no longer controls the project entity. Since the construction and marketing of solar parks is part of SOLARWORLD group's operations, deconsolidation of project entities, from an economic point of view, equals the sale of a solar park that is therefore recognized as a revenue transaction on the income statement and shown in the cash flow from operating activities on the cash flow statement.

For capital consolidation, cost of the investment is offset with the proportional equity amount – measured at fair value – at the time of acquisition. A resulting positive difference is allocated to the assets insofar as their carrying amount differs from the fair value. Any remaining positive difference is considered goodwill. A negative difference is recognized through profit and loss.

#### 4. CURRENCY TRANSLATION

Financial statements of the consolidated companies that are presented in foreign currencies are translated into Euro (€) in accordance with the concept of functional currency as set forth by IAS 21. The functional currency of foreign companies is determined by the primary economic environment in which the company principally generates and uses means of payment. Within SOLARWORLD AG, functional currency basically equals the domestic currency with the exemption of SOLARWORLD ASIA PACIFIC PTE LTD. and QATAR SOLAR TECHNOLOGIES Q.S.C. whose functional currency is US\$.

For the purpose of translating the foreign companies' financial statements into the reporting currency of the group, assets and liabilities are translated per closing rate while expenses and revenue are translated by means of the average annual rate. Due to the application of the closing date method, differences resulting from the translation are transferred to a currency exchange reserve, thereby not affecting profit or loss. The amount recognized in the reserve for a foreign operation is rerecognized and shown on the income statement upon disposal of the foreign operation.

The following exchange rates were used for currency translation:

1 € =	Closing rate		Average rate	
	31/12/13	31/12/12	2013	2012
U.S. (US\$)	1.38	1.32	1.33	1.29
South Africa (ZAR)	14.57	11.17	13.01	10.58
Czech Republic (CZK)	27.43	25.15	26.03	25.14

#### 5. SUBSTANTIAL JUDGMENTS, ESTIMATIONS AND ASSUMPTIONS OF MANAGEMENT

In the scope of preparing the consolidated financial statements in consideration of IFRS, some items require that judgments, estimations and assumptions are made which affect recognition and measurement of assets and liabilities on the balance sheet or the amount and presentation of revenue and expenses on the group's income statement as well as the statement of contingent assets and liabilities. The uncertainty of these assumptions and estimations might make for results leading to significant adjustments of the carrying amount of the respective assets or liabilities in future periods.

The following substantial judgments, estimates and assumptions were made when the group's financial statements in 2013 were prepared:

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The consolidated financial statements are based on the assumption of a going concern. This assumption is based on a restructuring concept that the company has prepared in accordance with the standards for the preparation of restructuring concepts by IDW (IDW ES 6 new version) and that has been assessed by external expert. The essential basis of this concept is the successful implementation of the financial restructuring measures that has been successfully completed on February 24, 2014. We refer to note 63.

Furthermore, the most significant assumptions and estimations concern the measurement of inventories, usability of deferred tax assets, the reversal of customer advances through profit and loss, impairment tests for fixed assets, measurement of claims for repayment of prepayments made for long-term silicon contracts and accounting and measurement of provisions especially provisions for potential contingent losses and warranties. These assumptions and estimations are based on premises that are, in turn, based on the respective state of knowledge currently available. However, these circumstances and assumptions regarding future developments can change due to market fluctuations and the market situation as well as legal assessments to the contrary that lie outside the group's influence. Such changes are included in the assumptions only upon occurrence.

Assumptions regarding expected business development are especially based on the existing circumstances at the time of preparation of the consolidated financial statements and the future development of the global and sector-specific environment as is deemed realistic at the time.

The group's impairment tests are based on calculations using the discounted cash flow method. The cash flows are derived from the finance plan of the next three years whereas future expansion investments that are not yet being implemented and will increase the earning power of the tested cash-generating unit are not included. The recoverable amount greatly depends on the discount rate used in the scope of the discounted cash flow method as well as on the expected future cash inflows and the growth rate used for extrapolation. More details on the basic assumptions for determining the recoverable amount for the cash-generating unit are provided in note 32.

Especially with regard to measurement on the basis of the recoverable amount, the inventory measurement is based on assumptions regarding the expected sales prices and costs expected to be incurred until completion. As a basic principle, we assumed that raw materials and consumables as well as work in progress are further processed to modules and sold.

With regard to long-term purchase agreements for silicon and the respective prepayments made, assumptions are made that relate to the legal validity of the agreements and, as regards to their extent, on the measurement of such prepayments. Such assumptions are subject to considerable uncertainties and are essentially based on estimations of the company's legal consultants, on market data and our own estimations. With respect to the legal validity of the agreements the company assumes, based on legal opinions prepared by third parties, that purchase commitments from the material contracts in a total amount of € 0.8 billion (calculated on the basis of originally agreed prices) probably violate EU anti-trust laws and therefore are null and void. Thus, in the accounting, the company neither set up a provision for onerous contracts in terms of IAS 37 nor deducted it from prepayments made. With regard to the accounting of the respective prepayments made (carrying amount € 140.9 million), the company assumes that a part of it (€ 59.6 million) is subject to repayment claims. As regards the remaining proportion, the company assumes that it is unrealizable. Thus, further impairment losses in an amount of € 40.6 million (prior year: € 40.7 million) were recognized in the reporting year.

An agreement regarding the continuation of existing contracts was reached with a supplier. On the basis of this agreement and in consideration of the current and estimated market prices, we determined a contingent loss of € 35.4 million, which was recognized as an impairment loss on prepayments made.

Due to uncertainties in the scope of possible legal disputes as well as possible changes of strategy, the accounting and measurement of the long-term contracts is subject to periodic reestimation upon changing circumstances over time. The recognition and calculation of the impairments as at the balance sheet date is based on a scenario that the Management Board considers the most probable under the circumstances at balance sheet date. A partial or total loss of the prepayments or even claims for damages exceeding the prepayments, however, cannot be ruled out entirely should the company fail to come to an agreement with its suppliers, come to a different agreement or a court ultimately issues a different assessment.

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The warranty provision is set up for specific individual risks, for the general risk of claims due to statutory warranties and performance guarantees granted with regard to sold solar modules. The latter are granted for a period of 25 and 30 years. Since SOLARWORLD AG has been producing and selling solar modules for significantly less than 25 years, it is hardly possible to fall back on experience regarding the calculation of the performance guarantee provision. Much rather, assumptions and estimations are required that are subject to uncertainties. Their modification due to gaining experience regarding claims due to the performance guarantee over the course of time can lead to adjustments of the provision or consequences on the expenses from warranties recognized on the income statement.

With respect to the exact specification of assumptions made in connection with the determination of further provisions, we refer to the respective disclosures in notes 23 and 58.

With regard to tax loss carryforwards, deferred tax claims are recognized only if their realization is likely in the medium-term (within the next five years). If a tax unit shows a history of losses, deferred tax claims from loss carryforwards of this unit are only recognized if sufficient taxable temporary differences or substantial indications for their realization exist. When determining the amount of deferred tax assets suitable for capitalization, substantial management assumptions and estimations are necessary with respect to the expected time of occurrence and the amount of the future taxable income as well as future tax planning strategies. In this connection, SOLARWORLD AG set up deferred tax assets regarding loss carryforwards of the German fiscal unity as the company assumes that in the scope of financial restructuring, sufficient tax-effective restructuring profits will be generated to utilize the tax loss carryforwards.

Uncertainties exist with respect to the interpretation of complex tax regulations, changes in tax law and the amount and time of origination of future results subject to tax. Due to the great bandwidth of international business relations and the non-current character and complexity of existing contractual agreements, it is possible that deviations between the actual results and the assumptions made or future modifications of such assumptions might require adjustments of tax income and tax expenses already recognized. On the basis of reasonable estimations, the group sets up provisions for possible tax field audits in the countries of operations. The extent of such provisions is based on different factors, e. g. experience from past tax field audits and different interpretations of tax law regulations by the taxpaying entity and the responsible tax office. Such different interpretations can result from a number of different facts and circumstances depending on the conditions that prevail in the country of domicile of the respective group company.

To the extent to that the fair value of financial assets and liabilities recognized on the balance sheet cannot be determined by way of active market data, it is primarily determined in application of measurement procedures including the discounted cash flow method. If possible, the factors included in the model are based on observable market data. For further details, we refer to note 64.

Expenses from postemployment defined benefit plans and the present value of pension obligations are determined on the basis of actuarial computations. The actuarial measurement is carried out on the basis of assumptions regarding discount rates, mortality and future increase in pensions. Due to the complexity of measurement, the assumptions used as a basis and their long-term nature, a defined benefit obligation shows very sensitive reactions to any modifications of these assumptions. All assumptions are subject to evaluation at each balance sheet date. When determining the appropriate discount rate, management keeps to the interest rates of corporate bonds with at least sound creditworthiness. The mortality rate is based on publicly accessible mortality tables. Further details regarding the applied assumptions can be found in notes 22 and 58.

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## ACCOUNTING POLICIES

### 6. BUSINESS COMBINATIONS AND ACQUISITION OF NON-CONTROLLING INTERESTS

Business combinations are accounted for using the purchase method. Cost of a business combination consist of the balance of the transferred consideration measured at fair value as of acquisition date and – if applicable – the non-controlling interests in the acquired entity. Expenses incurred in the scope of the business combination are recognized as expense.

If an entity is acquired, the classification and designation of the financial assets and assumed liabilities is assessed in compliance with the contract terms, economic framework and conditions prevailing at the time of acquisition.

Upon initial recognition, goodwill is measured at cost, which constitutes the surplus of the transferred consideration and the amount of the non-controlling interest – if applicable – over the acquired identifiable assets and assumed liabilities of the group. If this consideration ranges below fair value of the net assets of the acquired subsidiary, the difference (badwill) is recognized on the income statement.

In accordance with IAS 27.30, changes in the ownership interest in subsidiaries that do not result in a loss of control are accounted for as transactions with owners in their capacity as owners (equity transactions). In the scope of an equity transaction, the additional acquisition only concerns the allocation of the owners' residual claims. Hence, recognition of assets and liabilities remain unchanged. Within equity, however, a shift in assets takes place between majority owners and non-controlling owners.

#### **SOLARWORLD INDUSTRIES-THÜRINGEN GMBH**

On November 26, 2013, SOLARWORLD AG signed a contract on the acquisition of parts of Robert Bosch GmbH's solar activities. SOLARWORLD INDUSTRIES-THÜRINGEN GMBH, which was founded for this purpose and is a wholly owned subsidiary of SOLARWORLD AG, Bonn, will take over a large proportion of the manufacturing facilities and further assets of Bosch Solar Energy AG in the scope of a so-called "asset deal". The transaction is subject to meeting some closing conditions. The closing took place on March 12, 2014.

The purchase price for the manufacturing facilities and other assets payable by SOLARWORLD AG amounts to € 3.00. In addition, a payment of € 120 million payable by Bosch to SOLARWORLD AG was agreed ("negative purchase price").

The purchase price is due at closing date. The negative purchase price is subject to a payment plan with a term until March 2018.

Once the closing is conducted, SOLARWORLD group will have production capacities of some 1 gigawatt for the value added stages wafer, cell and module. In addition, the new production subsidiary supplements SOLARWORLD group's technological portfolio with its mono-crystalline high performance cells. Research and development activities for the consistent improvement of the high performance solar cell are supposed to be bundled to create new competitive advantages and make further cost reductions possible.

We do not expect material transactions that have to be recognized separate from the business combination in accordance with IFRS 3.51.

The determination of the fair values of the acquired production facilities and other assets is currently pending. As the fair values are not yet available, we are not in a position to recognize them as is true for the badwill resulting from the acquisition, IFRS 3.34.

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**7. INTANGIBLE ASSETS**

Purchased intangible assets are recognized at cost and – with the exception of goodwill – are subject to regular straight-line amortization, their useful lives ranging between 4 and 15 years. Aside from goodwill, intangible assets subject to indefinite useful lives do not exist. Expenditure on research incurred upon generation of intangible assets is immediately recognized as an expense. The same applies as regards development expenditure because research and development are iteratively linked and reliable severability therefore generally does not exist.

Profits or losses from derecognition of intangible assets are determined as the difference between the net disposal gain and the carrying amount of the asset and recognized through profit or loss in the period in which the asset is derecognized. Amortization of intangible assets is recognized in the amortization and depreciation item on the income statement.

All expenses for exploration and evaluation of natural resources are recorded as such and separately recognized as intangible assets. To the extent to that indications exist that point to impairment in terms of IFRS 6.20, the intangible asset is assessed for potential impairments. At balance sheet date, such indications were not at hand. After successful exploration and evaluation, the intangible asset is subject to regular amortization for the duration of the production period. Depreciation of property, plant and equipment used for exploration and evaluation purposes is part of the expenses that are recognized as intangible asset.

Goodwill – especially from capital consolidation – is subjected to an annual impairment test in accordance with IFRS 3 and IAS 36 and 38. Impairment tests are also conducted if individual indications imply the necessity. We refer to our comments in note 9.

**8. PROPERTY, PLANT AND EQUIPMENT**

Property, plant and equipment are measured at cost less regular physical depreciation. Cost comprises all individual expenses directly attributable to the manufacturing process as well as appropriate proportions of the necessary cost of materials and manufacturing overhead. In addition, cost includes depreciation caused by manufacturing and the manufacturing-related pro-rata costs for company retirement benefit plans as well as the voluntary social benefits of the company. Administration costs are considered to the extent to which they can be attributed to manufacturing. Cost also includes – in addition to the purchase price after reduction of discounts, rebates and cash discounts – all directly attributable costs incurred to bring the asset to a location and condition necessary for it to be capable of operating in the manner intended by management.

Borrowing costs that can be directly attributed to acquisition, construction or production of a qualifying asset are capitalized as part of the cost of the respective asset if a period of at least one year is required to prepare the asset for its intended use or sale. All other borrowing costs are recognized as an expense in the period in which they are incurred. Borrowing costs are interest and other costs incurred by an enterprise in connection with the borrowing of funds. As a basic rule, the group capitalizes borrowing costs for qualifying assets. However, no qualifying assets were identified in the annual period 2013. Hence, all borrowing costs were recognized as expenses.

Ongoing maintenance and repair expenses that do not constitute material replacement investments are recognized as expense right away. To the extent to that substantial parts of property, plant and equipment need to be replaced in regular intervals, the group recognizes these as separate assets with specific useful lives or depreciation. In the event of a major inspection, the group capitalizes in the carrying amount of the item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred if the recognition criteria are met. All other inspection and maintenance cost is recognized through profit or loss immediately.

To the extent to that depreciable property, plant and equipment consist of material identifiable components with different useful lives, these components are recognized separately and written down over the course of the respective useful life.

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The present value of an expected disposal of an asset after use is included in the respective asset's cost if the recognition criteria for a provision are met. Detailed information on the measurement of the provision for building restoration obligations can be found in note 58.

With respect to own work capitalized we refer to note 28.

The following useful lives are used as a basis for depreciation:

Buildings including investment property	15 to 50 years
Buildings/fixtures on leasehold land	Lease agreement terms (max. 10 to 15 years)
Technical equipment and machinery	Up to 10 years
Wind power and photovoltaic plants	20 years
Other equipment, factory and office equipment	3 to 5 years

Property, plant and equipment are derecognized either upon disposal or as soon as no further economic benefit is expected from further utilization or disposal of the recognized asset. The profits or losses resulting from derecognizing the asset are determined as the difference between the net sale price and the carrying amount of the asset and are recognized on the income statement through profit or loss in the period in which the asset is derecognized.

Investment grants and subsidies do not reduce the respective asset's cost but are subject to deferral on the liabilities side of the balance sheet. We refer to notes 21 and 57.

## 9. IMPAIRMENTS OF PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLE ASSETS

At each balance sheet date, the carrying amounts of property, plant and equipment and intangible assets are examined with regard to indications of the occurrence of impairments (impairment test). If such indications are identifiable, the recoverable amount of the asset is estimated to determine the extent of any possible impairment expenses. To the extent to that the recoverable amount cannot be estimated for the individual asset, the determination is conducted on the level of the cash generating unit (CGU) to which the respective asset is assigned.

Intangible assets with indefinite useful lives or those that cannot yet be used are subject to impairment testing at least once a year (December 31) and whenever so-called "triggering events" occur.

The recoverable amount is the higher one of fair value less costs to sell and the value in use.

- For determining the value in use, the estimated future cash flows are discounted with a pre-tax interest rate, which considers both the current market assessment through time value of money and risks concerning the asset to the extent to that they are not yet accounted for in the scope of the cash flow estimation. The computations are based on forecasts that are based on financial plans for the next three years as authorized by management. This planning horizon shows the assumptions for short- and medium-term market developments. As for the perpetuity period that exceeds this term, assumptions were made for long-term expectations concerning shipments, prices and operation cost per CGU. These estimates are based on processes which accompany the restructuring. In the detail planning phase, forecasts on long-term cost savings were lowered in comparison with financial plans that had been passed by the Management Board. Free cash flows were discounted at weighted average costs of capital after corporation taxes between 11.4 percent and 13.9 percent (2012: 11.4 percent to 15.1 percent) at the balance sheet date. This discount rate is based on the risk-free interest rate determined in accordance with the reporting date-related interest structure at the bond market for which a value between 2.58 percent and 3.76 percent (2012: 2.19 percent and 3.35 percent) was applied and a general market risk premium before personal taxes between 5.80 percent and 6.25 percent (2012: 5.80 percent and 6.25 percent). Data of a representative peer group, in which SOLARWORLD AG is not considered because of its restructuring situation, were used for determining the beta factor, borrowed capital surcharge and capital structure.

- The fair value less costs to sell was calculated on the basis of current market conditions and a general commercial use by market participants. For the main part of fixed assets, expert estimates on the fair value less costs to sell were at hand. Evaluating real estates (premises and buildings), above all local land values, market rents and operating expenses in addition to site-specific and use-specific returns were taken account. For marketing assumptions, several scenarios were considered. Evaluating machinery, prices and price indices for commercial products (based on the original value and current replacement value) as well as the variable factors time value and utility value were included in particular. The time value factor comprises the loss in value attributed to the age of the object as well as current market trends. The utility value factor is above all determined by the condition of the machinery as well as its location and its time and degree of utilization. For marketing assumptions, several scenarios were considered.

To the extent to that the recoverable amount of an asset or a CGU falls short of its carrying amount, the carrying amount is written down to the recoverable amount. The impairment loss is immediately recognized through profit and loss.

Should the impairment loss be reversed, the carrying amount of the asset or the CGU will be increased to the reassessed recoverable amount. Attention needs to be paid to the ceiling of the addition in the amount of the original carrying amount of the asset or CGU. The reversal of an impairment loss is immediately recognized through profit and loss.

Goodwill is not subject to scheduled amortization but is assessed on the basis of the recoverable amount of the CGU it is assigned to (impairment only approach). Goodwill acquired in the scope of a business combination is assigned to each individual CGU that is expected to get synergies out of the combination. The impairment test is conducted at least annually at reporting date (December 31) and again if indications of an impairment of the CGU are at hand.

In the event that the carrying amount of the CGU the goodwill was assigned to exceeds the recoverable amount the assigned goodwill is written down in the amount of the determined difference. Goodwill impairments cannot be reversed once they are conducted. If the determined difference (impairment necessity) of the CGU exceeds the carrying amount of the assigned goodwill, a proportionate impairment of the carrying amounts of the assets assigned to the CGU is conducted in the amount of the remaining impairment. Goodwill is recognized neither in the current nor the prior reporting year. Goodwill resulting from the acquisition of SOLARPARC AG was fully written off in the prior year.

With regard to the results of the impairment tests conducted during the reporting year, we refer to note 32.

## 10. INVESTMENT PROPERTY

Investment property is initially measured at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met and excludes the costs of day-to-day servicing of an investment property. In the scope of subsequent measurement, investment property is recognized at cost less straight-line depreciation and impairment expenses. With regard to measurement bases and useful lives we refer to note 8.



Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the income statement in the period of derecognition.

Transfers are made to or from investment property only when there is a change in use. For a transfer from investment property to owner-occupied property, the deemed cost for subsequent accounting is the fair value at the date of change in use. If owner-occupied property becomes an investment property, the group accounts for such property in accordance with details stated in note 8 until the time of the change of use.

#### 11. INVESTMENTS MEASURED AT EQUITY

The group's investments in associates are recognized in accordance with the equity method. An associate is an entity in which the group has significant influence.

Furthermore, the group is utilizing the option in accordance with IAS 31.38 and recognizes its interest in jointly controlled entities (joint ventures) using the equity method also.

Investments in other companies accounted for using the equity method are recognized on the balance sheet at cost in consideration of changes that occurred after the acquisition date regarding the group's participation in the investee's equity, of the hidden reserves and burdens recognized at acquisition as well as of the unrealized proportionate intercompany results from transactions with the investee. Goodwill connected with the investment is included in the carrying amount of the investment and is subject to neither regular amortization nor separate impairment tests.

The consolidated income statement contains in the line item "result from investments measured at equity" the group's share in the profit or loss of the investee including the effects of the development of the disclosed hidden reserves and burdens. This concerns profit allocable to the investors and, thus, profit after tax and non-controlling interests in the investee's subsidiaries. The group recognizes any changes recognized directly in the investee's equity to the extent of its share. Unrealized intercompany results from transactions between the investee and the group are also eliminated through the item "result from investments measured at equity" in accordance with the latter's share in the investee.

The financial statements of the associated companies are prepared as per the same balance sheet date as those of the parent. To the extent to which it is necessary, adjustments are made to conform the associates' accounting policies to those of the investor.

After application of the equity method, the group determines whether it is necessary to recognize any additional impairment loss with respect to the group's investment. As per each balance sheet date, the group determines whether there is any evidence indicating that the share in an associate could be impaired. If this is the case, the difference between the recoverable amount of the share in the associate and the carrying amount of the share is recognized in profit or loss.

#### 12. OTHER NONCURRENT ASSETS

Prepayments made on inventories are recognized in other noncurrent assets. The prepayments were partially made in US\$. As this does not concern monetary items in terms of IAS 21.16, measurement was carried out at historic rate at the time of spending.

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**13. INVENTORIES**

Inventories include raw materials and supplies, work in process and finished goods, merchandise and short-term prepayments for inventories. Purchased inventories are recognized at acquisition cost that, depending on the type of inventory, is determined either on the basis of average costs or in accordance with the “first-in-first-out” (FIFO) method. Inventories of the group’s own making are recognized at production cost. In addition to the individual costs, cost includes adequate proportions of the necessary cost of materials and manufacturing overhead based on regular capacity utilization of the production facilities. Cost also includes depreciation caused by manufacturing which can be directly allocated to the manufacturing process and, to the extent to that they are manufacturing-related, pro-rata expenses for company retirement benefit plans and voluntary social benefits. Administration costs are taken into account to the extent to that they concern manufacturing. Borrowing costs are not taken into account, as inventories do not constitute qualifying assets from the group’s point of view.

Measurement per balance sheet date occurs at the respective lower amount of cost on the one hand side and net realizable value on the other. The latter is the estimated sales proceed of the final good realizable in the normal course of business less estimated costs until completion of the good as well as estimated necessary distribution costs.

Due to the prevailing manufacturing circumstances in both, entity and industry, finished goods and merchandise are summarized in the comments on inventories in note 48.

Some of the current prepayments recognized in inventories were paid in US\$. Measurement was carried out at historic rate at payment date because the prepayments are non-monetary items in terms of IAS 21.16.

**14. TRADE RECEIVABLES**

Trade receivables are accounted for at nominal value. Should doubts exist with regard to the collectability of the debt, the receivables are recognized at lower realizable value. In part, allowances are made using a contra account. The decision whether an allowance is made via contra account or by directly reducing the carrying amount depends on the probability of the expected loss. Receivables stated in foreign currencies are accounted for at closing rate.

Receivables from construction contracts will be accounted for in accordance with the percentage-of-completion-method as set forth by IAS 11. We refer to our statements in notes 25 and 27.

**15. OTHER RECEIVABLES AND ASSETS**

Other receivables and other assets are accounted for at nominal value. Identifiable risks and general credit risks are taken into consideration by setting up corresponding value adjustments.

**16. OTHER FINANCIAL ASSETS**

Financial assets in terms of IAS 39 are either categorized as financial assets

- “measured at fair value through profit or loss”,
- “held-to-maturity-investments”,
- “financial assets available for sale”,
- “loans and receivables”, or
- derivatives that were designated as hedging instruments and are effective as such.

The group determines the classification of its financial assets upon initial recognition. Upon initial recognition, financial assets are measured at fair value plus transaction costs. Financial assets classified as “measured at fair value through profit or loss” are exempted therefrom, as they are initially recognized at fair value without taking transaction costs into account.

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At reporting date, no securities categorized as “held-to-maturity investments” exist.

Subsequent measurement of financial assets depends on their categorization.

Securities are “measured at fair value through profit or loss” if they are either designated as such or “held for trading”.

Securities are categorized as “held for trading” if they were acquired with the intention to sell them in the short term. This category also includes the group’s derivative financial instruments that are not designated as hedging instruments in hedge accounting in terms of IAS 39.

Financial assets are designated as “at fair value through profit or loss” if they are part of a portfolio that is evaluated and managed on the basis of fair values. Acquisition and sale of securities takes place with regard to revenue-optimized liquidity management and is, for the most part, centrally managed by Solar World AG. At reporting date, financial assets of this category did not exist.

Financial assets “at fair value through profit or loss” are recognized at fair value. Each profit or loss resulting from measurement is recognized in the financial result through profit or loss. The recognized net gain or loss also includes possible dividends and interest of the financial asset.

The fair value of financial instruments traded in active markets is determined by the market price at balance sheet date without any deduction for transaction costs. The fair value of financial instruments not traded in an active market is determined in application of appropriate measurement methods. For further details on the applied measurement methods, we refer to note 64.

Financial assets categorized as “loans and receivables” are non-derivative assets with fixed or identifiable payments that are not listed in an active market. After initial recognition, such financial assets are measured at amortized cost using the effective interest method less possible impairments in value in the scope of subsequent measurement.

Financial assets categorized as “available-for-sale financial assets” are financial instruments intended to be held for an indefinite period, which may be sold as a reaction to liquidity needs or changes of the market environment. After initial recognition, “available-for-sale financial assets” are measured at fair value in the following periods. Unrealized profits or losses are recognized in the AfS-reserve. Upon derecognising such an asset, the accumulated profit or loss is transferred to be shown on the income statement.

In consideration of IFRIC 14 and IAS 19, SOLARWORLD AG capitalized liability insurances in the financial assets. These insurances serve as insolvency insurance with regard to early retirement obligations. Recognition is based on the insurance company’s statements regarding the asset value and conducted in the amount in that the insurance value exceeds the amount of the early retirement obligations (plan asset surplus).

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**17. LIQUID FUNDS**

Liquid funds include cash and cash equivalents in the form of cash in hand, bank balances and current investments made with banks that can be converted into cash contributions at any time and are subject to only marginal fluctuations in value. They are categorized as “loans and receivables” and measured at amortized cost less possible impairments in accordance with the effective interest method.

For the purpose of the cash flow statement, cash and cash equivalents include cash in hand and current deposits less utilized advances on current accounts. To the extent to that means of payment are subject to restrictions on disposal of more than three months they are shown in other financial assets.

**18. ASSETS AND LIABILITIES HELD FOR SALE AND DISCONTINUED OPERATIONS**

Individual non-current assets, asset groups or assets of discontinued operations are recognized as “assets held for sale” if their carrying amounts are largely realized via sales transactions as opposed to via continued usage and if, additionally, they meet the criteria set forth in IFRS 5. Regular depreciation or amortization on these assets ceases. Impairments are only recognized if the fair value less costs to sell is lower than the carrying amount. Any impairment previously recognized needs to be reversed if the fair value less costs to sell is increased later on. The addition is limited to the impairments previously recognized for the respective assets.

Expenses and income from discontinued operations as well as gains and losses from their measurement at fair value less costs to sell are disclosed as the result of discontinued operations on the face of the income statement. Gains and losses from the sale of discontinued operations are also recognized in this line item.

**19. FINANCIAL LIABILITIES AND TRADE PAYABLES**

Upon first-time recognition, financial liabilities are measured at fair value. The transaction costs directly attributable to the acquisition are also recognized with regard to all liabilities that are, subsequently, not measured at fair value through profit or loss.

Financial liabilities measured at fair value through profit or loss in subsequent recognition usually concern derivative financial instruments. We refer to note 20 below.

With respect to subsequent recognition, trade payables and other original financial liabilities, e.g. interest bearing loans, are measured at amortized cost in accordance with the effective interest method. Profits and losses are recognized through profit or loss if the liabilities are derecognized and in the scope of amortization by way of the effective interest method.

Financial guarantees issued by the group are contracts concerning the obligation to make payments compensating the guarantee for a loss that results from a specific debtor not complying with his payment obligations in accordance with the requirements of a debt instrument in due time. Upon initial recognition, financial guarantees are recognized at fair value less transaction costs directly connected with issuing the guarantee. Subsequently, the liability is measured at the best estimate of the expenses required for meeting the current obligation per balance sheet date or at the higher recognized amount less accumulated amortization.

**20. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING**

SOLARWORLD group utilizes derivatives for hedging interest rate, currency exchange and commodity risks resulting from operating activities, financial transactions and investments. These financial instruments are measured at fair value through profit or loss and are classified as financial assets or liabilities held for trading if they are acquired for the purpose of selling it in the near term or not designated as hedging instruments in hedge accounting in terms of IAS 39. Profits or losses from financial assets or liabilities held for trading are recognized through profit

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or loss. The results are stated in other operating income or expenses to the extent to that the financial instrument was concluded for hedging purposes with regard to operating activities. Results are stated in other financial result to the extent to that the financial instrument concerns financing or investment activities.

Derivative financial instruments that are designated as hedging instruments and effective as such are categorized as current or non-current or split up in a current and a non-current part on the basis of an assessment of the facts and circumstances.

SOLARWORLD group applies hedge accounting provisions in accordance with IAS 39 (Hedge Accounting) to hedge future cash flows.

The decisive factor for recognition of changes in fair value – recognition on the income statement through profit or loss or recognition in equity not affecting profit or loss– is whether or not the derivative is included in an effective hedging relationship in accordance with IAS 39. If hedge accounting is not applied, changes of the derivatives' fair values are immediately recognized through profit or loss. If, however, an effective hedge relationship in terms of IAS 39 exists, the hedging relationship as such is accounted for.

At inception of the hedging relationship, the relation between hedged item and hedging instrument including the risk management objectives is documented. In addition, both at inception and in the course of the hedge, documentation is carried out continuously as to whether the designated hedging instrument is highly effective with regard to compensation of cash flow changes in the hedged item.

The effective part of the change in fair value of a derivative or a non-derivative financial instrument designated as a hedging instrument in the scope of a cash flow hedge is recognized in equity. Profit or loss falling upon the ineffective part is immediately recognized through profit or loss.

Amounts recognized in equity are transferred to the income statement in that period in which the hedged item of the cash flow hedge becomes effective through profit or loss. Recognition on the income statement occurs within the same line item in which the hedged item is recognized. If, however, a hedged forecast transaction leads to the recognition of a non-financial asset or a non-financial liability, the profits and losses previously recognized in equity are derecognized and taken into consideration at initial determination of cost of the asset or liability.

Hedge accounting is discontinued if the hedging relationship is revoked, the hedging instrument expires or is sold, terminated or exercised or is no longer appropriate for hedging purposes. All profits or losses recognized in equity at this time remain in equity and are only accounted for through profit or loss once the forecast transaction is also recognized on the income statement. If the transaction is no longer expected to occur, the entire profit recognized in equity is immediately transferred to recognition on the income statement.

At initial recognition and in subsequent measurement, derivative financial instruments are recognized at fair value. The recognized fair values of traded derivative financial instruments equal the market prices. Derivative financial instruments that are not subject to trade are calculated using accepted measurement methods based on discounted-cash-flow-analyses and by taking recourse to current market parameters. We refer to note 64.

## 21. ACCRUED INVESTMENT GRANTS

Investment grants accounted for are accrued in application of IAS 20 and released to income over the course of the useful lives of the respective assets. Thus, the item is allocated to the periods of useful lives of the subsidized property, plant and equipment, and gradually increases future business years' pre-tax income. This increase in income occurs alongside amortization and depreciation expenses of corresponding amounts, which are, therefore, neutralized upon balancing. In addition, tax effects will arise whereas income-increasing reversals of the accrued investment grants occur income tax exempt to the extent to which they result from tax-exempt investment grants.

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IAS 20 also applies to income from investment tax credits. Claims for tax credits are recognized if there is reasonable assurance that the material requirements for receipt are met and they are granted. The claims are measured at present value.

## 22. RETIREMENT BENEFITS

Group retirement benefits predominantly occur via defined contribution plans. The company pays contributions into a state or private pension fund on the basis of statutory or contractual obligations or on a voluntary basis and, once the contributions are paid, has no further benefit obligations. The annual contributions are recognized as personnel expenses.

One of SOLARWORLD AG's subsidiaries has a defined benefit plan, the insolvency protection of which is effected via the pension security association. Plan assets do not exist. These pension provisions are measured in accordance with the projected unit credit method for defined benefit plans as required by IAS 19. The interest proportion included in the pension expenses is recognized in the item "interest and similar financial expenses".

The amount to be recognized as a liability from a defined benefit plan includes the present value of the defined benefits (using a discounted interest rate on the basis of first-class fixed-interest industrial bonds) less the yet unrecognized past service cost and the yet unrecognized actuarial losses (plus gains).

## 23. OTHER PROVISIONS

Other provisions are set up to the extent to which a current (legal or constructive) obligation to third parties exists originating from an event in the past that will probably make for a future outflow of resources and a reliable estimate can be made of the amount of the obligation. Provisions are measured at the best estimate of the extent of the obligation. Provisions for obligations that will probably not make for an outflow of resources in the year following the reporting year are recognized at present value of the expected outflow of resources. To the extent to that the group expects at least a proportionate refund for a provision carried as liability (e.g. in case of an insurance agreement), the refund is recognized as a separate asset if the inflow of the refund is virtually certain. The expense from setting up the provision is recognized on the income statement less the refund. For further details, we refer to note 58.

If a provision cannot be set up because some criteria are not met while the possibility of a claim is all but remote, the respective obligations are recognized as contingent liabilities. In this context, we refer to note 66.

Provisions for expenses in connection with guarantees are set up at the time the respective product is sold or the service is rendered. First-time recognition is conducted on the basis of estimations and assumptions. We refer to our statements in note 5. The original estimation of expenses in connection with guarantees is subject to examination on a regular basis.

Provisions for restructuring measures are set up if a detailed formal restructuring plan is prepared and the respective parties were informed about such plan.

Provisions for restructuring obligations are recognized for contractually specified obligations and are measured at expected cost for restoration.

Provisions for contingent losses from onerous contracts are set up if the economic benefit expected from the contract ranges below the expenses inevitable for meeting the contract requirements.

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**24. OTHER LIABILITIES**

Accrued liabilities included in the balance sheet item “other liabilities” are recognized for services and goods received and for obligations to employees that do not yet meet the requirements for payment. With regard to these liabilities, future outflow of resources is, on the merits, certain and is merely subject to minor uncertainties as regards the amount. Measurement is conducted at best estimate of the expenditure required.

A proportion of the customer advances recognized in other liabilities is denominated in US\$. As the customer advances are no monetary items in terms of IAS 21.16, they were recognized at historic exchange rates valid at the date of collection.

In the scope of a “trust agreement for insolvency protection”, payments to an escrow account are made in connection with the accrued liabilities for profit-oriented employee compensation. These payments concern obligations of the annual period 2011. As these obligations are considered other long-term employee benefits in terms of IAS 19.126 (d), the current value of the obligations at balance sheet date is netted with the fair value of the escrow account (which is to be regarded a plan asset) in terms of the measurement according to IAS 19.128. Plan assets comprise assets held by a long-term employee benefit fund. Plan assets are not available to the entity’s creditors and cannot be paid directly to the entity. Both current and non-current netting was conducted at reporting date.

**25. REVENUE AND EXPENDITURE RECOGNITION**

Income is recognized when it is probable that the economic benefit will flow to the group and the amount of income can be reliably determined. Income is measured at fair value of the received or to be claimed payment less granted (cash) discounts and VAT or other dues.

Revenue from the sale of goods or products is recognized at the time the significant risks and rewards are transferred if – as commonly true – the other requirements (no continued involvement, reliable estimation of the amount of revenue and probability of inflow) are also met.

Revenue from project business is recognized in accordance with the percentage of completion method (PoC) set forth by IAS 11 to the extent to that the corresponding requirements are met. For customer-specific projects, a pro-rata profit realization is recognized by reference to the stage of contract completion if the assessment of the stage of contract completion, total costs and total revenue of the respective contract can be reliably estimated in terms of IAS 11. The state of completion is assessed in accordance with the cost-to-cost method pursuant to IAS 11.30 (a). If the stated requirements are met, the overall contract revenue is recognized on a pro-rata basis in compliance with the stage of completion. Contract expenses include the costs directly attributable to the contract and a proportion of overhead. To the extent to that the result of a construction contract cannot be reliably determined, project income is recognized in the amount of the connected project costs, which makes for a zero balance (zero-profit-method).

Advances received in connection with long-term sales contracts for silicon wafers are released through profit or loss once SOLARWORLD group is no longer obliged to credit against future supplies and does, de facto, not consider crediting.

Grants related to expenses are recognized on an accrual basis through profit corresponding to the occurrence of the respective expenses.

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Operating expenses are recognized when goods and services are received or at the time of their occurrence respectively. Provisions for warranties are set up upon realization of the corresponding revenue.

All financial instruments measured at amortized cost as well as interest bearing financial assets classified as available-for-sale, interest income and interest payable are recognized at effective interest rate. This is the calculatory interest rate at which the estimated future incoming and outgoing payments are accurately discounted to the net carrying amount of the financial asset or the financial liability over the course of the expected maturity of the financial instrument or possibly a shorter period. Interest income or expenses are recognized on the income statement as part of interest and other financial income or interest and similar financial expenses and are recognized on an accrual basis.

## 26. TAXES

### a) Current taxes on income

Current tax assets and tax liabilities for the current and earlier periods are measured at the amount that equals the expected refund from or payment to the tax authorities. The calculation of the amount is based on tax rates and tax provisions effective in the country the group is operating in and generates taxable income at balance sheet date.

### b) Deferred taxes

Deferred taxes are set up using the liability method for temporary differences between the recognition of an asset or a liability on the balance sheet and its value on the tax balance sheet at balance sheet date.

Deferred tax liabilities are recognized for all taxable temporary differences with the exemption of:

- deferred tax liabilities from the initial recognition of goodwill
- deferred tax liabilities from taxable temporary differences that are related to investments in subsidiaries, associates and interests in joint ventures if the temporal course of the reversal of the temporary differences can be steered and it is probable that the temporary differences will reverse in the near future.

Deferred tax assets are recognized for all deductible temporary differences, not yet used tax loss carryforwards and not yet used tax credits to the extent to that it is probable that taxable income will be available against which the deductible temporary differences and the not yet used tax loss carryforwards and tax credits can be offset. An exemption are deferred tax assets from deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures if it is probable that the temporary differences will not be reversed in the near future or if no sufficient taxable income will be available to set off against the temporary differences.

The carrying amount of the deferred tax assets is subject to inspection at each balance sheet date and reduced to the extent to that it is no longer probable sufficient taxable income will be available against which the deferred tax asset may be offset at least in part. Deferred tax assets that are not recognized are subject to inspection at each balance sheet date and recognized to the extent to that it became probable that a future taxable income might enable the realization of the deferred tax asset.

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Deferred tax assets and liabilities are measured by way of those tax rates that will probably become effective in the course of the period in which the asset is realized or a liability is paid. The tax rates (and tax laws) effective at balance sheet date are used as a basis. Future tax rate changes are taken into account if, in the scope of a legislative procedure, substantial prerequisites for its future applicability are met.

Deferred taxes that concern items that are not recognized on the income statement are recognized directly in equity in correspondence with the transaction they are based on.

Deferred tax assets and deferred tax liabilities are offset if the group has a legally enforceable right to set off current tax assets against current tax liabilities and these relate to income taxes levied by the same tax authority.

#### c) VAT

Income, expenses and assets are recognized after VAT is deducted. The following cases are an exemption to this rule:

If VAT incurred upon the acquisition of assets or the utilization of services cannot be claimed by the tax authority, the VAT is recognized as part of cost of the asset or part of expenses.

Receivables and liabilities are recognized with the respective VAT amounts.

The VAT amount to be refunded by or paid to the tax authority is recognized on the balance sheet in the item “other receivables and assets” or in “other current liabilities”.

## COMMENTS ON THE INCOME STATEMENT

## 27. REVENUE

Revenue and its allocation to the business segments and regions can be taken from segment reporting (note 39) in these consolidated notes. Consolidated revenue consist of the following products and services:

in k€	2013	2012
Module- and assembly kit sales (group and third party manufacturing)	350,399	497,130
Project proceeds	81,943	73,903
Cells/wafers	11,293	18,686
Power generation	5,064	13,655
Other revenue	7,122	3,020
<b>Total</b>	<b>455,821</b>	<b>606,394</b>

Project proceeds basically result from the construction and sale of major solar plants.

Other revenue primarily includes income from the sale of other intermediate and input products and income from recycling activities.

## 28. OWN WORK CAPITALIZED

Own work capitalized recognized in the prior year mainly concerned the construction of photovoltaic systems operated by consolidated entities. Comparable transactions did not exist in the reporting period.

## 29. OTHER OPERATING INCOME

in k€	2013	2012
Compensation payments	12,032	9,978
Reversal of advances received	9,663	63,417
Other income relating to other periods	7,376	4,736
Income from grants for research and development	7,195	5,261
Reversal of accrued investment grants	6,522	48,299
Reversal of provisions and liabilities	3,930	3,883
Gains from currency translation	3,193	13,409
On-charging of expenses	1,294	1,179
Income from other supplies and services	268	2,267
Income from derivative financial instruments	36	743
Income from wind portfolio sale	0	7,071
Miscellaneous other operating income	7,777	6,216
<b>Total</b>	<b>59,287</b>	<b>166,459</b>

Compensation payments are almost entirely (prior year € 10.0 million) attributable to settlement payments for the non-compliance with long-term supply contracts.

Income from the reversal of received customer advances resulted from the lapse of the obligation to credit advances for wafer supplies against future supplies. € 7,523k (prior year: € 60,372k) of the income result from the complete lapse of the obligation with regard to several customers while an amount of € 2,140k (prior year: € 3,045k) results from shortfalls of orders for wafer supplies that were subject to fixed order volumes in 2013.

Other income relating to other periods mainly results from a refund of an U.S. energy supplier (€ 6.6 million).

Of the income from the reversal of accrued investment grants, € 26,551k was due to unscheduled amortization and depreciation in the scope of impairment tests in previous year. A comparable effect did not exist in the reporting year. We refer to notes 9 and 32.

Other trade income primarily results from sales of commodities, supplies and merchandise that do not constitute a component of ordinary activities.

The item income from the sale of the wind portfolio recognized in the prior year results from the divestment and subsequent disposal of SOLARWORLD group's wind activities. A comparable transaction did not take place in the reporting year. Research and development grants received are subject to a number of requirements. In accordance with our knowledge today, all of these requirements will be met. Hence, repayment obligations are not expected to arise.

### 30. COST OF MATERIALS

in k€	2013	2012
Cost of commodities, supplies and merchandise	233,697	470,843
Cost of purchased services	38,969	63,725
<b>Total</b>	<b>272,666</b>	<b>534,568</b>

### 31. PERSONNEL EXPENSES

in k€	2013	2012
Wages and salaries	93,081	107,202
Social security and pensions	19,285	22,176
<b>Total</b>	<b>112,366</b>	<b>129,378</b>

The decrease in personnel expenses is mainly due to the measures for reducing personnel expenses already initiated in previous year. Amongst other reasons, these measures became necessary due to the adjustment of production capacities to the current order situation. We refer to note 68.

**32. AMORTIZATION AND DEPRECIATION****a) Regular amortization and depreciation**

The combination and classification of regular amortization and depreciation for intangible assets, property, plant and equipment and investment property of € 39,984k can be taken from the fixed asset movement schedule. We refer to note 40.

**b) Impairment test for goodwill and property, plant and equipment and irregular amortization and depreciation**

The solar industry is in a continuous state of consolidation. Hence, we assessed possible impairments of all assets on the lowest possible aggregation level.

In total, the result was an impairment of property, plant and equipment and intangible assets amounting to € 1.9 million (prior year € 330.4 million). In the prior reporting year, irregular impairment losses were in part offset by irregular reversals of accrued investment grants of € 26.5 million.

Reversals of impairment losses of property, plant and equipment were not conducted in the reporting period (prior year: € 2.6 million).

The consolidated income statement shows the impairment losses in amortization and depreciation.

**aa) Basic assumptions for the calculation of the recoverable amount****Value in use**

Aside from market and industrial trends, general expectations regarding macroeconomic developments and in-house experience, the detailed budgets of the producing cash-generating units (CGUs) for the first three years are based on the following substantial assumptions:

- Stabilization of sales prices
- Increase in the efficiency levels of solar cells
- Mainly decreasing cost of materials
- Increased productivity

The sustained profit margins expected for the perpetuity period following the detailed planning period were – CGU-specifically – derived in consideration of the continuous growth of revenue from the first planning year and in consideration of economic and production cycles as well as, although the market situation is currently still characterized by considerable overcapacities, a slight improvement of said market situation expected in the medium term. Consequently, the earnings level is lower than in the last planning year and is considered in the derivation of free cash flows in the period of perpetuity.

Upon calculating the efficiency of the tested CGUs, the assumptions used as a basis are subject to estimation uncertainties especially with respect to:

- Gross profit margins
- Development of prices for commodities and materials
- Output quantity in the observation period
- Development and shipments volume of projects and
- Discount interest rate (including the growth rate used as basis for the extrapolation).

**GROSS PROFIT MARGINS.** Gross profit margins result from the scheduled transfer and sales prices and the planned cost development. For the development of step costs, we assumed an output quantity that does not include expansion investments. In addition, we expect increases in productivity and mainly decreases in cost of materials (in part

cyclical increase in commodity prices). Over the course of the next two years, SOLARWORLD AG expects the market prices for solar modules to stabilize or recover slightly and a cyclical development on a long-term moderate earnings level.

**DEVELOPMENT OF PRICES FOR COMMODITIES AND MATERIALS.** The estimations include the published price indices for important commodities like silicon and silver. Actual past developments of commodity and material prices are used as an indicator for future price developments and – to the necessary extent – amended by management's estimations.

**ASSUMPTIONS REGARDING OUTPUT QUANTITY.** For the determination of the value in use in the scope of the impairment tests, SOLARWORLD AG assumes an increase in the utilization of existing capacities in the annual periods 2014 and 2015 and full utilization in 2016. An increase is expected with respect to the output quantity in watt peak due to technological progress (increasing efficiency) and efficiency increase programs.

**DISCOUNT RATES.** The discount rates reflect current market assumptions regarding the specific risks attributable to SOLARWORLD AG. The discount rate was estimated on the basis of the customary average weighted capital costs (WACC).

**ESTIMATIONS OF THE SUSTAINED GROWTH RATE.** The growth rate used as a uniform basis in the phase of sustained growth amounts to 1.0 percent for all CGUs. This equals half of the estimated long-term inflation rate (source: International Monetary Fund) and thus equals the proportion of expected increases in prices that management believes can be passed on to the customer in the long-term.

#### Fair value less costs to sell

Experts' estimates of the fair value less costs to sell of immovable property in Germany and the United States as at the balance sheet date are based on the capitalization of future payment surpluses. Here, experts assumed a general commercial use, which means an abstracted view from the use up to now (production of solar cells). Land prices result from offer prices for properties of a comparable kind in the neighborhood. Market rents result from market rents according to use, adapted to location, size and equipment. Returns depending on location and use are based on market data considering the macro-location and micro-location as well as the age of the buildings. Costs and loss of earnings resulting from the marketing were estimated by taking the local market activity into consideration. Costs to sell under market conditions were deducted.

Calculations of the fair value less costs to sell for the larger part of machinery and equipment as at the qualifying date of the financial statements are in principle based on the comparative value method and thus on market prices, comparative transactions or comparative multipliers. When no comparative values were available, the asset value method was applied. Value assessment derives from replacement values less depreciation and reductions because of economic or technical excess of age. The earnings value method was not used for the value assessment of machinery, because a reliable forecast of future earnings is not possible due to the particularities in the solar industry, above all the discontinuation of incentives and aggressive competition by state-subsidized providers from China.

#### bb) Results of impairment tests

In the reporting year, the impairment test on the level of the CGUs with regard to fixed assets did not result in any impairment losses.

Previous year the following impairment losses have been recorded:

•CGU "Wafer Freiberg Gewerbegebiet Süd":	€ 55.9 million
•CGU "Wafer Freiberg Industriegebiet Ost":	€ 140.9 million
•CGU "Wafer U.S.":	€ 12.8 million
•CGU "Cell U.S.":	€ 85.2 million
•CGU "Module Camarillo":	€ 3.4 million
•CGU "Module Hillsboro":	€ 2.1 million
•Corporate Assets U.S.:	€ 17.3 million
•CGU "Large scale projects":	€ 4.6 million

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Impairment charges of € 1,893k (prior year € 7,974k) were recognized for individual assets.

### 33. OTHER OPERATING EXPENSES

in k€	2013	2012
Impairment losses on prepayments and repayment claims	76,021	88,722
Legal fees, consultancy and audit expenses	15,782	11,556
Maintenance expenses	11,750	21,028
Selling expenses	11,622	15,732
Marketing expenses	9,658	13,889
External staff expenses	8,494	15,565
Losses from currency translation	6,777	7,201
Research and development expenses (third party)	4,062	6,310
Travel expenses	3,973	5,622
Expenses for insurances and fees	3,645	5,235
Expenses from the addition to other provisions	2,647	5,181
Rent and lease expenses	2,850	6,451
Data processing expenses	2,549	4,465
Expenses for phone, stamps and internet	1,370	1,676
Expenses from derivative financial instruments	1,292	522
Expenses from sewage and waste disposal	1,180	1,822
Expenses from additions to warranty provision	914	3,010
Amortization of non-current assets held for sale	818	0
Bad debt allowances and losses	627	9,974
Expenses relating to other periods	534	1,663
Expenses in connection with other trade	520	3,041
Miscellaneous other operating expenses	18,396	18,402
<b>Total</b>	<b>185,480</b>	<b>247,066</b>

The impairment loss or loss of prepayments exclusively results from the remeasurement of long-term silicon purchase agreements concluded in the past and prepayments made in this respect. We refer to our comments in notes 5 and 52.

Legal fees, consultancy and audit expenses are characterized by restructuring measures. In addition, expenses incurred for compensation and restructuring fees for the creditors are recognized in other financial expenses. We refer to our comments in note 35.



Rent and lease expenses include minimum lease payments from operating lease agreements in an amount of € 1,811k (prior year € 3,341k).

With regard to the development of the bad debt allowances, we refer to note 49.

Exchange rate losses are offset by exchange rate gains of € 3,193k (prior year € 13,409k) which are recognized in other operating income (note 29).

### 34. RESEARCH AND DEVELOPMENT EXPENSES

Research and development costs of SOLARWORLD group made for a total of € 26,491k (prior year € 49,139k) in the reporting period.

### 35. FINANCIAL RESULT

#### a) Result from investments measured at equity

in k€	2013	2012
Income from investments measured at equity	0	17
Expenses from investments measured at equity	-5,309	-14,655
<b>Total</b>	<b>-5,309</b>	<b>-14,638</b>

In the reporting year, expenses from investments measured at equity exclusively concern QATAR SOLAR TECHNOLOGIES Q.S.C. In the prior year, the item also included impairment losses recognized with respect to the investment in JSSI GmbH (€ 11.188k) and SolarCycle GmbH (€ 34k). JSSI GmbH that was accounted for using the at equity method and in which SOLARWORLD AG held a 49 percent investment was sold effective per July 2, 2013.

#### b) Interest and similar income

in k€	2013	2012
Interest income	154	2,280
Other financial income	219	126
<b>Total</b>	<b>373</b>	<b>2,406</b>

Income from interest includes interest from interest-bearing securities, fixed term deposits and other bank balances categorized as “loans and receivables” or “financial assets available for sale”.

#### c) Interest and similar expenses

in k€	2013	2012
Interest expenses	60,680	64,170
Other financial expenses	9,607	9,345
<b>Total</b>	<b>70,286</b>	<b>73,515</b>

Interest expenses exclusively consist of interest payable for financial liabilities categorized as “measured at amortized cost”. They mainly result from bank loans, from financial instruments issued by SOLARWORLD AG and from interest-bearing liabilities of SOLARWORLD group towards its employees in the scope of an internal plan with regard to profit-oriented employee compensation.

Other financial expenses include expenses in connection with the restructuring of financial liabilities from compensation and restructuring fees for creditors in an amount of € 7,860k (prior year € 3,004k).

As in the prior year, borrowing costs eligible for capitalization leading to a reduction of interest expenses do not exist.

#### d) Other financial result

in k€	2013	2012
Net gains and losses from		
financial assets and financial liabilities designated as measured at fair value	-539	60
financial assets held for trading	93	-1,240
financial liabilities measured at amortized cost	0	19,901
Gains/losses from currency translation	-1,071	-463
<b>Total</b>	<b>-1,517</b>	<b>18,258</b>

As in the prior year, the net result of the category “designated at fair value through profit or loss” is not influenced by changes of the credit risk.

Derivatives that are part of a hedging relationship are not taken into account when it comes to the presentation of net gains and losses. Derivatives that are not accounted for as hedging instruments are included in the measurement category “financial assets held for trading”.

### 36. INCOME TAXES

The following chart shows the composition of recognized tax expenses and income:

in k€	2013	2012
Actual domestic tax expenses	2,091	4,780
Actual foreign tax expenses	1,292	165
<b>Total actual tax expenses</b>	<b>3,383</b>	<b>4,945</b>
Deferred domestic tax income	-40,471	-86,673
Deferred foreign tax income/expenses	-8	206
<b>Total deferred tax income</b>	<b>-40,480</b>	<b>-86,467</b>
<b>Total recognized tax result</b>	<b>-37,097</b>	<b>-81,522</b>

Taxes paid or owed on income in the individual countries as well as deferred taxes are recognized as taxes on income.

Both in the reporting period and in prior years, tax losses were incurred by the U.S. entities. IAS 12 sets high standards when it comes to recognizing deferred taxes on loss carryforwards if losses are recent. These requirements were not met at reporting date. Thus, as in the prior year, no deferred tax assets were set up with regard to loss carryforwards of U.S. entities (potentially € 43,088k, prior year € 66,062k) in the 2013 period.

With regard to “Federal tax”, the tax loss carryforwards of the U.S. entities amount to an equivalent of some € 466 million. They can be offset with tax gains until at least 2024 and will then gradually be forfeited in the years 2025 to 2033. These loss carryforwards concern some € 145 million in deferred tax assets. With regard to “State tax”, the tax loss carryforwards amount to some € 414 million and concern the Federal states of California (€ 130 million), Oregon (€ 274 million) and other states (€ 10.3 million). In California, they can be offset with tax gains until at least 2018. An amount of roughly € 30 million will then gradually be forfeited in the years 2019 to 2021. For the rest (€ 100 million), they will be forfeited in 2033. In Oregon, the loss carryforwards will gradually be forfeited starting in 2022 while in the other states, part of the loss carryforwards (€ 1.9 million) will be forfeited in 2014 to 2016 while the remaining € 8.4 million will gradually be forfeited starting in 2026. Overall, deferred tax assets of some € 34 million are attributable to these loss carryforwards.

In addition, deferred tax assets were set up for loss carryforwards that existed in SOLARWORLD AG’s fiscal unity. We expect that the existing loss carryforwards will be utilized in full, as we anticipate that the scheduled financial restructuring measures will result in a restructuring profit, which can be fully offset with existing loss carryforwards in the scope of the issuance of a reorganization decree.

The following chart shows unnetted and netted deferred tax assets and liabilities with regard to accounting differences in the different balance sheet items and tax loss carryforwards:

in k€	Deferred tax assets		Deferred tax liabilities	
	31/12/13	31/12/12*	31/12/13	31/12/12
Intangible assets/property, plant and equipment	133,310	152,261	7,268	13,421
Other non-current assets	4,863	77	2,979	0
Current assets	38,423	59,472	375	3,330
Assets held for sale	241	0	0	0
Accrued investment grants	1,197	1,456	899	1,083
Other non-current liabilities	2,704	2,588	3,302	6,648
Current liabilities	5,680	3,515	836	1,060
Tax loss carryforwards	86,982	37,114	0	0
Allowances on deferred tax assets	-138,936	-154,761	0	0
<b>Total</b>	<b>134,464</b>	<b>101,722</b>	<b>15,659</b>	<b>25,542</b>
Offsetting	-13,086	-23,280	-13,086	-23,280
<b>Recognized deferred taxes</b>	<b>121,378</b>	<b>78,442</b>	<b>2,573</b>	<b>2,262</b>

\* Comparative figures were adjusted in accordance with IAS 8.22. We refer to our comments in note 1.

At reporting date, as in the previous year no deferred tax assets and no deferred tax liabilities were recognized in equity due to the lack of hedging relationships.

As in the prior year, no deferred tax liabilities for temporary differences in connection with investments in subsidiaries, associates or joint ventures in accordance with IAS 12.39 were recognized per Dec. 31, 2013. The corresponding temporary differences make for a total of € 3,612k (prior year € 3.642k)

The substantial differences between nominal and effective tax rates in the course of the reporting year and the prior year are illustrated below:

in k€	2013	2012
Income before taxes	-265,403	-687,813
Expected income tax rate (incl. trade tax)	30.0 %	30.0 %
<b>Expected result from income tax</b>	<b>-79,621</b>	<b>-206,344</b>
Deviating domestic and foreign tax burden	-4,425	-5,603
Actual taxes relating to other periods	1,393	-493
Taxes from non-deductible expenses	2,168	2,328
Tax reductions due to tax-exempt income	-1,467	-8,265
Goodwill impairment	0	1,393
Allowances on other deferred tax assets	24,563	129,868
Subsequent taxation as per § 2a EStG	19,268	0
Other deviations of tax expenses	1,024	5,594
<b>Recognized income tax result</b>	<b>-37,097</b>	<b>-81,522</b>
Effective income tax rate	14.0 %	11.9 %

### 37. EARNINGS PER SHARE

Earnings per share are calculated as ratio of the consolidated net income and the weighted average of the number of shares in circulation during the business year. As in the prior year, the key figure “diluted earnings per share” was not applicable as option rights or conversion privileges are not outstanding. The consolidated result for the year results exclusively from continued operations. The weighted average of the shares in circulation used as a basis for the determination of earnings per share was recalculated per reporting date and now amounts to 110,795,393.

### 38. STATEMENT OF COMPREHENSIVE INCOME

SOLARWORLD group decided to present all items of income and expense recognized in a period in two statements, a separate income statement and a statement of comprehensive income. The statement of comprehensive income directly follows the income statement. We refer to our comments in note 1.

Since the amounts that were re-classified from equity to result of the period or allocated to cost of non-financial assets and the profits and losses not shown through profit or loss including any tax effects are presented in the statement of comprehensive income, no further disclosures are required at this point.

**39. SEGMENT REPORTING****a) Segment disclosures**

The presentation of segment reporting follows the “full management approach”. As in the prior year, the following reportable segments were identified:

- Production Germany,
- Production U.S.,
- Trade.

This is due to SOLARWORLD AG’s prevailing internal organization, reporting and steering structure that focuses on the production and distribution of solar systems and solar modules. The greater objective of the group is to increase the existing synergy and efficiency potentials of the entire value added chain and thus achieve strategic competitive advantages for the marketing of solar systems.

No operating segments were combined for setting up the aforementioned reportable operating segments.

Each of the two production segments combines regionally related and fully integrated manufacturing activities in Germany and the U.S. and each include the manufacturing areas of the entire value added chain.

The operating segment “Trade” comprises the worldwide distribution of solar systems and solar modules and the operations of SOLARPARC AG.

The category “all other segments” includes various business activities of the group that did not materially affect the group’s financial position and financial performance in 2013.

As in the prior year, the accounting principles applicable for the consolidated entity also apply for the individual segments.

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## INFORMATION ON OPERATING SEGMENTS FOR THE ANNUAL PERIOD 2013 // IN M€

	Production Germany	Production U.S.	Trade	All other segments	Recon- ciliation	Consoli- dated
<b>Revenue</b>						
External revenue	18	2	436	0	0	456
Inter-segment revenue	193	123	0	14	-330	0
<b>Total revenue</b>	<b>211</b>	<b>125</b>	<b>436</b>	<b>14</b>	<b>-330</b>	<b>456</b>
<b>EBITDA</b>	<b>-75</b>	<b>-29</b>	<b>-57</b>	<b>6</b>	<b>8</b>	<b>-147</b>
Scheduled depreciation	-22	-9	-3	-6	0	-40
Non-scheduled depreciation	0	-2	0	0	0	-2
<b>Operating result (EBIT)</b>	<b>-97</b>	<b>-40</b>	<b>-60</b>	<b>0</b>	<b>8</b>	<b>-189</b>
Financial result						-77
<b>Result before income taxes</b>						<b>-266</b>
Income taxes						38
Result from continued operations						-228
<b>Consolidated net result</b>						<b>-228</b>
Material non-cash income	15	0	0	1	0	16
Material non-cash expenses	-89	-9	-1	-1	0	-100

## INFORMATION ON OPERATING SEGMENTS FOR THE ANNUAL PERIOD 2012 // IN M€

	Production Germany	Production U.S.	Trade	All other segments	Recon- ciliation	Consoli- dated
<b>Revenue</b>						
External revenue	23	1	581	1	0	606
Inter-segment revenue	332	177	2	21	-532	0
<b>Total revenue</b>	<b>355</b>	<b>178</b>	<b>583</b>	<b>22</b>	<b>-532</b>	<b>606</b>
<b>EBITDA</b>	<b>9</b>	<b>-47</b>	<b>-154</b>	<b>10</b>	<b>-21</b>	<b>-203</b>
Scheduled depreciation	-49	-26	-6	-6	0	-87
Non-scheduled depreciation	-201	-121	-5	-3	0	-330
<b>Operating result (EBIT)</b>	<b>-241</b>	<b>-194</b>	<b>-165</b>	<b>1</b>	<b>-21</b>	<b>-620</b>
Financial result						-67
<b>Result before income taxes</b>						<b>-687</b>
Income taxes						82
Result from continued operations						-606
<b>Consolidated net result</b>						<b>-606</b>
Material non-cash income	100	11	0	1	0	112
Material non-cash expenses	-97	-27	-69	0	0	-193

With regard to inter-segment revenue, the reconciliation column includes eliminations from expense and income consolidation.

Reconciliation of the balance of the segment results to the consolidated result is mainly attributable to intra-group profit elimination and other immaterial consolidation entries affecting profit or loss.

Revenue of the category “All other segments” primarily comprises the following:

in m€	2013	2012
Research and development services (intra-group)	14	21
Income from power input	0	1
<b>Total</b>	<b>14</b>	<b>22</b>

The material non-cash income and expenses includes reversals of received advances and reversals of accrued investment grants and impairment losses for inventories, receivables and prepayments made, respectively.

**b) Disclosures on group level**

With respect to the breakdown of revenue in accordance with products, we refer to the information provided in note 27.

No external customer accounts for more than 10 percent of SOLARWORLD group's revenue at once.

Allocation of revenue to individual countries or regions is carried out on the basis of invoicing. Revenue is considered generated in the country in which the addressee of the invoice is domiciled.

in m€	Revenue		Intangible assets, property, plant and equipment and investment property	
	2013	2012	31/12/13	31/12/12
Germany	134	300	251	275
Rest of Europe	119	114	0	0
Asia	26	20	0	0
U.S.	155	140	80	89
Others	22	32	0	0
<b>Total</b>	<b>456</b>	<b>606</b>	<b>330</b>	<b>364</b>



## COMMENTS ON THE CONSOLIDATED BALANCE SHEET

## 40. DEVELOPMENT OF INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT AND INVESTMENT PROPERTY

Composition and development of intangible assets, property, plant and equipment as well of investment property can be taken from the following chart:

in k€	Cost						As at 31/12/13
	As at 01/01/13	Reclassifi- cations	Addition	Reclassifi- cations to assets held for sale	Disposal	Currency difference	
<b>I. Intangible assets</b>							
1. Concessions, industrial property and similar rights and assets, and licenses in such rights and assets	31,365	966	710	–	532	–332	32,177
2. Goodwill	39,524	–	–	–	–	–	39,524
3. Exploration and evaluation	892	–	668	–	–	–	1,560
4. Prepayments	258	–119	785	–	21	–2	902
	<b>72,039</b>	<b>847</b>	<b>2,163</b>	<b>–</b>	<b>553</b>	<b>–334</b>	<b>74,162</b>
<b>II. Property, plant and equipment</b>							
1. Land and buildings	367,565	2,652	938	–	–	–5,466	365,688
2. Technical equipment and machinery	982,128	7,296	16,102	–	28,171	–14,796	962,558
3. Other equipment, factory and office equipment	39,479	60	529	–	1,446	–332	38,290
4. Construction in progress and prepayments	17,074	–9,967	2,355	–	169	–212	9,081
	<b>1,406,245</b>	<b>41</b>	<b>19,924</b>	<b>–</b>	<b>29,787</b>	<b>–20,806</b>	<b>1,375,617</b>
<b>III. Investment property</b>	<b>26,094</b>	<b>–888</b>	<b>670</b>	<b>9,630</b>	<b>–</b>	<b>–</b>	<b>16,245</b>
	<b>1,504,378</b>	<b>–</b>	<b>22,757</b>	<b>9,630</b>	<b>30,340</b>	<b>–21,140</b>	<b>1,466,025</b>

in k€	Cost						As at 31/12/12
	As at 01/01/12	Reclassifi- cations	Addition	Reclassifi- cations to assets held for sale	Disposal	Currency difference	
<b>I. Intangible assets</b>							
1. Concessions, industrial property and similar rights and assets, and licenses in such rights and assets	32,950	2,360	3,549	–	7,347	–147	31,365
2. Goodwill	39,524	–	–	–	–	–	39,524
3. Exploration and evaluation	210	–	682	–	–	–	892
4. Prepayments	339	–	43	–	124	–	258
	<b>73,023</b>	<b>2,360</b>	<b>4,274</b>	<b>–</b>	<b>7,471</b>	<b>–147</b>	<b>72,039</b>
<b>II. Property, plant and equipment</b>							
1. Land and buildings	354,932	10,194	6,125	–	1,218	–2,468	367,565
2. Technical equipment and machinery	1,020,208	34,557	25,751	5,221	86,195	–6,973	982,128
3. Other equipment, factory and office equipment	38,562	932	1,373	–	1,246	–143	39,479
4. Construction in progress and prepayments	53,230	–43,920	9,918	–	1,988	–167	17,074
	<b>1,466,932</b>	<b>1,763</b>	<b>43,168</b>	<b>5,221</b>	<b>90,646</b>	<b>–9,751</b>	<b>1,406,245</b>
<b>III. Investment property</b>	<b>27,993</b>	<b>–4,123</b>	<b>2,224</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>26,094</b>
	<b>1,567,948</b>	<b>–</b>	<b>49,667</b>	<b>5,221</b>	<b>98,117</b>	<b>–9,898</b>	<b>1,504,378</b>

Amortization and depreciation							Carrying amounts		
As at 01/01/13	Reclassifi- cations	Scheduled additions	Impair- ment charges	Reclassifi- cations to assets held for sale	Disposal	Currency difference	As at 31/12/13	As at 31/12/13	As at 31/12/12
24,361	662	1,775	-	-	295	-289	26,214	5,963	7,004
39,524	-	-	-	-	-	-	39,524	-	-
-	-	-	-	-	-	-	-	1,560	892
-	-	-	-	-	-	-	-	902	258
63,885	662	1,775	-	-	295	-289	65,738	8,425	8,154
253,261	533	4,982	-	-	-	-3,984	254,792	110,896	114,304
781,065	2,029	32,232	1,893	-	27,475	-12,755	776,989	185,569	201,062
29,838	-	2,539	-	-	1,328	-278	30,771	7,519	9,640
11,621	-3,176	-1,933	-	-	147	-165	6,199	2,882	5,452
1,075,786	-615	37,820	1,893	-	28,951	-17,182	1,068,751	306,866	330,459
1,127	-47	389	-	330	-	-	1,139	15,106	24,967
1,140,798	-	39,984	1,893	330	29,246	-17,471	1,135,628	330,397	363,580

Amortization and depreciation							Carrying amounts		
As at 01/01/12	Reclassifi- cations	Scheduled additions	Impair- ment charges	Reclassifi- cations to assets held for sale	Disposal	Currency difference	As at 31/12/12	As at 31/12/12	As at 31/12/11
17,620	-	3,486	5,133	-	1,752	-126	24,361	7,004	15,330
34,882	-	-	4,642	-	-	-	39,524	-	4,642
-	-	-	-	-	-	-	-	892	210
-	-	-	-	-	-	-	-	258	339
52,502	-	3,486	9,775	-	1,752	-126	63,885	8,154	20,521
148,658	127	11,046	95,604	-	382	-1,791	253,261	114,304	206,274
549,232	-3	67,113	211,687	3,968	36,928	-6,068	781,065	201,062	470,976
21,416	3	5,050	4,523	-	1,036	-118	29,838	9,640	17,146
2,945	-	-	8,788	-	-	-111	11,621	5,452	50,285
722,251	127	83,209	320,601	3,968	38,346	-8,088	1,075,786	330,459	744,681
762	-127	492	-	-	-	-	1,127	24,967	27,231
775,515	-	87,187	330,377	3,968	40,099	-8,214	1,140,798	363,580	792,433

**41. INTANGIBLE ASSETS**

In the scope of exploring the Eastern Ore Mountains with regard to lithium reserves, expenses of € 1,560k (prior year € 682k) were incurred in the reporting period, which were capitalized as an intangible asset in accordance with IFRS 6. No other self-generated intangible assets were capitalized.

**42. PROPERTY, PLANT AND EQUIPMENT**

Leases in accordance with IAS 17 that would lead to capitalization of an asset do not exist.

**43. INVESTMENT PROPERTY**

The building complex AUERMÜHLE (object A) that contains the distribution center of SOLARWORLD AG is partially leased to third parties. The respective parts of the building are therefore classified investment property. The market value of these building parts amounts to € 14.9 million (prior year € 15.4 million) and, thus, falls short of their carrying amount by € 0.2 million (prior year € 0.8 million).

The second property (object B), that is leased to third parties in full, has been reclassified to assets held for sale in the reporting period. We refer to our comments in note 54.

Independent experts determined the market value of the remaining property. Due to the type of the property and the lack of comparative data, no observable market transactions were used as a basis for the assessment of the fair value of the property. Instead, the fair value was determined using the capitalized earnings method in application of the following assumptions.

	Object A	
	2013	2012
Market rent	11.30 €/qm	11.25 €/qm
Loss of rent risk	4 %	5 %
Capitalization rate	5.80 %	5.80 %
Residual useful life	infinite	infinite

Rental income of € 965k (prior year € 1,090k) was generated with investment property in the annual period while the leased parts accounted for expenses of € 255k (prior year € 342k). Expenses of € 162k (prior year € 1,141k) were incurred with regard to the unrented parts. These disclosures take into account object B up until its classification as held for sale.

Limitations regarding the disposability of investment property, contractual obligations to acquire, establish or develop investment property do not exist. Object B is subject to the contractual obligation to conduct constructional measures while all expenses relating to the fitting-out including any interest payments are borne by the tenant.

With regard to the reconciliation statement that shows the development of the carrying amount of the investment properties, we refer to the fixed asset movement schedule in note 40.

Future minimum rent payments from the leased parts are as follows. The statements of the prior year included the minimum rent payments from the leased parts of object B:

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in k€	2013	2012
Twelve months or less	748	1,084
2 to 5 years	936	1,642
<b>Total</b>	<b>1,684</b>	<b>2,726</b>

#### 44. INVESTMENTS MEASURED AT EQUITY

in k€	2013	2012
QATAR SOLAR TECHNOLOGIES Q.S.C. (29 %)	18,891	23,368

SOLARWORLD AG holds a 29 percent investment in the assets and results of QATAR SOLAR TECHNOLOGIES Q.S.C. domiciled in the Emirate Qatar. Together with Qatar Foundation and Qatar Development Bank, SOLARWORLD AG is constructing a production facility for polysilicon.

JSSi GmbH, an associate accounted for using the equity method, in which SOLARWORLD AG has held a 49 percent investment and which was written off in full in the prior year, was sold by way of an agreement dated July 2, 2013.

With regard to related party disclosures we refer to note 67.

The following chart includes summarized financial information regarding investments measured at equity. The amounts refer to the SOLARWORLD group's shares and not to the amount of a notional 100 percent investment.

in k€	31/12/13	31/12/12
<b>Share in assets</b>	<b>144,407</b>	<b>81,417</b>
Of which current	11,843	10,410
Of which noncurrent	132,564	71,007
<b>Share in liabilities</b>	<b>128,132</b>	<b>56,743</b>
Of which current	26,896	17,224
Of which noncurrent	101,236	39,519
<b>Share in revenue</b>	<b>0</b>	<b>6,909</b>
<b>Share in net result for the year</b>	<b>-5,309</b>	<b>-12,171</b>

#### 45. OTHER NON-CURRENT FINANCIAL ASSETS

Other financial assets primarily include amounts classified as non-current for re-insurances of € 331k (prior year € 501k) that were accounted for in accordance with IFRIC 14 and IAS 19. The re-insurance contracts were concluded in connection with early retirement obligations and netted with the outstanding wage payments at reporting date. The current proportion is recognized in other current financial assets (compare note 52).

**46. DEFERRED TAX ASSETS**

In part, deferred tax assets result from accounting policies for recognition and measurement of assets and liabilities that differ from tax principles and current loss carryforwards. The development of deferred tax assets is included in the comments on tax expenses (note 36).

**47. OTHER NON-CURRENT ASSETS**

The item concerns the non-current proportion of prepayments made on raw materials.

**48. INVENTORIES**

in k€	31/12/13	31/12/12
Commodities and supplies	33,971	48,892
Work in progress	32,421	98,555
Finished goods and merchandise	35,759	64,373
Prepayments (current)	17,000	10,702
<b>Total</b>	<b>119,151</b>	<b>222,523</b>

For the purpose of the breakdown above, only solar modules were qualified as finished goods of the group.

In the reporting year, inventory impairments of € 15,222k (prior year € 94,488k) were recognized as expenses. As in the prior year, reversals of impairment losses were not conducted.

As in the prior year, no material restrictions on ownership or disposal do exist.

**49. TRADE RECEIVABLES**

Of the trade receivables, the trade receivables of SOLARWORLD AG amounting to € 17,748k (prior year € 15,112k) are assigned as collateral for loan obligations.

The following chart illustrates the aging structure of receivables:

in k€	31/12/13	31/12/12
Neither past due nor impaired	36,709	42,159
Past due but not impaired		
- up to 30 days	5,509	6,526
- between 31 and 60 days	695	620
- between 61 and 90 days	185	184
- between 91 and 180 days	197	267
- between 181 and 360 days	68	508
- exceeding 360 days	5,496	5,048
Impaired	0	257
<b>Total</b>	<b>48,859</b>	<b>55,569</b>

With regard to trade receivables that were not impaired, an indication for the recognition of impairment losses did not exist or impairment losses did not have to be recognized due to existing collaterals. The receivables included in the “between 1 and 90 days” cluster were fully redeemed within the preparation period of the consolidated financial statements. The majority of the receivables included in the “between 91 to more than 360 days” cluster result from wafer sales that mostly originate from long-term agreements. With regard to respective default risks, we refer to note 64.

The following chart illustrates the development of the bad debt allowance:

in k€	2013	2012
As at Jan 1	29,593	26,522
Utilization	-2,428	-6,502
Net release/allocation	-58	9,614
Currency translation	642	-41
<b>As at Dec 31</b>	<b>27,749</b>	<b>29,593</b>

#### 50. INCOME TAX ASSETS

Tax assets of € 1,353k (prior year € 1,054k) are especially due to creditable investment income tax.

#### 51. OTHER RECEIVABLES AND ASSETS

in k€	31/12/13	31/12/12
Receivable from investment subsidies	9,527	16,632
VAT receivables	4,798	2,908
Deferred items	3,074	3,201
Electricity tax refund	2,172	968
Receivable from research and development investment subsidies	1,738	1,351
Other prepayments	1,308	292
Other	2,617	3,716
<b>Total</b>	<b>25,234</b>	<b>29,068</b>

Receivables from investment subsidies concern an expected payment on the basis of the statutory provisions of the Investment Subsidy Act of 2010 in accordance with resolutions of the EU Commission dated July 6, 2010 and March 23, 2011.

Unsettled receivables from electricity tax refunds result from the German Electricity Tax Act.

## 52. OTHER CURRENT FINANCIAL ASSETS

in k€	31/12/13	31/12/12
Repayment claims	59,578	123,741
Sub-participation Solarparks of Extremadura S.L., Spain	13,834	13,834
Security deposits	7,753	18,476
Liquid funds subject to restrictions on use	2,017	1,197
Derivative financial instruments	103	54
Other financial assets	256	291
<b>Total</b>	<b>83,541</b>	<b>157,593</b>

Repayment claims result from prepayments relating to long-term purchase contracts for silicon that most probably violate EU anti-trust laws and therefore are null and void. As a consequence, the prepayments made were reclassified and recognized as repayment claims in the line item other financial assets already in prior year. The decrease in repayment claims in the reporting year results from an agreement concluded with a supplier regarding the continuation of the existing agreements and corresponding re-classification to inventories and other non-current assets. We refer to our comments in notes 5 and 33.

Bank balances subject to restraints on disposal serve as collateral for utilized bank guarantees.

The sub-investment in Solarparks of Extremadura S.L., Spain, results from a cooperation agreement with a wholly owned subsidiary of Deutsche Bank AG (DB), in which DB grants SOLARPARC AG the right to participate in the result from marketing or alternatively the operation of solar parks in Extremadura (Spain). The recognized carrying amount of the sub-investment offsets an amount payable to DB of € 12,667k (compare note 56), which DB can claim at any time.

## 53. LIQUID FUNDS

Liquid funds almost entirely concern bank balances. At reporting date, these were invested in – mostly short-term – fixed term deposits and day-to-day money with different banks. Bank accounts with a credit balance of € 13,555k (prior year € 11,780k) are subject to pledge agreements. Additional minimum cash at hand of € 155k (prior year € 372k) needs to be available in the scope of project financing of photovoltaic facilities. Thus, this amount is not at the group's free disposal.

## 54. ASSETS AND LIABILITIES HELD FOR SALE

In the course of restructuring, SOLARWORLD AG intends to sell its Bonn-Buschdorf property within the next twelve months. The search for a buyer has already started. In addition, a machine that is no longer used was classified as held for sale in the prior year and was subject to a € 818k devaluation in the reporting year..

## 55. EQUITY

## a) Subscribed capital

At reporting date, the capital stock amounts to € 111.72 million (prior year € 111.72 million) and only includes common shares, namely 111,720,000 non-par bearer shares.

**b) Authorized capital**

The shareholders' meeting of May 20, 2010 revoked the capital stock increases authorized in previous shareholders' meetings and authorized the board of directors for a maximum period of five years, i.e. until May 20, 2015, to increase – upon approval of the Supervisory Board – the capital stock once or more often by up to an overall amount of € 55,860,000 by issuing new bearer or registered shares for cash contribution or contribution in kind.

On August 7 2013, the extraordinary shareholders' meeting of SOLARWORLD AG passed the cancellation of the authorized capital without replacement. The registration of this resolution in the Commercial Register (Handelsregister) is linked to the implementation of the capital measures that were also passed by the shareholders' meeting of August 7, 2013, and that are essential parts of the restructuring concept of SOLARWORLD. Registration was effected on February 24, 2014.

**c) Conditional capital**

SOLARWORLD AG does not have any conditional capital. d) Treasury shares

By resolution of the shareholders' meeting of May 20, 2010, the board of directors was authorized to purchase treasury shares. In accordance with § 71 para. 1 No. 8 AktG, the authorization is subject to a fixed term, expires per midnight of May 20, 2015, and is limited to an extent of up to 10 percent of the capital stock.

At December 31, 2013, SOLARWORLD AG owns a total of 924,607 treasury shares. Thus, the number of treasury shares equals that of the prior period.

The weighted average of the shares in circulation used as a basis for the determination of the result per share was recalculated per reporting date and amounts to 110,795,393.

**e) Other reserves****Currency translation reserve**

The currency translation reserve contains differences arising from currency translation in the scope of translating annual financial statements of foreign subsidiaries.

**Hedging reserve and AfS reserve**

As in the prior year, the hedging reserve does not contain any gains and losses from hedging relationships that were classified as effective in the scope of cash flow hedges. As in the prior year, an AfS reserve does not exist from the change of the fair value of the assets (AfS assets) available for sale. Thus, as before, deferred taxes were not offset with the hedging reserve.

**f) Non-controlling interests**

As in the prior year, non-controlling interests do not exist.

**g) Dividend distribution**

No dividend was distributed for 2012.

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## 56. NON-CURRENT AND CURRENT FINANCIAL LIABILITIES

in k€	31/12/13	31/12/12
Bonds	551,446	550,915
Issued assignable note loans	372,032	356,221
Bank loans	65,073	64,043
Purchase price obligation AUERMÜHLE	16,903	16,377
Payment obligation sub-investment Solarparks of Extremadura S.L., Spain	12,667	12,667
Derivative financial instruments	370	199
Other	3,646	4,358
<b>Total</b>	<b>1,022,137</b>	<b>1,004,781</b>

Bank loans are collateralized by land charges in an amount of € 6.5 million (prior year € 6.5 million) and customary chattel mortgages of property, plant and equipment of € 3.1 million (prior year € 5.7 million) for which the consolidated entities are liable. The chattel mortgages exclusively concern photovoltaic facilities operated by SOLARWORLD group. In addition, minimum cash in hand amounts of € 0.2 million (prior year € 0.4 million) have to be maintained at the borrowing banks for project financing of photovoltaic facility projects.

Per December 31, 2012, financial liabilities of € 403.6 million were reclassified from noncurrent to current as certain financial covenants could not be met at the end of the period, which entitled the creditors of these financial liabilities to demand premature repayment of the loans. We refer to our comments in note 64e.

The purchase price obligation AUERMÜHLE results from concluded options that entitle SOLARWORLD AG and the seller, Solar Holding Beteiligungsgesellschaft mbH, to acquire and dispose of another 45 percent of the shares in AUERMÜHLE.

The payment obligation for the sub-investment Solarparks of Extremadura S.L., Spain, is connected with the sub-investment in Solarparks of Extremadura S.L., Spain, recognized in other financial assets. We refer to our comments in note 52.

## 57. ACCRUED INVESTMENT GRANTS

The item includes accrued investment subsidies and investment grants as well as accrued tax credits, even to the extent to which they are to be reversed in the course of the following year because they exclusively concern property, plant and equipment.

The investment subsidies and investment grants are subject to a number of requirements. Based on today's knowledge, all of those requirements will be met subject to the reservation stated below. Thus, repayment obligations are not expected to arise.

In prior years, SOLAR FACTORY GMBH received investment grants from Sächsische Aufbaubank. Due to not fully meeting the employment guarantees in the eligibility period, there is a general risk that a proportion of the grants might have to be repaid. Due to the current state of negotiations with Sächsische Aufbaubank, however, we do not expect that we will have to refund the investment grants.

## 58. NON-CURRENT AND CURRENT PROVISIONS

in k€	As at 01/01/13*	Utilization	Reversal	Addition	Currency translation	As at 31/12/13
Warranties	21,857	785	226	2,318	-213	22,951
Pensions	8,605	431	0	598	0	8,772
Litigation risks	1,295	626	28	1,924	0	2,565
Contingent losses from pending contracts	2,355	1,553	530	1,231	-28	1,475
Restoration obligations	2,417	1,006	7	45	-70	1,379
Other provisions	12,528	8,798	1,767	304	-8	2,259
<b>Total</b>	<b>49,057</b>	<b>13,199</b>	<b>2,558</b>	<b>6,420</b>	<b>-319</b>	<b>39,401</b>

\* Comparative figures were adjusted in accordance with IAS 8.22. We refer to our comments in note 1.

The provision for warranties is set up for specific individual risks, for the general risk of being called upon in accordance to statutory warranty regulations and performance guarantees granted with regard to photovoltaic modules sold. The provision for the risk of being called upon for performance guarantees is set up in an amount of 0.25 percent of all of SOLARWORLD group's module revenue. This lump sum rate represents the current estimation of the discounted total expenses over the entire term of the performance guarantee (performance guarantee is granted for a period of 25 years). Thus, it is subject to compounding at matched maturity interest rate. In the reporting period, this makes for interest expenses of € 1,129k (prior year € 874k), which are included in other financial expenses (compare note 35.)

The provision for building restoration obligations concerns tenant fixtures that have to be removed by SOLARWORLD group after expiration of the lease term. In addition, the provision includes the obligation to restore surface areas used for the operation of photovoltaic facilities once the lease term expires. Due to the noncurrent nature of the provision, it is subject to compounding at matched maturity interest rate. In the reporting period, this makes for interest expenses of € 35k (prior year € 202k), which are included in other financial expenses (compare note 35).

The addition to the provision for contingent losses primarily results from unfavorable procurement contracts.

#### Pension provisions

Pension provisions include promises of retirement benefits to employees of the group on the basis of direct compensation. The pension claims earned depend on the amount of pay at the time of retirement.

The following measurement parameters were uniformly used as a basis for calculating the defined benefit obligation (DBO):

	31/12/13	31/12/12
Discount rate	3.3 %	3.8 %
Rate of pension progression	2.0 %	2.0 %

The Heubeck standard tables RT 2005 G were used with regard to mortality and invalidity.

Alternative discount rates and rates of pension progression would result in the following changes in the defined benefit obligation and the corresponding reverse changes in equity (before taking into account deferred tax effects):

Measurement parameter	Sensitivity	Change in the DBO in k€	
Discount rate	+/- 1.00 %	-997	1,225
Rate of pension progression	+/- 0.50 %	489	-448

The following chart illustrates the DBO's development:

in k€	2013	2012*
Extent of obligation as at Jan. 1	8,605	7,772
Interest payable	327	389
Pension payments and other utilizations	-431	-431
Gains (-) and losses (+) from the remeasurement:		
- actuarial losses due to changes in the financial assumptions	523	1,134
- actuarial losses from experience adjustments	-252	-259
<b>Extent of obligation as at Dec 31</b>	<b>8,772</b>	<b>8,605</b>

\* Comparative figures were adjusted in accordance with IAS 8.22. We refer to our comments in note 1.

The following DBO-amounts were recognized for defined benefit plans in the current and prior reporting periods:

in k€	2013	2012	2011	2010	2009
Extent of obligation as at Dec 31	8,772	8,605	7,772	7,682	7,470

## 59. OTHER NON-CURRENT AND CURRENT LIABILITIES

in k€	31/12/13	31/12/12
Customer advances	23,994	34,202
Outstanding invoices	12,397	9,859
Other personnel obligations	6,256	7,967
VAT	1,323	7,655
Equity contribution obligation	1,051	0
Profit-oriented employee compensation	440	1,361
Other	10,442	10,928
<b>Total</b>	<b>55,903</b>	<b>71,972</b>

Customer advances mainly concern advances from long-term wafer purchase agreements.

Other personnel liabilities substantially consist of employee bonuses, outstanding wages and salaries and holiday entitlements.

The claimed obligation to contribute equity concerns a capital increase called for by QATAR SOLAR TECHNOLOGIES Q.S.C. in November 2013 that was based on a corresponding shareholder agreement. We refer to our comments note 44.

The recognized liability from profit-oriented employee compensation only includes the employer's share of social security contributions regarding obligations from prior annual periods. Employee entitlements that originated more than 12 months prior to the end of the annual period were netted with the corresponding insolvency protection amount. We refer to our comments in note 24. Profit-oriented employee compensation was not recognized in the reporting period. Interest payable from interest expenses from liabilities for profit-oriented employee compensation amounts to € 96k (prior year € 763k) and is included in interest payable (compare note 35).

The contribution obligation recognized in the prior period concerned the equity addition called upon by QATAR SOLAR TECHNOLOGIES Q.S.C. in December 2011 that was agreed on in the scope of the "Shareholder Agreement" dated April 1, 2010. The respective liability was paid in the reporting period.

#### **60. DEFERRED TAX LIABILITIES**

Deferred tax liabilities entirely result from accounting policies for recognition and measurement of assets and liabilities that differ from tax principles. The item's development is included in the comments on tax expenses (note 36).

#### **61. INCOME TAX LIABILITIES**

The item includes corporation, trade and capital yields tax assessed by the tax authorities and calculated or estimated by the consolidated entities as well as corresponding foreign taxes resulting from tax laws.

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## OTHER DISCLOSURES

## 62. OTHER FINANCIAL LIABILITIES

in m€	31/12/13	31/12/12
<b>Order commitments from commodity and license agreements</b>		
- within 1 year	59	54
- between 1 and 5 years	75	36
- more than 5 years	55	6
<b>Order commitments from investments in fixed assets</b>		
- within 1 year	7	13
- between 1 and 5 years	1	0
- more than 5 years	0	0
<b>Obligations from perennial rent agreements</b>		
- within 1 year	2	2
- between 1 and 5 years	3	4
- more than 5 years	0	2
<b>Total</b>	<b>202</b>	<b>117</b>

The obligations from multi-year rental agreements mostly concern office buildings and vehicles. The terms of the lease agreements for buildings and vehicles run from 3 to 11 and 3 and 4 years, respectively. The lease agreements for vehicles do not include any significant purchase or extension options. One lease agreement for a building includes the option to extend the contract twice by five years each. The contracts do not impose any restrictions on SOLARWORLD AG.

## 63. CONTINGENCIES AND EVENTS AFTER BALANCE SHEET DATE

A comprehensive presentation of corporate risks and events after balance sheet date is included in the group management report which, in accordance with German laws and regulations, is to be prepared and published at the same time as these consolidated financial statements. Amongst others, the group management report goes into detail with regard to the expectations for future development of selling prices and the overall market.

**Financial restructuring successfully completed**

On January 13, 2014, the Cologne Higher Regional Court approved the applications for summary judgments which SOLARWORLD AG filed in October 2013. As a result, it was possible to implement the noteholders' and shareholders' resolutions that were adopted in August 2013. Furthermore, in January 2014, all creditor groups and noteholder representatives as well as the new investor Qatar Solar S.P.C. signed the final restructuring agreement. This agreement contains the individual financial restructuring steps and makes them legally binding on all parties to the agreement. On January 20, 2014, the capital reduction in the ratio of 150:1 that was approved by shareholders on August 7, 2013 was entered in the commercial register. On January 27, 2014, the German Federal Financial Supervisory Authority (BaFin) approved the prospectuses for the new shares and bonds that were issued as part of the financial restructuring program. On February 24, 2014, the implementation of the capital increase by contribution in kind for SOLARWORLD AG was entered in the commercial register of the local court of Bonn. As a result, the financial liabilities of SOLARWORLD AG were reduced from around € 1 billion by € 570 million to € 427 million and the financial restructuring which began in January 2013 was completed.

The capital increase by contribution in kind increased the capital stock of SOLARWORLD AG from € 744,800.00 by € 14,151,200.00 to € 14,896,000.00. The capital stock of SOLARWORLD AG is now divided into 14,151,200 no-par value shares to which a pro-rata amount of the share capital of € 1.00 per share (new shares, ISIN DE000A1YDED6) is attributed, and 744,800 no-par value shares to which a pro-rata amount of the share capital of € 1.00 per share (old shares, ISIN DE000A1YCMM2) is attributed.

#### **U.S. International Trade Commission commences proceedings**

In February 14, 2014, the U.S. International Trade Commission (ITC) declared that the domestic solar industry in the United States was still being threatened and harmed by imports from China and the third country Taiwan. The commission unanimously backed a complaint filed by SOLARWORLD INDUSTRIES AMERICA INC. on December 31, 2013. The decision by the ITC is the first of four steps in the proceedings against illegal trade practices which could lead to an extension of the duties imposed back in 2012.

#### **Production lines of Bosch Solar Energy AG taken over**

On March 12, 2014, as planned, SOLARWORLD INDUSTRIES-THÜRINGEN GMBH, a wholly owned subsidiary of SOLARWORLD AG, acquired cell and module production assets from Bosch Solar Energy AG in Arnstadt, Thuringia. SOLARWORLD INDUSTRIES-THÜRINGEN GMBH will employ around 800 people when production begins in mid-March 2014. The acquisition increases production capacities at the cell and module stages of the value chain, and strengthens the group's technological foundation.

#### **Directors' dealings**

After December 31, 2013, Dr.-Ing. E.h. Frank Asbeck, the company's CEO, sold a total of 20,781,406 old shares in SOLARWORLD AG (ISIN DE0005108401) via the stock exchange. Once the financial restructuring was executed, Dr.-Ing. E.h. Frank Asbeck purchased 2,919,057 new shares (ISIN DE000A1YDED6) off-market. Due to these transactions, the indirect and direct voting rights of Dr.-Ing. E.h. Frank Asbeck decreased from 22.27 to 19.78 percent as of the key date March 12, 2014.

CFO Philipp Koecke also purchased 8,000 new shares in SOLARWORLD AG. His voting rights amounted to 0.05 percent as of the key date March 12, 2014.

### **64. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS**

#### **a) Management of capital structure**

SOLARWORLD group's capital management is especially aligned to ensure the group's financing. This includes the safeguarding of a constant level of minimum liquidity that is available. Directly managed by the executive board, SOLARWORLD AG is responsible for planning and monitoring the group's liquidity as well as the raising of capital. Short-term liquidity management is carried out with a planning horizon of 13 weeks. The corresponding planning is updated every two weeks. In addition to the cash flow from operating activities, the group used different capital market instruments like bonds and promissory notes. In the light of the difficult environment the solar industry is facing when it comes to financing, refinancing with these types of capital market instruments is currently possible only to a very limited extent. Thus, the capital management efforts in connection with the financial restructuring were focused on adjusting existing loan obligations to the earning power and financial requirements of the company. Moreover, in the scope of the financial restructuring process, SOLARWORLD received a new credit line of € 50 million from QATAR SOLAR TECHNOLOGIES Q.S.C.. We refer to our comments in note 64e and the management report.

**b) Principles and objectives of financial risk management**

In its capacity as an internationally operating group, SOLARWORLD AG is exposed to market, credit and liquidity risks with regard to its assets, liabilities and future transactions already set and planned. Objective of financial risk management is the limitation of these risks by way of operating and finance-oriented activities.

Main features of financial policies are agreed upon in the board of directors and with the respective subsidiaries on a regular basis. Selected derivative and non-derivative financial instruments are utilized to limit or take risks in a controlled way, depending on the respective risk assessment, planning ability regarding future transactions and current market situation. As a basic principle, however, only those risks are addressed that have short- to medium-term consequences on the group's cash flow. Implementation of financial policies as well as risk management is handled by the respective departments, which report to the board of directors on a regular basis.

Derivative financial instruments are regularly used as hedging instruments but not for trading or speculation purposes. To exploit short-term market fluctuations, possibly existing hedging instruments are closed out economically. To minimize default risks, hedging agreements are only concluded with leading financial institutions that have a credit rating in the investment grade area.

With regard to the investment of liquid funds, it is SOLARWORLD group's primary objective to minimize risks from the change of market prices or the creditworthiness of creditors and to obtain a return rate at money market level in the process. SOLARWORLD group therefore mostly invests uncommitted liquid funds in demand deposits (fixed-term deposits and day-to-day money). To limit the default risk, demand deposits are only placed with leading financial institutes with a credit rating in the investment grade area. Moreover, central management and broad diversification of the investments with regard to debtors works against the establishment of risk concentration.

**c) Market risks**

With respect to market risks, SOLARWORLD group is especially prone to risks from the change in currency translation, commodity prices and interest rates.

For the presentation of market risks, IFRS 7 requires sensitivity analyses, which show the consequences of hypothetical changes of relevant risk variables on result and equity. The periodic consequences are determined by showing how the hypothetical changes of the risk variables could have affected the existing financial instruments at balance sheet date. It is therefore assumed on the basis of existing hedging relations that net liabilities, the relation of fixed and variable interest on liabilities and derivatives and the proportion of foreign currency financial instruments remain unchanged.

Currency risks in terms of IFRS 7 arise on financial instruments that are denominated in a currency different from the functional currency and are of a monetary nature. Currency risk related differences from the translation of financial statements into the group currency remain unaccounted for. Relevant risk variables are basically all non-functional currencies in which SOLARWORLD group holds financial instruments.

Interest risks exist both on the borrowing and the deposit side. Thus, analysis of interest risks is carried out on the basis of net debt whereas it is assumed that interest for variably interest-bearing borrowings and deposits change in equal measure. Moreover, only those interest-bearing financial instruments whose interest level depends exclusively on market interest development are included in the analysis.

Risks from the change of commodity prices result from commodity derivatives concluded for hedging purposes with regard to the corresponding commodity purchases.

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**aa) Currency risks**

SOLARWORLD group's currency risks mainly result from operating activities. Foreign currency risks are hedged to the extent to which they influence the group's cash flows. On principle, risks that result from the translation of assets and liabilities of foreign subsidiaries into the group reporting currency and influence the group's cash flow only upon disposal of the subsidiary are not hedged. However, hedging of these risks is not entirely ruled out in the future.

With regard to operating activities, the individual group companies mostly handle their operations in utilization of the respective functional currency. For the rest, SOLARWORLD group is exposed to foreign currency risks in connection with foreign currency transactions already set and planned. These mainly concern transactions in US\$ in connection with the procurement of raw materials. As in the prior year, no hedging relationships existed for these transactions at balance sheet date.

Aside from a proportion of liquid funds and trade receivables and liabilities, the material financial instruments are mainly denominated in functional currency. Hence, exchange rate changes basically influence the result only with regard to these foreign currency items.

If the Euro revalues (devalues) towards the US\$ by 10 percent, this will make for a negative (positive) effect on earnings before income tax of € 360k (€ 428). If the Euro revalues (devalues) towards the British pound by 10 percent, this will make for a negative (positive) effect on earnings before income tax of € 884k (€ 1,080k). With regard to all other changes in exchange rates, the group's currency risk is insignificant.

**bb) Interest risks**

At reporting date, all borrowed capital of the group was subject to fixed-interest rates. As uncommitted liquid funds are mainly invested for the short-term, SOLARWORLD faces an interest risk on the deposit side. Moreover, the group is subject to interest risks in connection with an interest rate limit transaction in form of a maximum rate agreement (cap), which is not designated into a hedging relationship.

If the market interest rate level increases by 50 basis points, the positive effect on earnings before tax would amount to € 1,014k (prior year € 1,175k). If the market interest rate level decreases by 50 basis points, the negative effect on earnings before tax would amount to € 924k (prior year € 1,131k).

**cc) Other price risks**

In addition, SOLARWORLD group concluded commodity derivatives to hedge the risk of increasing silver prices. As the derivatives are not integrated in a valid hedging relationship, changes in the derivatives' value affect the earnings before tax.

If the silver price rate increased or decreased from – at reporting date – some US\$ 20/kg to US\$ 30/kg or US\$ 15/kg, the earnings before tax would be € 1,331k higher or € 596k lower, respectively.

**d) Credit risks**

For the most part, SOLARWORLD group's uncommitted liquidity is invested in demand deposits with German banks. Thus, the default risk is considered marginal in this respect.

With regard to supplies to non-group customers, depending on type and amount of the respective service, collateral is required, credit ratings/references are collected or historical data from previous business relations – especially as regards payment behavior – is used for avoiding default in payment.

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To further limit credit risks, receivables from non-group module sales are mostly secured via credit insurances. Hence, the respective credit risk is regarded rather remote.

With respect to receivables from wafer sales that mainly originate from long-term contracts, credit insurances do not exist for the most part as these customers have paid extensive advances, which are non-refundable especially in the event of insolvency. Thus, the respective credit risk is economically provided for.

SOLARWORLD group shows extensive repayment claims from silicon suppliers that are not secured. The claims are against large and established suppliers in the silicon field so that the credit risk is, on principle, estimated rather low. However, due to the tense market environment, which also hit the established silicon suppliers hard, a default risk cannot ruled out.

For the rest, the maximum credit risk results from the carrying amounts.

#### **e) Liquidity risks**

For SOLARWORLD group, liquidity risks arise from the obligation to redeem liabilities in full and in due time. It is therefore the task of the cash and liquidity management to assure the individual group companies' liquidity at any time.

Cash management for operating activities is carried out in a decentralized manner within the individual business units. SOLARWORLD AG predominantly balances the respective requirements and surpluses regarding the individual units' means of payment in a centralized way by granting and accepting intra-group loans. Central cash management determines the group-wide financial resources requirements on the basis of business planning.

Contracts in connection with borrowed capital amounting to nominal € 404.5 million contain regulations that will entitle creditors to exceptional terminate the contract and demand early repayment of the loans if certain financial ratios (covenants) are not met. These financial ratios were renegotiated and standardized with all creditors in the summer of 2012. The financial ratios mainly concern key data regarding the level of indebtedness, liquidity and the operating result.

Almost all contracts in connection with borrowed capital include so-called "cross-default clauses (third party default clauses)", which govern that the creditors have an extraordinary right to cancel to the extent to that SOLARWORLD AG does not comply with its obligations from other borrowed capital.

In addition, creditors of borrowed funds in a nominal amount of € 931 million are entitled to request the premature repayment of the loans if a change of control takes place at SOLARWORLD AG.

SOLARWORLD group failed to meet the agreed covenants at December 31, 2012. Hence, creditors of borrowed funds in a nominal amount of € 404.5 million (mostly from issued assignable note loans) are in principle entitled to an exceptional termination.

On January 24, 2013, SOLARWORLD AG announced by an ad hoc notification the need for financial restructuring. After this announcement, the Management Board conducted negotiations on a restructuring concept with its main creditors. On June 18, 2013, SOLARWORLD AG announced that an agreement had been reached on the implementation of the restructuring of liabilities with all creditors of assignable loans (Schuldscheine) as well as a creditor of a secured loan. In this agreement, the creditors waived their rights to terminate the loans for breach of financial covenants.

If creditors of the issued assignable note loans had made use of their right to exceptional termination and if the company had failed to meet the creditors' repayment claims resulting therefrom there would have been a risk that the remaining creditors of borrowed capital (mainly from bonds issued in a nominal volume of € 400 million and € 150 million) will also have a right to exceptional termination due to the "cross default clauses".

The final restructuring agreement for carrying out the restructuring, which contains individual financial restructuring steps, was concluded on January 6, 2014.

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On February 24, 2014, the execution of the non-cash capital increase of SOLARWORLD AG was entered in the commercial register of the Bonn local court, thereby reducing SOLARWORLD AG's financial liabilities by € 570 million from some € 1 billion to € 427 million and finalizing the financial restructuring of SOLARWORLD AG that had started in January 2013.

The reorganized financial liabilities consist of two newly issued bonds with a nominal value of € 52 million and € 175 million and a newly structured loan (Senior Facility Agreement or short SFA) of € 191 million. In addition, SOLARWORLD took out a new loan (Super Senior Agreement or short SSA) from QATAR SOLAR TECHNOLOGIES Q.S.C. in the amount of € 50 million on February 25, 2014.

All new financial liabilities fall due within 5 years and include a so-called "cross-default clause", which gives the creditors an extraordinary right to give notice if SOLARWORLD AG does not meet its obligations from other borrowed funds.

The SFA and SSFA include provisions that entitle the creditors to extraordinary termination of the contract and demand premature repayment of the loans if certain covenants are not met. The covenants are mainly indicators regarding the debt-equity and interest cover ratio that have to be complied with from December 31, 2015 and indicators regarding the minimum liquidity and maximum debt.

As further detailed in the report on § 315 para. 4 HGB, the creditors of the new financial liabilities also have the right to demand the premature repayment of the loans if a change of control takes place at SOLARWORLD AG.

These regulations are supplemented by further standard provisions on termination.

The following chart shows the future undiscounted cash flows of the financial liabilities (interest and repayment), as they would contractually result without taking into account any unscheduled repayments. Unscheduled repayments are contractually agreed if certain liquidity or cash flow indicators are met or certain material cash flow-relevant transactions took place.

#### Undiscounted cash flows of financial liabilities

in k€	Total	2014	2015	2016	2017	2018	2019	2020 et seq.
Bank loans	10,947	1,031	1,006	7,332	613	443	290	232
Bonds	290,268	38,724	24,849	27,737	12,093	12,093	174,772	0
Senior Facility	238,726	41,626	24,502	26,059	8,907	8,907	128,725	0
Super Senior Facility	66,958	2,750	3,458	3,500	3,500	3,500	50,250	0
<b>Total</b>	<b>606,899</b>	<b>84,131</b>	<b>53,815</b>	<b>64,628</b>	<b>25,113</b>	<b>24,943</b>	<b>354,037</b>	<b>232</b>

## f) Fair values, carrying amounts and residual terms of financial instruments in accordance with categories

The following chart shows fair values and carrying amounts of financial assets and liabilities included in the individual line items:

Assets Dec 31, 2013			
in k€	Measurement categories IAS 39		
	Held for trading	Loans and receivables	Available for sale
Trade receivables	–	48,859	–
Other receivables and assets	–	906	–
Other financial assets	103	69,604	13,834
Liquid funds	–	163,662	–
<b>Total</b>	<b>103</b>	<b>283,031</b>	<b>13,834</b>

Assets Dec 31, 2012			
in k€	Measurement categories IAS 39		
	Held for trading	Loans and receivables	Available for sale
Trade receivables	–	55,569	–
Other receivables and assets	–	147	–
Other financial assets	54	143,705	13,834
Liquid funds	–	224,109	–
<b>Total</b>	<b>54</b>	<b>423,530</b>	<b>13,834</b>

Liabilities Dec 31, 2013				
in k€	Measurement categories IAS 39			Total carrying amounts
	Financial liabilities recognized at amortized cost	Financial liabilities designated as at fair value	Purchase price commitment from business acquisition	
Financial liabilities	1,004,022	1,212	16,903	1,022,137
Trade payables	17,456	–	–	17,456
Other liabilities	440	–	–	440
<b>Total</b>	<b>1,021,918</b>	<b>1,212</b>	<b>16,903</b>	<b>1,040,033</b>

Liabilities Dec 31, 2012				
in k€	Measurement categories IAS 39			Total carrying amounts
	Financial liabilities recognized at amortized cost	Financial liabilities designated as at fair value	Purchase price commitment from business acquisition	
Financial liabilities	987,378	1,026	16,377	1,004,781
Trade payables	32,632	–	–	32,632
Other liabilities	1,361	–	–	1,361
<b>Total</b>	<b>1,021,371</b>	<b>1,026</b>	<b>16,377</b>	<b>1,038,774</b>

Derivatives in hedging relationships	Total carrying amounts	Total fair values	IFRS 7 not applicable	Total carrying amounts
–	48,859	48,859	–	48,859
–	906	906	24,329	25,234
–	83,541	83,541	–	83,541
–	163,662	163,662	–	163,662
–	296,967	296,967	24,329	321,296

Derivatives in hedging relationships	Total carrying amounts	Total fair values	IFRS 7 not applicable	Total carrying amounts
–	55,569	55,569	–	55,569
–	147	147	28,921	29,068
–	157,593	157,593	–	157,593
–	224,109	224,109	–	224,109
–	437,418	437,418	28,921	466,340

Residual terms					
Total fair values	IFRS 7 not applicable	Total carrying amounts	up to 1 year	between 1 and 5 years	exceeding 5 years
421,369	–	1,022,137	485,508	536,628	–
17,456	–	17,456	17,456	0	–
440	55,463	55,903	55,601	302	–
439,265	55,463	1,095,496	558,566	536,930	–

Residual terms					
Total fair values	IFRS 7 not applicable	Total carrying amounts	up to 1 year	between 1 and 5 years	exceeding 5 years
264,105	–	1,004,781	467,226	537,555	–
32,632	–	32,632	32,632	–	–
1,361	70,611	71,972	44,944	27,028	–
298,098	70,611	1,109,385	544,802	564,584	–

The fair value of financial assets and financial liabilities needs to be presented in the amount that could be generated if the respective instruments were exchanged in the scope of a current transaction (with the exception of forced sale or liquidation) between business partners willing to contract. The methods and assumptions used for determining fair values are:

- Trade receivables, other receivables and assets, liquid funds, trade liabilities and the material proportion of the other liabilities in terms of IFRS 7 are subject to short residual terms. Thus, their carrying amounts at reporting date approximately equal fair value.
- Other liabilities include financial obligations to employees resulting from profit-oriented employee compensation. The liabilities are subject to variable interest rates. Thus, the fair value at balance sheet date equals the carrying amount.
- The fair value of other financial assets and financial liabilities is determined on the basis of stock market prices on active markets if available.
- The fair value of unlisted other financial assets is estimated in application of appropriate measurement methods or on the basis of conducted transactions.
- The fair value of unquoted promissory note and bank loans is estimated at a uniform 36.48 percent of the nominal value without taking maturity terms into consideration. This equals the mid-market rate of the two SOLAR-WORLD AG bonds traded on the capital market. The uniform measurement is derived from the condition that, in accordance with the restructuring agreement, all creditors are to be treated equally irrespective of the maturity terms of the borrowed capital. This does not apply for bank loans or parts thereof if collateral is provided. These parts are recognized in full.
- The fair value of derivative financial instruments with existing observable input parameters on the market is estimated by discounting future cash flows in application of these input parameters. The used input parameters concern yield curves, commodity spot and forward rates as well as volatilities. The fair value of liabilities from terminable non-group investments in a fully consolidated partnership was determined on the basis of the proportionate annual result at amortized cost as no significant value-impairing factors existed.

Financial instruments accounted for at fair value per reporting date follow the following hierarchy for determining and recognizing fair values of financial instruments:

Stage 1: Listed (unadjusted) prices on active markets for similar assets or liabilities.

Stage 2: Processes in which all input parameters significantly affect the recognized fair value are directly or indirectly observable.

Stage 3: Processes using input parameters that significantly affecting the recognized fair value and are not based on observable market data.

in k€	Dec 31, 2013				Dec 31, 2012			
	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
<b>Financial assets measured at fair value</b>								
held for trading	103	–	103	–	54	–	54	–
derivatives in hedging relationships	–	–	–	–	–	–	–	–
available for sale	13,834	–	–	13,834	13,834	–	–	13,834
<b>Financial liabilities measured at fair value</b>								
held for trading	–370	–	–370	–	–199	–	–199	–
derivatives in hedging relationships	–	–	–	–	–	–	–	–
from terminable partnership interests	–842	–	–	–842	–827	–	–	–827
<b>Total</b>	<b>12,725</b>	<b>–</b>	<b>–267</b>	<b>12,992</b>	<b>12,862</b>	<b>–</b>	<b>–145</b>	<b>13,007</b>

The following chart shows the development of financial instruments included in stage 3 over the course of the business year:

in k€	2013	2012
As at Jan 1	13,007	15,818
Losses/Profits recognized in other financial result	–15	60
Sale	0	–2,871
<b>As at Dec 31</b>	<b>12,992</b>	<b>13,007</b>

The financial instruments still held at balance sheet date that were assigned to stage 3 made for a netted loss of € –15k (prior year netted profit of € 60k) in 2013, which is included in other financial result.

#### g) Net gains and losses by measurement category

To the extent to that they are assignable to financing or investment activities, net gains and losses of the measurement categories “financial assets designated as at fair value through profit or loss” and “financial assets held for trading” are included in other financial result (note 35). In addition to results from market value measurement, they also include interest, dividend and currency effects. Furthermore, net gains and losses from “financial assets held for trading” that are assignable to operations have to be taken into account as well. In total, the net loss from “financial assets held for trading” amounts to € –1,163k (prior year € –1,019k).

In addition to the exchange gains mentioned below, net gains and losses of the measurement category “loans and receivables” mainly contain impairment losses in an amount of € 627k (prior year € 9,974k). The latter are included in other operating expenses.

With respect to the measurement categories “loans and receivables” and “financial liabilities measured at amortized cost”, net gains and losses need to take losses from currency effects into account, which were not subdivided for reasons of efficiency. The netted exchange losses for the reporting period amount to € -4,655k (prior year exchange gains € 5,746k). To the extent to that they concern transactions in the scope of operations and financing transactions, they are recognized in other operating income or other operating expenses and other financial result, respectively.

In the prior year, the net result of “financial liabilities carried at amortized cost” took into account income from the repayment of financial liabilities of € 19,901k in addition to a proportion of the exchange rate effects mentioned above. The former were recognized in other financial result. We refer to note 35. No comparable transaction took place in the reporting year.

Thus, net losses from the measurement categories “loans and receivables” and “financial liabilities measured at amortized cost” amount to a total of € -5,282k (prior year net income of € 15,673k)

As in the prior year, neither interest income nor additions to the AFS reserve were recognized with regard to “financial assets available for sale” in the reporting year.

#### **h) Hedging**

Hedging that required hedge accounting did not exist in the reporting period.

### **65. COMMENTS ON THE CASH FLOW STATEMENT**

#### **a) Cash flow from operating activities**

Cash flow from operating activities was prepared in accordance with the indirect method. At first, the pretax result used as a starting point is adjusted by significant non-cash earnings and expenses. This makes for the cash flow from operating results. Cash flow from operating activities takes the changes of net current assets into account.

Non cash-effectives expenses and income of the business year concern income from the reversal of advances received and impairment losses of prepayments made, inventories and receivables. Income from the first-time consolidation of SOLARPARC AG was also included in the prior period.

Interest paid and interest received is included in cash flow from financing activities and cash flow from operating activities, respectively.

#### **b) Cash flow from investing activities**

The cash flow from investing activities includes payments for asset investments as well as investment grants received for this purpose. Cash receipts from the disposal of fixed assets and financial investments are also included. In the prior year, cash receipts from the disposal of assets mainly resulted from the sale of SOLARPARC AG's wind activities. A comparable transaction did not take place in the reporting year.

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## c) Cash flow from financing activities

Cash flow from financing activities is characterized from the repayments of financial liabilities. The most substantial components are the partially premature repayment of bank loans. In the prior year, the sale of SOLARPARC AG's wind activities made for a € 18.4 million decrease in financial liabilities in addition to the repayment evident from the cash flow. The respective liability was assumed by the buyer. Finally, the item shows interest paid and restructuring expenses incurred with regard to compensation and restructuring fees for creditors.

## d) Cash and cash equivalents

As in the prior period, cash and cash equivalents at the end of the period exclusively consist of liquid funds as recognized on the consolidated balance sheet. Cash and cash equivalents whose availability is restricted for more than 3 months are included in financial assets. In the scope of project financing of photovoltaic facilities, minimum cash in hand has to amount to € 0.2 million (prior year € 0.4 million), which are therefore not at the entity's free disposal. Furthermore, bank accounts with a credit balance of € 13,555k (prior year € 11,780k) are subject to pledge agreements.

## 66. CONTINGENT LIABILITIES

Our subsidiary DEUTSCHE SOLAR GMBH is currently the defendant in a court proceeding with a silicon supplier. The subject of the court proceeding is the non-acceptance of silicon from long-term silicon contracts concluded with this silicon supplier. Due to the non-acceptance, the silicon supplier claims a total of USD 676 million on the basis of the "take or pay" obligation and in damages. On the basis of external legal opinions, the company believes that the silicon contracts in question violate European antitrust law, which could mean that the purchase obligation as well as the contracts per se might be null and void. At this point in time the outcome of the proceedings cannot be estimated. Depending on the outcome, however, it is possible that DEUTSCHE SOLAR GMBH might be liable for damages up to the claimed amount.

A first instance ruling of the Munich I district court states that a brand of SOLARWORLD AG infringes trademark rights and that SOLARWORLD AG has to compensate the plaintiff for any loss that resulted or results from the utilization of the sign for photovoltaic systems. SOLARWORLD AG appealed this judgment. So far, no loss is quantified and an actual claim for damages is not pending. A reliable estimation for any potential outflow of resources on the basis of these facts and circumstances can thus not be made.

## 67. RELATED PARTY DISCLOSURES

The following material transactions involving related parties were conducted in the annual period 2013:

Administration and commercial property in Bonn as well as a solar park in Freiberg were rented and leased from Dr.-Ing. E.h. Frank Asbeck and close family members, the annual rent and lease payments amounting to € 1.2 million (prior year € 1.4 million).

For other services and on-charges of costs incurred especially in connection with the management of solar parks, the net amount of € 251k (prior year € 202k) was invoiced to Dr.-Ing. E.h. Frank Asbeck and his individual enterprise. At the end of the period, this resulted in a receivable from Dr.-Ing. E.h. Frank Asbeck in an amount of € 3k (prior year € 4k).

-----



Services and on-charges of costs incurred in the amount of € 363k (prior year € 311k) were rendered to entities indirectly and directly controlled by Dr.-Ing. E.h. Frank Asbeck and close family members. Receivables of € 49k (prior year € 51k) are unsettled at the end of the period.

SOLARWORLD group rendered other services of € 0.1 million (prior year € 0.3 million) to joint ventures. At reporting date, receivables from these transactions no longer exist (prior year € 7k).

SOLARWORLD group sold fixed assets of € 0.8 million (prior year € 0k) to QATAR SOLAR TECHNOLOGIES Q.S.C., Qatar. Receivables from this transaction do not exist at reporting date.

In the reporting year, QATAR SOLAR TECHNOLOGIES Q.S.C., Qatar, called in an equity contribution of US\$ 1,450k on the basis of a corresponding shareholder agreement. Payment is deferred until February 28, 2014. Die Zahlung ist bis zum 28. Februar 2014 gestundet. We refer to our comments in note 59.

The law firm of Schmitz Knoth Rechtsanwälte, Bonn, – a party related to the chairman of the Supervisory Board, Dr. Claus Recktenwald, in terms of IAS 24 – handles SOLARWORLD group's legal issues. Upon approval of the Supervisory Board, a total fee of € 1.4 million (prior year € 1.3 million) was rewarded for these services in 2013.

Remuneration and share ownership of members of the executive and Supervisory Board is listed in note 69 and presented in the remuneration report of the management report.

All transactions were carried out at arm's length.

## 68. EMPLOYEES

The average number of employees amounted to 2,103 (prior year 2,537) and falls upon the entity's areas of operations and segments as follows:

Headcount	2013	2012
Production Germany	1,031	1,231
Production U.S.	600	858
Trade	352	353
Other	120	95
<b>Total</b>	<b>2,103</b>	<b>2,537</b>

Per December 31, 2013, the number of employees amounted to 2,073 (prior year 2,355) and included 50 trainees (prior year 73).

## 69. EXECUTIVE BOARD MANAGEMENT BOARD AND SUPERVISORY BOARD

For assuming their duties in both parent company and subsidiaries in 2013, the members of the Management Board received total remuneration payments of € 1,809k (prior year € 1,573k), which includes variable remuneration of € 0k (prior year € 0k).

Mr. Klebensberger's board function ended in February 2013. On the basis of his still ongoing contract, he received continued payment of remuneration amounting to € 345,898.72 in 2013.

For assuming their duties in both parent company and subsidiaries in 2013, the members of the Supervisory Board received remuneration payments including reimbursements in a total amount of € 234k (prior year € 240k), each plus statutory VAT. The total includes variable remuneration of net € 0k (prior year € 0k).

Individualized disclosures regarding the remuneration of the board of directors' members are included in the entity's management report.

The appointed members of the Management Board are:

- Dr.-Ing. E.h. Frank Asbeck (Chief Executive Officer)
- Dipl.-Ing. Boris Klebensberger (Chief Operations Officer, until February 7, 2013)
- Dipl.-Kfm. tech. Philipp Koecke (Chief Financial Officer)
- Dipl.-Wirtschaftsing. Frank Henn (Chief Sales Officer)
- Attorney at law Colette Rückert-Hennen (Chief Information, Brand & Personnel Officer).

At reporting date, the chairman of the Management Board, Dr.-Ing. E.h. Frank Asbeck, directly owned 22.27 percent (prior year indirectly and directly 27.84 percent) of the shares in SOLARWORLD AG.

As in the prior year, members of the Supervisory Board are:

- Dr. Claus Recktenwald (Chairman), attorney-at-law and partner with the partnership Schmitz Knoth Rechtsanwälte, Bonn
- Dr. Georg Gansen (Deputy Chairman), attorney-at-law/ corporate legal counsel of Deutsche Post AG, Bonn
- Dr Dr. Alexander von Bossel, LL.M (Edinb.), attorney-at-law and partner with CMS Hasche Sigle, partnership of attorneys and tax consultants, Cologne, resigned his position on August 7, 2013
- Marc M. Bamberger, management consultant in Wiesbaden, since August 7, 2013.

The chairman of the Supervisory Board, Dr. Claus Recktenwald, is also chairman of the Supervisory Board of SOLARPARC AG, member of the Supervisory Board of VEMAG Verlags- und Medien Aktiengesellschaft, Cologne, and member of the advisory boards of Grünenthal GmbH and Grünenthal GmbH & Co. KG, Aachen.

The deputy chairman of the Supervisory Board, Dr. Georg Gansen, is also deputy chairman of the Supervisory Board of SOLARPARC AG.

## 70. AUDITOR'S FEES

In 2013, total fees invoiced by the auditor of the consolidated financial statements, BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg/Bonn, including reimbursement of costs, amount to:

- a) Year-end audit € 633k (prior year € 860k)
  - b) Other certification services € 20k (prior year € 35k)
  - c) Tax consulting € 0k (prior year € 0k)
  - d) Miscellaneous services € 0k (prior year € 37k)
-

## 71. CORPORATE GOVERNANCE

On August 10, 2012, Supervisory Board and Management Board issued the statement required by § 161 AktG, stating that the recommendations of the “Regierungskommission Deutscher Corporate Governance Kodex” (Government Commission German Corporate Governance Code) as announced by the Federal Ministry of Justice were and are complied with. On March 18, 2013, Supervisory Board and Management Board temporarily limited this declaration of compliance with regard to the deviation from the scheduled disclosure of the consolidated financial statements within 90 days after the end of fiscal year. In line with the new version of the GCGC of May 13, 2013, a corresponding restricted compliance statement for the 2013 fiscal year was then issued on December 20, 2013. Both the declaration of compliance and the limitation are published on the SOLARWORLD AG website. @ [www.solarworld.de/declarationofcompliance//](http://www.solarworld.de/declarationofcompliance//)

Bonn, March 14, 2014  
SOLARWORLD AG  
The Management Board



**Dr.-Ing. E. h. Frank Asbeck**  
Chief Executive Officer



**Dipl.-Wirtschaftsing. Frank Henn**  
Chief Sales Officer



**Dipl.-Kfm. tech. Philipp Koecke**  
Chief Financial Officer



**Rain Colette Rückert-Hennen**  
Chief Information,  
Brand & Personnel Officer

# AUDITORS' REPORT

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We have audited the consolidated financial statements of SOLARWORLD Aktiengesellschaft, Bonn, – comprising the balance sheet, income statement, statement of comprehensive income, statement of changes in equity, statement of cash flows and the notes to the consolidated financial statements – as well as the group management report for the financial year from January 1, 2013 to December 31, 2013. The preparation of the consolidated financial statements and the group management report in accordance with IFRS, as to be applied in the EU, and the additional requirements of German commercial law pursuant to Section 315a, paragraph 1 of the German Commercial Code (*HGB = Handelsgesetzbuch*), and the supplementary provisions of the articles of incorporation is the responsibility of the legal representatives of the company. Our task is to express an opinion on the consolidated financial statements and the group management report on the basis of the audit carried out by us.

We conducted our audit of the consolidated financial statements in accordance with Section 317 HGB in compliance with the German principles of proper auditing adopted by the German Institute of Chartered Accountants (*IDW – Institut der Wirtschaftsprüfer*). These standards require that we plan and perform the audit in such a way that misstatements and infringements materially affecting the presentation of the net worth, financial position and results of operations in the consolidated financial statements and the group management report in accordance with generally accepted auditing standards are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The audit includes examining, largely on a random test basis, the effectiveness of the accounting-related internal control systems and evidence supporting the disclosures in the consolidated financial statements and the Group management report. The audit encompasses assessing the annual financial statements of the companies included in the consolidation, the definition of the scope of consolidation, the accounting and consolidation principles used and significant estimates made by the legal representatives as well as evaluating the overall presentation of the consolidated financial statements and the Group management report. We are of the opinion that our audit provides a sufficiently sound basis on which to make an assessment.

Our audit has not led to any objections.

In our opinion, based on the results of our audit, the consolidated financial statements comply with IFRS, as to be applied in the EU, and with the supplementary provisions of Section 315a (1) HGB and the supplementary provisions of the articles of incorporation, and convey a true and fair view of the group's net worth, financial position and results of operations in compliance with these provisions. The group management report is in line with the consolidated financial statements, provides an overall accurate picture of the group's situation and accurately reflects the opportunities and risks of future development.

Bonn, March 14, 2014

BDO AG  
Wirtschaftsprüfungsgesellschaft



**Lubitz**  
German Public Auditor



**Ahrend**  
German Public Auditor

# RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the group, and the group management report includes a fair review of the development and performance of the business and the position of the group, together with a description of the principal opportunities and risks associated with the expected development of the group.

Bonn, March 14, 2014

SOLARWORLD AG  
Board of Management



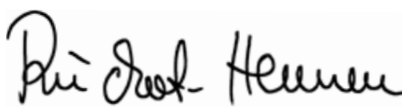
**Dr.-Ing. E. h. Frank Asbeck**  
Chief Executive Officer



**Dipl.-Wirtschaftsing. Frank Henn**  
Chief Sales Officer



**Dipl.-Kfm. tech. Philipp Koecke**  
Chief Financial Officer



**Rain Colette Rückert-Hennen**  
Chief Information,  
Brand & Personnel Officer

# #6: SERVICE



REAL VALUE – FOR OUR CUSTOMERS, THIS MEANS:  
**TOP QUALITY ON ONE PALLET –  
SAVES TIME AND MONEY**

# #6 SERVICE

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## GLOSSARY

- A** **ACTIVE PATENT** • A granted patent is considered to be active so long as the maximum patent duration of 20 years has not expired and the patent is not abandoned before then.  
**AIDED BRAND AWARENESS** • Value calculated from a survey when respondents recognize a particular brand name among several brand names  
**ASSET DEAL** • A form of business acquisition in which a company's assets – such as machinery or rights – are purchased individually and transferred to the buyer
- C** **CAPITAL INCREASE** • Increasing the equity capital of a stock corporation by issuing new shares  
**CAPITAL REDUCTION** • Reduction in the capital stock of a corporation  
**CAPITAL STOCK** • Total of the par value of all stocks issued by a company  
**CARBON DIOXIDE (CO<sub>2</sub>)** • Odorless, invisible gas consisting of carbon and oxygen. The increase of its concentration in the atmosphere is caused by the use of fossil energy sources and contributes to global warming.  
**CARBON DISCLOSURE PROJECT (CDP)** • Global cooperation between more than 722 institutional investors with investment capital of more than US\$ 87 trillion. The goal is to disclose → *greenhouse gas emissions* by companies and their respective strategies concerning action on climate change. The CDP is the world's largest freely available emissions inventory for corporate → *CO<sub>2</sub> emissions*. The eight German CDP Report was published in 2013. SOLARWORLD AG has been regularly participating in this project since 2006 and in 2011 was named Sector Leader in the renewable energies field.  
**CASH FLOW** • Cash surplus generated from ordinary business activities; an indicator of a company's self-financing strength  
**CASH FLOW STATEMENT** • Identification and reporting of income and expenditure generated or consumed by a company within a specific period of time from ongoing business, investment and financing activities  
**CELL** • → *Solar cell*  
**CLOSING** • Legal conclusion and coming into force of a contract  
**CLUSTER PROJECT** • Research questions that are closely related in terms of content and organizational structure are grouped together and worked on in cluster projects  
**CO<sub>2</sub> EMISSIONS** • → *Greenhouse gas emissions*
- CO<sub>2</sub>-EQUIVALENT (CO<sub>2</sub>eq)** • Contribution of a greenhouse gas to the greenhouse effect. The greenhouse gas potential of → *carbon dioxide (CO<sub>2</sub>)* is used as a comparative value to describe the global warming effect of different greenhouse gases uniformly over a certain period of time.  
**CORPORATE CULTURE** • The fundamental beliefs, values and attitudes shared by the members of a company concerning the purpose of the company. Corporate culture expresses, for example, the value notions that management holds and the way they deal with one another and with employees. (Source: German Federal Agency for Civic Education).  
**CORPORATE GOVERNANCE** • → *German Corporate Governance Code*  
**COST OF MATERIALS** • The cost of materials consists of the total of raw materials and supplies, goods for resale and services.  
**COVENANTS** • Agreements which, for example, require a borrower to achieve defined financial ratios
- D** **DEBT-TO-EQUITY SWAP** • A transaction in which a company's liabilities are converted into shares in the company  
**DECLARATION OF COMPLIANCE** • Declaration by the Management Board and the Supervisory Board pursuant to § 161 German Stock Corporation Act (AktG) stating the extent to which they follow the recommendations of the Government Commission on the → *German Corporate Governance Code*  
**DEFERRED TAXES** • Result from differences in tax burdens where taxable profit differs from earnings in the commercial-law financial statements due to tax rules  
**DEGRADATION** • Reduction in → *solar cell* efficiency over time  
**DEPRECIATION** • The annually increasing decline in the value of fixed assets and equipment is taken into account by systematically setting off the original cost against tax over the years of their use. Depreciation is treated as an expense for accounting purposes.  
**DESIGN TO COST** • A product development approach in which a cost-optimized solution is sought for individual components, and in which life cycle costs in particular are taken into account from the development phase onward  
**DIRECT MATERIAL** • Material that is incorporated directly into the product

**DIRECTORS' DEALINGS** • Securities transactions by managers or persons/companies close to them involving stocks in their own listed company

**DIVIDEND** • Portion of the earnings of a stock corporation distributed to the shareholders on an annual basis. The distribution of these earnings is resolved by the Annual General Meeting.

**E EARNINGS PER SHARE** • Group earnings divided by the weighted number of stocks

**EBIT** • Revenues after deduction of all operating costs. EBIT is usually used to evaluate a company's earnings position, particularly for international comparisons.

**EBIT MARGIN** • Shows what percentage of the operating profit before interest, tax and financial result the company has been able to generate per sales unit. Thus, it provides information on the company's earnings power.

**EBITDA** • Earnings Before Interest, Taxes, Depreciation (on property, plant and equipment) and Amortization (of intangible assets). This indicator facilitates international comparisons as it does not include national taxes.

**EINSTEIN AWARD** • Award presented by SOLARWORLD since 2005 to persons who have rendered outstanding services in the area of solar energy. In addition, young scientists have been awarded the SOLARWORLD Junior Einstein Award since 2006 for their scientific work in specialist areas relating to → *photovoltaics*.

**EEG** • Erneuerbare-Energien-Gesetz (→ *Renewable Energy Sources Act*)

**EMISSION INTENSITY** • Emissions per unit of value added.

**ENERGY PAYBACK TIME/CO<sub>2</sub> PAYBACK TIME** • The amount of time it takes the solar power system to produce as much energy as was used to manufacture it. Accordingly, the CO<sub>2</sub> payback time refers to the time it takes to compensate for the greenhouse gases that were emitted during manufacturing.

**EQUITY** • Balance sheet item consisting of the capital stock, reserves and accumulated results that are available to the company to be used for investments (for example).

**EQUITY RATIO** • Measures equity as a proportion of the total → *capital stock*. Used to assess the stability of a company

**EU PROSUN** • → *ProSun*

**F FEED-IN TARIFF** • The local utility is obliged to buy electricity from renewable sources and pay for it at a current

rate. In Germany, for example, this is regulated by the German → *Renewable Energy Sources Act* (Erneuerbare-Energien-Gesetz, EEG).

**G GERMAN CORPORATE GOVERNANCE CODE (GCGC)** • The code is designed to make transparent the rules applying to corporate management and supervision in Germany so as to promote the trust of international and national investors, of customers, employees and the public as stakeholders in the management of German companies. SOLARWORLD has complied with the code since 2002.

**GIGAWATT (GW)** • One gigawatt equals one billion (1,000,000,000) → *watts*

**GLOBAL COMPACT (GC)** • Also "United Nations Global Compact"; is concluded between companies and the UN with the objective of making globalization more ecologically and socially compatible

**GLOBAL REPORTING INITIATIVE (GRI)** • Global multi-stakeholder network of experts to define a global standard for the preparation of sustainability reports. The GRI reporting framework serves to ensure systematic presentation of the economic, ecological and social performance of companies in order to facilitate comparisons between companies and a transparent presentation of the development over time.

**GREENHOUSE GAS EMISSIONS** • Greenhouse gases interfere with the natural balance of the atmosphere, which may lead to climate change. The most important man-made greenhouse gases are → *carbon dioxide (CO<sub>2</sub>)* from the combustion of fossil energy sources (about 60 percent) and methane from agriculture and mass animal husbandry (about 20 percent).

**GRID PARITY** • Parity between the price of solar-produced power and domestic electricity prices. This is achieved when the purchase price of solar power is the same as normal domestic electricity from the wall socket.

**I IMPAIRMENT** • Adjustment item to cover the impairment of a fixed or current asset item carried under assets in the balance sheet, for example accounts receivable

**INCOME STATEMENT** • Period-related comparison of the incomes and expenditures of a company

**INDIRECT MATERIAL** • Material or also services that are not required for directly manufacturing a product

**INTANGIBLE ASSETS** • Include concessions, commercial property rights, licenses, corporate goodwill and patents

**INTERNATIONAL ACCOUNTING STANDARDS (IAS)** • Collection of standards and interpretations in which the rules of external reporting for capital-market-oriented companies are listed

**INTERNATIONAL ACCOUNTING STANDARDS BOARD (IASB)** • Internationally staffed independent body of accounting experts that develops the → *International Financial Reporting Standards (IFRS)* and revises them as and when required

**INTERNATIONAL FINANCIAL REPORTING INTERPRETATIONS COMMITTEE (IFRIC)** • Discusses current accounting issues that are differently or incorrectly treated because of insufficient guidance concerning the IAS and IFRS standards. Furthermore, it deals with new sets of conditions that have not yet been covered by IAS/IFRS.

**INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)** • Collection of internationally applicable standards and their official interpretations that lists the rules guiding the external reporting of capital-market-oriented companies

**INVERTER** • Converts the direct current generated by → *solar modules* into the alternating current required by the grid. It also monitors the grid connection.

**ISO 9001** • International standard on → *quality management* that determines the generally accepted requirements to be met by a quality management system

**ISO 14001** • International environmental management standard that lays down requirements to be met by an environmental management system

**J** **JOINT VENTURE** • Economic cooperation between companies aimed at taking better advantage of each party's know-how and resources

**K** **KILOWATT (KW)** • One kilowatt equals 1,000 → *watts*

**L** **LARGE SCALE PLANT** • Large solar power system, mostly ground-mounted installations. Primarily, these are plants with a rated output of more than 100 kW.

**LINEAR PERFORMANCE GUARANTEE** • Warranty under which the guaranteed performance declines by a certain percentage per year and is not reduced step by step

**M** **MARGIN** • Difference or market margin between producer (production) price and sales (consumer) price of a tradable product. The margin allows the overhead costs included in production and distribution to be covered.

**MARKET CAPITALIZATION** • Measurement referring to the number of stocks times the stock price

**MEGAWATT (MW)** • Equals one million (1,000,000) → *watts*

**MODULE** • → *Solar module*

**MONOCRYSTALLINE** • Conditions prevailing during crystallization result in the solidification of the → *solar-grade silicon* in a single large and homogeneous cylindrical crystal. Cf. → *polycrystalline*

**N** **NO<sub>x</sub>** • Nitrogen oxide

**O** **OECD (ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT)** • Established in 1961, currently an alliance of 34 governments having the objective of identifying "best practice" concerning sustainable economic development, high employment, raising living standards and financial stability, and drawing up appropriate guidelines. A further aim is to contribute to the growth of world trade.

**OFF-GRID** • Solar power systems not directly connected to the power grid. The power generated is consumed directly or stored locally (so-called stand-alone system).

**ÖKODAX** • Represents the performance of the ten most liquid German companies in the renewable energy sector and, along with the DAX and TecDAX, belongs to the → *Prime Standard*. The SOLARWORLD stock has been listed in the index since its launch in 2007.

**ON-GRID** • Solar power systems connected to the regional power grid. The operator of the system can feed electricity into the grid when electricity production is high (strong solar radiation), and can also take electricity from the grid if necessary.

**P** **PERC** • Passivated Emitter and Rear Contacts. Passivating the emitter and rear of the solar cell reduces optical and electrical losses. PERC technology therefore helps to increase the efficiency of the → *solar cell*. In conventional solar cells, the back of the cell is screen-printed with an aluminum coating, which acts as a contact. But in PERC cells, the rear is given a dielectric coating (usually SiO<sub>2</sub>). The contacts for carrying electricity are formed individually.

**PHOTOVOLTAICS** • Describes the direct conversion of solar radiation into electrical energy

**POLYCRYSTALLINE** • The conditions prevailing during crystallization cause the → *solar-grade silicon* to solidify into a silicon block consisting of several small crystals which overall does not show a completely homogeneous arrangement of atoms. Cf. → *monocrystalline*

**POSITIVE GOING CONCERN PROGNOSIS** • Substantiated assessment that the company is able to sustainably continue its business activities while meeting its payment obligations

**PRICE EARNINGS-RATIO (P/E)** • Indicates the multiple of the earnings per stock at which the stock is currently valued on the stock exchange

**PRIMARY SOURCES OF ENERGY** • Naturally occurring energy sources such as the sun, wind, water, coal, crude oil, natural gas, and nuclear fuels, which have to be converted (e.g. in power plants) to generate usable energy for end consumers

**PRIME STANDARD** • Legally regulated listing segment of the Frankfurt Stock Exchange for companies meeting particularly stringent international transparency standards. Prerequisite for admission to DAX, MDAX, TecDAX or SDAX

**PROSUN** • EU ProSun is a joint initiative of companies in the European solar industry. The mission of EU ProSun is to promote the development of solar energy as a sustainable energy source. SOLARWORLD is one of the backers of EU ProSun.

**PROVISIONS** • Balance sheet items in which amounts are accrued for uncertain future liabilities that can, however, already be estimated at the present time (e.g. pension payments, taxes)

**Q QUALITY MANAGEMENT (QM)** • Application of measures serving to improve products, processes or services of any kind. QM is considered part of functional management, aiming to enhance the efficiency of a transaction or workflow.

**R REDUCED WORKING HOURS** • “Kurzarbeit” in German. Employment policy instrument in which a company temporarily reduces regular working hours during slack periods. Reduced working hours are used to avoid redundancies and relieve the burden on employers. Subject to certain conditions, employees in Germany are able to claim a benefit in lieu of income under the terms of their unemployment insurance.

**RENEWABLE ENERGYSOURCESACT** • Law promoting renewable energies in Germany (Erneuerbare-Energien-Gesetz, EEG). It regulates the preferred purchase, transmission and compensation of electricity from renewable sources. → *Feed-in tariffs* are fixed for twenty years.

**RISK MANAGEMENT** • Procedure for the identification, measurement and avoidance/reduction of risks or the implementation of corresponding measures

**SELF-CONSUMPTION** • Self-generated power can be consumed directly, the rest can be fed into the public grid. In both cases, the → *feed-in tariff* for solar power is guaranteed by the German state for 20 years through the → *Renewable Energy Sources Act*. The more power is used

straight from the roof, the higher the return on investment from a solar array will be. The self-consumed rate can be boosted to more than 60 percent with intelligent products for consumption control. People who produce their own power are more independent of increasing electricity prices. At the same time, the strain on the grid is reduced since solar power generation and consumption occur together in the same building.

**S SILICON** • Solar-grade silicon

**SO<sub>x</sub>** • Sulfur oxide

**SOLAR CELL** • Solar cells interconnected in a → *solar module* allow sunlight to be turned into electricity via the photovoltaic effect. The cell consists of two layers that are deliberately contaminated (doped). At the interface of the two layers, an electric field is formed. When a light beam hits an electron in the upper layer, it can move freely and migrates to the outside. This creates a voltage that can be tapped via external contacts.

**SOLAR MODULE** • Consists of interconnected → *solar cells*, which are sealed with silicone behind glass in an aluminium frame to make the module weather-resistant

**SOLAR POWER SYSTEM/SOLAR POWER PLANT** • Complete system of → *solar modules* generating direct current through the photovoltaic effect; an → *inverter* converts the power into alternating current before it is fed into the grid.

**SOLAR-GRADE SILICON** • Silicon crystals with a high degree of purity sufficient for solar applications. The chemical element silicon is a semiconductor that forms crystals with a stable diamond structure. After oxygen, silicon is the second most common element in the Earth's crust. For use in the solar industry, the raw silicon has to be purified into solar-grade silicon and is cast into blocks for cutting into wafers.

**SOLAR2WORLD** • Under the SOLAR2WORLD, SOLARWORLD supports aid projects in developing countries with off-grid solar power solutions that promote sustainable economic development.

**SQUEEZE-OUT** • Exclusion of minority shareholders from a stock corporation by the majority shareholder in return for payment of a cash settlement

**STAKEHOLDER** • Groups or individuals who may influence the goals achieved by a company or who are affected by these goals. The key stakeholder groups include employees, shareholders, investors, suppliers, customers, consumers, authorities and non-governmental organizations.

**STANDARD TEST CONDITIONS (STC)** • Conditions under which the current and voltage indicators of a → *solar cell* and/or a → *solar module* are measured (1,000W/m<sup>2</sup>, 25°C cell temperature, solar spectrum AM 1.5)

**SUPPLY CHAIN MANAGEMENT (SCM)** • Involves planning and managing all tasks across the entire value-creation process, from supplier selection and procurement to logistics

**SUSTAINABILITY** • 1. Characteristic of a system that continues to exist in the long term; 2. Scientific concept concerning the objective limits to environmental exploitation; 3. A concept in ethical standards at the core of which is the issue of justice and balance

**SUSTAINABILITY MANAGEMENT** • Control of ecological, social and economic effects in order to achieve sustainable corporate and business development and ensure a positive contribution is made by the company to the sustainable development of society at large. To demonstrate this, many large companies in all industries now publish an annual sustainability report. Solar World's environmental and social reporting has followed the guidelines of the → *Global Reporting Initiative (GRI)* since 2007.

**T TAKE-OR-PAY OBLIGATION** • Contractual "payment guarantee" agreed between producers or seller and buyer which requires the buyer to pay a fixed amount regardless of whether the products are manufactured or sold. Consequently, if the agreed minimum quantity is not purchased, the payment for the unpurchased quantity is still due.

**V VALUE CHAIN** • Term used to designate the value added of a product at every stage of its production processes. The stages of Solar World's value chain range from → *solar-grade silicon* to → *solar modules*.

**W WAFER** • Thin discs made of → *solar-grade silicon*, used to produce solar cells. They can be either → *monocrystalline* or → *polycrystalline*.

**WATT** • International measuring unit for power output, named after James Watt, standard sign "W"

**WATT-PEAK** • Unit of measurement commonly used in → *photovoltaics* to specify the electrical power output of → *solar cells* or → *solar modules* under → *standard test conditions*

**WORKING CAPITAL** • Current assets minus current liabilities, i. e. the portion of current assets financed with long-term sources. It provides information about the company's financial stability and flexibility.

# LIST OF ACRONYMS AND ABBREVIATIONS

- (A)** AG ..... *German Stock Corporation*  
AKTG ..... *German Stock Corporation Act*
- (B)** BAFIN ..... *German Federal Financial Supervisory Authority*  
BGB ..... *German Civil Code*  
BIP ..... *Gross Domestic Product*
- (C)** CDP ..... *Carbon Disclosure Project*  
CEO ..... *Chief Executive Officer*  
CFO ..... *Chief Financial Officer*  
CIBPO ..... *Chief Information, Brand and Personnel Officer*  
CO<sub>2eq</sub> ..... *CO<sub>2</sub>-equivalent*  
COO ..... *Chief Operating Officer*  
CSO ..... *Chief Sales Officer*
- (D)** D&O ..... *Directors and Officers*
- (E)** EBIT ..... *Earnings Before Interest and Taxes*  
EBITDA ..... *Earnings Before Interest, Taxes, Depreciation and Amortization*  
EEG ..... *German Renewable Energy Sources Act*  
EIA ..... *Energy Information Administration*  
ESG ..... *Environmental, Social, Governance*
- (G)** GCGC ..... *German Corporate Governance Code*  
GMBH ..... *Company with limited liability*  
GRI ..... *Global Reporting Initiative*  
GW ..... *Gigawatt*
- (H)** HGB ..... *German Commercial Code*
- (I)** IFRS ..... *International Financial Reporting Standards*  
IFW ..... *Institute for the World Economy in Kiel, Germany*  
INC. .... *Incorporated*  
ISIN ..... *International securities identification number*  
ISO ..... *International Organization for Standardization*  
IT ..... *Information Technology*
- (K)** KW ..... *Kilowatt*  
KWH ..... *Kilowatt per hour*
- (L)** LLC ..... *Limited Liability Company*  
LP ..... *Limited Partnership*  
LTD. .... *Limited Company*
- (M)** MW ..... *Megawatt*
- (O)** OHSAS ..... *Occupational Health and Safety Assessment Series*
- (P)** PV ..... *Photovoltaic*
- (R)** R&D ..... *Research and Development*  
ROCE ..... *Return on capital employed*
- (T)** TPM ..... *Total Productive Management*  
TUBAF ..... *Freiberg University of Mining and Technology*
- (V)** VORSTAG ..... *German Act on the Appropriateness of Management Board Remuneration*
- (W)** WKN ..... *German Securities Code Number*  
WPHG ..... *German Securities Trading Act*



**FINANCIAL AND EVENT CALENDAR 2014**

	<b><u>MARCH 27, 2014</u></b>	<b>Publication of Annual Group Report 2013</b> <i>www.solarworld.de/financial-reports</i> Press Conference on Financial Statements Analyst Conference on Financial Statements
	<b><u>MARCH 28, 2014</u></b>	<b>International Analyst Conference Call</b>
•	<b>MARCH 30 – APRIL 04, 2014</b>	Light & Building, Frankfurt (Germany) <i>www.light-building.messefrankfurt.com</i>
•	<b>APRIL 16 – 17, 2014</b>	SolarSolution, Haarlemmermeer (The Netherlands) <i>www.solarsolutions.nl/en</i>
•	<b>MAY 03 – 11, 2014</b>	Grand Designs Live, London (United Kingdom) <i>www.granddesignslive.com</i>
•	<b>MAY 10 – 11, 2014</b>	4. Fahrzeugshow Elektromobilität, Bad Neustadt a.d. Saale (Germany) <i>www.m-e-nes.de/de/4-fahrzeugschau.html</i>
	<b><u>MAY 14, 2014</u></b>	<b>Publication of Consolidated Interim Report 1st quarter 2014</b> <i>www.solarworld.de/financial-reports</i>
	<b><u>MAY 30, 2014</u></b>	<b>Annual General Meeting, Bonn (Germany)</b>
•	<b>JUNE 04 – 06, 2014</b>	Intersolar Europe, Munich (Germany) <i>www.intersolar.de</i>
•	<b>JULY 08 – 10, 2014</b>	Intersolar North America, San Francisco (U.S.) <i>www.intersolar.us</i>
•	<b>JULY 22 – 24, 2014</b>	Feria Internacional de Tecnologias (IFT) Energy 2014, Antofagasta (Chile) <i>www.ift-energy.cl/ingles.php</i>
•	<b>JULY 30 – AUGUST 01, 2014</b>	PVJapan, Tokio (Japan) <i>www.jpea.gr.jp/pvj2014/english/index.html</i>
	<b><u>AUGUST 14, 2014</u></b>	<b>Publication of Consolidated Interim Report 1st half 2014</b> <i>www.solarworld.de/finanzberichte</i>
•	<b>OCTOBER 07 – 09, 2014</b>	Solar Power International 2014, Las Vegas (U.S.) <i>www.solarpowerinternational.com</i>
•	<b>OCTOBER 15 – 16, 2014</b>	All Energy Exhibition, Melbourne (Australia) <i>www.all-energy.com.au</i>
	<b><u>NOVEMBER 13, 2014</u></b>	<b>Publication of Consolidated Interim Report 3rd quarter 2014</b> <i>www.solarworld.de/financial-reports</i>



THE ANNUAL GROUP REPORT IS ALSO AVAILABLE  
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HOMEPAGE AT  
[WWW.SOLARWORLD.DE/FINANCIAL-REPORTS](http://WWW.SOLARWORLD.DE/FINANCIAL-REPORTS).



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# SUSTAINABILITY IN DETAIL 2013

FROM THE ANNUAL GROUP REPORT 2013  
OF THE SOLARWORLD AG



# SUSTAINABILITY IN DETAIL 2013

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Our reporting on sustainable corporate management is integrated into the SOLARWORLD annual group report 2013. The present “Sustainability in Detail” embrace the extensive disclosure along:

- The framework of the Global Reporting Initiative (GRI), Version G4, In Accordance – Comprehensive
  - The Key Performance Indicators of the European Federation of Financial Analysts Societies (EFFAS) Commission on Environmental, Society and Government (ESG) and the German Society Investment Professionals (DVFA) Commission on Non-Financials (CNF) as well as
  - The provisions of the United Nations Global Compact (GC).
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S002

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### FOR YOUR GUIDANCE

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➔ *Cross reference to the annual group report 2013 • p. 000//*

⌚ *Cross reference to charts in Sustainability in Detail • p. S000//*

@ *www.internetlink.com//*

**Abbreviations:** ep = estimated & preliminary, cp = calculated & preliminary, mp = measured & preliminary,  
ef = estimated & final, cf = calculated & final, mf = measured & final



# SUSTAINABILITY IN DETAIL

## COMPANY PROFILE AND REPORT CONTENTS

### SOLARWORLD COMMITS ITSELF TO SUSTAINABILITY

SOLARWORLD is a “Changemaker” and measures success according to ambitious sustainability objectives. We have been a member of the Changemaker initiative of the Utopia Foundation since February 2014. Utopia’s goal is that millions of consumers change their consumption behavior. That’s why Utopia works together with companies pushing for economic change towards sustainability. The SOLARWORLD Changemaker Manifest is a voluntary commitment to sustainable corporate management and at the same time, SOLARWORLD’s groupwide sustainability strategy. Because SOLARWORLD stands for real values, we want to be measured according to ten ambitious commitments geared toward action, all of which are supported by concrete, verifiable targets and measures. The Changemaker Manifest was signed by the entire Management Board of SOLARWORLD and is thus, in addition to the SOLARWORLD Vision, a personal commitment underlining the significance of sustainable activities for the SOLARWORLD group. This voluntary commitment supplements our award as Green Brand 2012/2013 and excellently fits in our current corporate transition as part of the restructuring process, which is also referred to internally as “Change”. We are making the Changemaker Manifest available on the website of Utopia @ [utopia.de](http://utopia.de)// as well as on our homepage @ [www.solarworld.de/sustainability](http://www.solarworld.de/sustainability)//.



We have been reporting within the framework of the Global Reporting Initiative (GRI) since our 2007 Annual Group Report. This makes the present report the seventh in a row. In the past, we reached the application level A+. In the course of the introduction of the G4 guidelines by the GRI, these application levels have been eliminated. This year, it is now possible for the first time to apply this new standard. Two alternatives are available to reporting companies, both of which are in accordance with the GRI framework: the “Core” variant and the “Comprehensive” variant. SOLARWORLD continues to report comprehensively and has an audit performed by the BDO AG Wirtschaftsprüfungsgesellschaft. This variant maintains the high standard of the application level A+.

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## S004

The report spells out the role of the SOLARWORLD group in society and effects on the economy, environment and people. One of the central innovations in the G4 guidelines is the focus on essential concerns. This requires a more comprehensive and far-reaching materiality analysis. The process of determining the report's contents must take the four basic principles of the GRI into account: materiality, engagement of stakeholders, sustainability context and completeness.

## KEY IMPACTS, RISKS AND OPPORTUNITIES

/ G4-2 / The SOLARWORLD group makes a direct contribution to the sustainable development of society with its products, because solar energy plays a key part in the energy mix of a forward-looking society. Our focus here is on customer and product responsibility. But because our business activity of course also involves resource consumption and emissions, we pay very close attention to making sure our environmental impact is kept in check. That's why we have performed life cycle analyses of our products since 2009. Through increased efficiency, we were able to make progress in many areas, for example, in the energy payback time and the compensation of CO<sub>2eq</sub> emissions of the polycrystalline modules from Freiberg. We strive not only to be an attractive employer and a reliable business partner, but at the same time to also maintain our active commitment to the sustainable development of society. We always seek open stakeholder dialog and comply with legal requirements and international standards. Overall, SOLARWORLD has not been involved in any significant violations. Our performance can be judged based on the historical development of performance indicators of the Global Reporting Initiative and the EFFAS/DVFA, as well as the accompanying commentary. There, we also mention the most important processes for each performance improvement. However, there is not yet enough comparable data from our competitors for a benchmarking, and non-industry benchmarking is not very expedient. Since this is very unlikely to change in the short term, we will attempt to find suitable non-industry companies for comparison in the future. The prioritization of the challenges and opportunities is the result of the evaluation within the company and by our stakeholders. ☉ G4-19 • p. S006 //

For the time being, the increasing scarcity of fossil fuels and continuing climate change are creating more opportunities than risks, in particular for solar energy because it offers solutions to these challenges. We want to achieve long-term competitive advantages by positioning ourselves as a company that acts responsibly. At present, the SOLARWORLD group faces the challenge of asserting itself in a market with enormous price pressure against providers from low-wage countries, whereby the share of customers in the solar market with a clear sustainability orientation is still relatively small. Additional risks arise primarily from the effects of production on the environment, health and safety. However, these risks can be considered minor compared with other industries. Further risks across all sustainability dimensions will increasingly arise from the value chain. Detailed information on the most important opportunities and risks, with a special focus on the financial performance of the organization, will be set out in the Management Report. ☉ Group management report forecast • p. 086 //

☉ G4-EC2 • p. S047 //

## DETERMINING REPORT CONTENTS

/ 64-18 / This year, the evaluation of sustainability issues was revised as part of the first-time application of the new standard G4 of the Global Reporting Initiative. On the basis of the materiality analysis, Sustainability Management produces the draft report, which is examined by the Management Board. The Management Board may request amendments and gives final approval to the report.

First, we determined the aspects and additional relevant topics which should be taken into account. We used various sources for this: the aspects of the Global Reporting Initiative, the principles of the UN Global Compact, the key performance indicators of the EFFAS/DVFA, as well as the topics raised by stakeholders throughout the year. Additionally, an assessment was made as to where effects related to individual topics primarily occur: inside or outside of the company.

To determine the most important aspects and topics, we evaluate the topics from the company perspective (by surveying the Management Board) as well as from the perspective of individual stakeholder groups ☉ *G4-24 to G4-27 • p. S034* //. Evaluations for each stakeholder group are based on our corporate knowledge that we accrue through continuous contact with our stakeholders as part of our corporate activity. The evaluation is composed (at a ratio of 1:2) of the estimate of Sustainability Management and the estimate of the contact persons in the company who stand in particularly close contact with specific stakeholder groups (e.g. Purchasing with suppliers). Furthermore, we also surveyed members of our Sustainability expert panel. The results were summarized in clusters and assigned to the various aspects and topics. The survey results from the previous year were included in the evaluation. Finally, we gave stakeholders who are unable to express their needs a voice (here represented by the terms “future generations & the environment”) by including them as a separate stakeholder group, and then assuming the highest number of points across all topics.

For the company perspective, we calculated the valuation based on the likelihood (0-100%) and the expected magnitude of impact (on a scale from 1-10). The evaluation from the perspective of individual stakeholder groups was made on a scale of 1-10, whereby during aggregation, the valuation of each main stakeholder was weighted by a factor of 1.2 and those of the remaining stakeholders with a weight of 0.8. Main stakeholders are those for which we are directly responsible (employees, customers, suppliers, shareholders/investors, banks/creditors, as well as “future generations & the environment”). In cases where a particular urgency (value > 7.5) existed for the remaining stakeholders for a specific topic, the overall evaluation was marked with a “+” to indicate that a particular interest was present, which should also be reflected in the report. The analysis resulted in a “+” for each of the topics listed, meaning that for each topic there are stakeholders with a high interest and especially high informational needs.

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S006

/ 64-48 / Finally, the analysis was discussed with the Management Board and then approved. The result of the analysis is a list of 22 material aspects and topics (value > 7.5 from the company or stakeholder perspective).

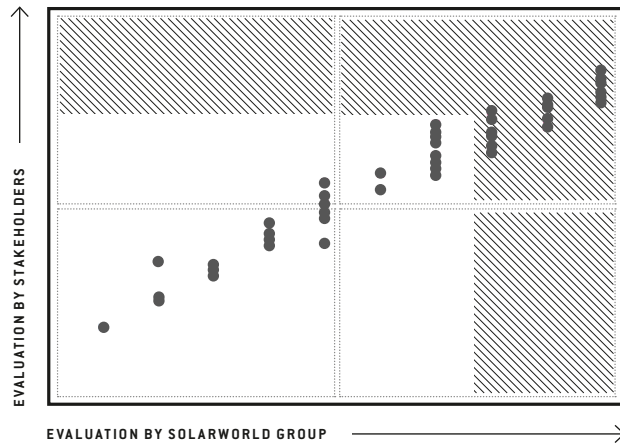
/ 64-19 + 20 + 21 / MATERIAL ASPECTS AND TOPICS

	Classification of the aspect within the organization	Classification of the aspect outside of the organization
Economic performance	material within the entire organization	Globally material for: all stakeholder groups excluding NGOs and associations/industrial trading groups
Market presence	material within the entire organization, in particular in Sales	Globally material for: employees, customers, competitors, analysts/brokers and “future generations & the environment”
Procurement practices	material within the entire organization, in particular in Purchasing	Globally material for: suppliers, shareholders/investors, banks/creditors, analysts/brokers, Expert Panel 2012 and “future generations & the environment”
Material input	material within the entire organization, in particular in Production and in Purchasing	Globally material for: suppliers, NGOs, Expert Panel 2012 and “future generations & the environment”
Energy	material within the entire organization, in particular in Production	Globally material for: Expert Panel 2012 and “future generations & the environment”
Water	material within the entire organization, in particular in Production	Globally material for: Expert Panel 2012 and “future generations & the environment”
Complaint actions regarding ecological aspects	material within the entire organization, in particular in Production and in Sales	Globally material for: NGOs and “future generations & the environment”
Employment	material within the entire organization	Globally material for: employees, local population, NGOs, governments/authorities, press, employees’ representatives or associations, interested public, Expert Panel 2012 and “future generations & the environment”
Occupational health and safety	material within the entire organization, in particular in Production	Globally material for: employees, employees’ representatives or associations, Expert Panel 2012 and “future generations & the environment”
Child labor	Particularly material in Purchasing	Globally material for: suppliers, NGOs, interested public, Expert Panel 2012 and “future generations & the environment”
Forced labor	Particularly material in Purchasing	Globally material for: suppliers, NGOs, interested public, Expert Panel 2012 and “future generations & the environment”
Complaint actions regarding human rights	Particularly material in Purchasing	Globally material for: NGOs, “future generations & the environment”
Local communities	material within the entire organization, in particular in Production and in Sales	Globally material for: local population, NGOs, governments/authorities, press and “future generations & the environment”

	Classification of the aspect within the organization	Classification of the aspect outside of the organization
Anti-corruption efforts	material within the entire organization, in particular in compliance risk areas	Globally material for: suppliers, NGOs, interested public and “future generations & the environment”
Politics	material within the entire organization, in particular in Public Relations (PR)	Globally material for: suppliers, NGOs and “future generations & the environment”
Complaint actions regarding social impact	material within the entire organization	Globally material for: NGOs, “future generations & the environment”
Customer health and safety	material within the entire organization	Globally material for: employees, customers, governments/authorities, employees’ representatives or associations, interested public and “future generations & the environment”
Labeling of products and services	material within the entire organization, in particular in Sales	Globally material for: employees, customers, employees’ representatives or associations, interested public and “future generations & the environment”
Compliance regarding product and customer responsibility	material within the entire organization	Globally material for: employees, customers, NGOs, employees’ representatives or associations, Expert Panel 2012 and “future generations & the environment”
Precautionary principle	material within the entire organization	Globally material for: NGOs, press and “future generations & the environment”
Development and dissemination of environmentally friendly technologies	material within the entire organization	Globally material for: employees, customers, local population, NGOs, employees’ representatives or associations, interested public, Expert Panel 2012 and “future generations & the environment”
Expenditures for research and development	material within the entire organization, in particular in Innovation	Globally material for: employees, competitors and “future generations & the environment”
Share of new customers	material within the entire organization, in particular in Sales	Globally material for: employees and “future generations & the environment”
Production downtime due to material shortages	material within the entire organization, in particular in Production, Purchasing and Sales	Globally material for: employees, suppliers and “future generations & the environment”

All results from the analysis are presented at the end of the report.  Appendix: Materiality analysis – Assessment of all aspects and topics • p. S127//

## 01 MATERIALITY MATRIX: ARRAY OF ASPECTS AND TOPICS



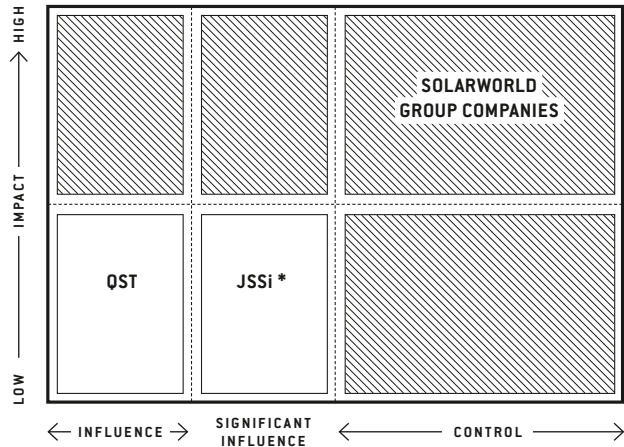
## REPORTING SCOPE AND BOUNDARY

/ 64-17 / As a general rule, the reporting scope and boundary includes all the organizational units that we control and significantly influence, i.e. all SOLARWORLD group companies. ➔ SOLARWORLD group structure as of December 31, 2013 • p. 156 // Upstream and downstream stages of the value chain outside the SOLARWORLD group are included only to a limited degree, due to lack of control and influence. The strategic information in this report furthermore relates to Joint Solar Silicon (JSSi) Verwaltungs-GmbH, which was sold in the middle of 2013 and the joint venture QATAR SOLAR TECHNOLOGIES Q.S.C. (QST).

In terms of performance indicators, subsidiaries and leased facilities are generally included. Joint ventures are only included if we exert operational control and significant strategic influence with regard to a specific indicator, which is not currently the case with our joint ventures. According to the Global Reporting Initiative, SOLARWORLD exerts control if SOLARWORLD governs the financial and operating policies of an enterprise so as to obtain benefits from its activities. Significant influence, for the Global Reporting Initiative, is when SOLARWORLD has the power to participate in the financial and operating policy decisions of the entity but does not exert control over those policies.

Outsourced operations (such as logistics services) are not included, unless it is a performance indicator with a special affect on the value chain. Any departures from these reporting boundaries are indicated for each indicator of the Global Reporting Initiative. The results are representative of the SOLARWORLD group or are interpreted in that sense. Further details are highlighted per indicator.

02 REPORTING BOUNDARY



\* sold as of middle 2013

As a general rule, data is collected through the SOLARWORLD group software systems (Navision, Targit) and each department compiles their own data. Most of the ecological and social data is collected through a Sharepoint-Solution. Individual pieces of information are collected through interviews and e-mail contacts. The calculation basis and estimations are each described in the profile entires and indicators.

/ 64-22 + 23 / With this year's report, we are utilizing the standard G4 of the Global Reporting Initiative for the first time. The fundamental format of the previous year has been adjusted. At the same time, the comparability with previous years is ensured through high continuity of the key data collected. Where the data of previous years could be improved, the information has been updated. There were no significant changes compared to the previous year. The explanations to the indicators outline minor adjustments.

The error margin (i.e. potential inaccuracies in estimates or measurements) in our quantitative data is so small that it does not impair decision-making by stakeholders. The quantitative statistical error tolerance cannot be calculated yet. Historical data are updated if more accurate values become available. In the case of profound errors the corrected is commented accordingly. More detailed information on the methods is provided for each of the estimates outlined below.

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## S010

## MANAGEMENT APPROACH

/ G4-DMA / In general, our management approach is directed at avoiding, combating, or eliminating negative impacts while promoting positive effects. Complete risk avoidance is impossible, making it necessary to distinguish between the following levels. First, it is necessary that SOLARWORLD uphold statutes and laws. In questions of compliance, the primary concern is preventing and avoiding harm, whereby it should also be considered that it is possible to differentiate the company from competitors through good compliance. The next level concerns economic performance, since this is the precondition for every activity of the company. Being economically successful is a basic requirement for sustainable development because when we generate a surplus, we have the freedom to take action and change things. The classic risk management approach applies: Risks are – in this order, and at acceptable cost – avoided, reduced, insured and deliberately taken. Especially for SOLARWORLD as a so-called “green” company, sustainability issues offer a chance for the company to differentiate itself from competitors and, in accordance with the precautionary principle, commit early to the most sustainable solutions. But at the moment, the company is facing a very difficult test: Market cost pressure is immense, and the so-called LOHAS customers (LOHAS = Lifestyles of Health and Sustainability) that demand sustainability from companies are few and far between. To ensure the survival of the company, the current focus must therefore lie on cost savings. This means that sustainability measures will be favored which harmonize with this. At present, trade-offs must be decided in favor of the cost side. Meanwhile, we therefore hope that in terms of sustainability the solar market decouples itself from the fierce price competition.

**ECONOMIC PERFORMANCE / MARKET PRESENCE / EXPENDITURES FOR RESEARCH AND DEVELOPMENT**

By definition, economic performance is very important to a company. Stakeholders are particularly affected when they are directly dependent on the profitability of the company. In particular, market presence is an important criterion for customers. In addition to the German and American market, we now have highly-developed sales structures in the UK, France, Italy, Belgium and Japan. Through our business activities, we contribute in different ways to the development of the wider economy, for example by paying taxes, sustaining as many jobs as possible even in difficult times, promoting a sustainable, forward-looking energy supply, and also fulfilling our corporate responsibility in various contexts. To achieve economic performance, in particular in competition with manufacturers from low-wage countries, we must continually introduce innovative products and services to the very dynamic solar market. Expenditures for research and development therefore represent a key figure. However, this is not sufficient to judge the quality of research and development. This is why we provide additional information in our innovation report. ➔ [Innovation report](#) • p. 058//

In addition, SOLARWORLD encourages innovation in the solar sector. We recognize people who have rendered outstanding service to the global use of solar energy through our annual SOLARWORLD Einstein Award, which has been held since 2005. The 2012 award was given to Molly and George Greene from the American aid organization Water Missions International (WMI) and to Günther Cramer, founder of the inverter manufacturer SMA. The aid organization WMI from Charleston, South Carolina employs 150 people and has carried out over 600 water projects in 49 countries to date. The idea came to Molly and her husband George when they traveled to Honduras in 1998 to help the victims of Hurricane Mitch. WMI has used solar power almost exclusively to operate their water pumps for years. Günther Cramer and three others founded SMA 30 years ago in Kassel, Germany. Today the company has a worldwide presence and employs over 5,000 people. The award recipient in 2013 was Prof. Dr. Eicke R. Weber, head of the Fraunhofer Institute for Solar Energy Systems (ISE). As a materials researcher, Eicke Weber, born 1949, was primarily concerned with defects in silicon and other semiconductors. The Fraunhofer Institute is the most important research center for solar technology in Europe.

Every year since 2006, we have distinguished an up and coming scientist with the SOLARWORLD Einstein Junior Award. In 2012, the prize went to the physicist Dr. Bianca Lim from the Institute for Solar Energy Research in Hameln. In her dissertation she analyzed the Boron-Oxygen bond which lowers the efficiency of solar cells. She was able to explain the phenomenon and develop a practical procedure to reduce the effect of the bond on cell efficiency. The SOLARWORLD Junior Einstein Award was presented twice in 2013. One of the award winners, Pierre Saint-Cast, is also employed at the Fraunhofer Institute for Solar Energy Systems (ISE). According to the jury, in his dissertation, the young Frenchman “developed a solar cell rear side passivation method using aluminum oxide suitable for use in industry with which cell efficiency can be improved”. In his Master’s thesis, “Dimensioning and Grid Integration of PV Storage Systems”, Johannes Weniger outlined how photovoltaic and battery systems can be efficiently combined and integrated into the existing energy system. From his comprehensive simulation calculations he derived recommendations for the ideal planning of a solar power system and the accompanying storage system for the most efficient operation possible. Taking into account the growing number of solar power systems feeding into the grid, he recommends limiting feed-in in order to maximize the PV capacity that can be installed in a grid area.

At the highest level, Management Board members are responsible for the performance of SOLARWORLD, followed by Presidents and Vice Presidents, Directors, department heads and divisional managers, and all other executives and employees. The Management Report provides extensive information about the management approach to these two aspects, the positioning of SOLARWORLD, significant changes, and about the goals and the achievement of goals. Our vision is the basis for everything we do. ➔ General information about the group • p. 025 // Business model • p. 025 // Strategy and action • p. 028 // Group structure and segments • p. 025 // Corporate management and control • p. 033 // Business report 2013 • p. 037 // Brand and marketing • p. 051 // Innovation report • p. 058 // Employees • p. 066 // Income position • p. 071 // Financial position • p. 075 // Asset structure analysis • p. 078 // Forecast report • p. 110 // Future development in production • p. 114 // Future research and development

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S012

*activites 2014 • p. 115// Corporate governance • p. 122//* The Management Board has put forth a medium-term plan (three years), which has been validated by PricewaterhouseCoopers (PwC). Comprehensive information on the necessary steps for restructuring the group is presented throughout the entire Management Report, in particular in the Section “Strategy and action”. ➞ *Strategy and action • p. 028//*

#### **PROCUREMENT PRACTICES / PRODUCTION DOWNTIME DUE TO MATERIAL SHORTAGES / CHILD LABOR / FORCED LABOR**

The procurement practices of the group are important because they have a large leveraging effect on the cost structure, the quality of products and services, and the sustainability of the entire value chain across all dimensions.

Purchasing is a global, strategic area in the SOLARWORLD group. ➞ *Global Supply Chain – Procurement • p. 056//* The goal of the purchasing strategy is creating a competitive advantage for the SOLARWORLD group on the international solar market, currently in particular through cost savings. The global purchasing organization is divided into the areas Strategic Procurement (Category Management), Operational Procurement, Supply Chain Enabling Functions and Supplier Performance. Furthermore, there are management functions such as Procurement Excellence, which cut across all departments and levels of the purchasing organization. Category Management includes four material areas (categories): bill of material (BOM), balance of system (BOS), indirect materials and services, and projects. Below this, there are seven category clusters, and below that a total of 49 clusters. Local, regional and global category cluster managers are responsible for each category cluster. New employees in Purchasing receive systematic on-the-job training.

The division is organized using a global procurement manual, global processes and local work instructions. Global processes were developed for the BOM, BOS, for indirect materials, for capital investments, for long-term contracts, for the material valuation, the supplier evaluation, supplier development and material qualification. Furthermore the group-wide signature regulation applies. Global and local Balanced Scorecards are used for control. Monthly reports are made on the expenditures per legal unit, supplier and category, as well as on the scope of liabilities (days payable outstanding) per supplier, as well as on inventory turnover. A so-called savings tracker is used for all savings projects to achieve the cost targets. A monthly risk report is created. In light of the large purchasing volumes, hedging is one of the measures for risk reduction. In the third quarter of each year, a monthly forecast is made for the coming year, quarterly for the following year, and for each of the following three years. This is an important source of information for Controlling, Sales and the Production.

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Material suppliers (which includes service providers) for the SOLARWORLD group are, depending on the context, our main suppliers or, in particular, the suppliers of direct material. We define main suppliers as strategic suppliers (meaning the largest in terms of purchasing expenditures), the single-source suppliers, and the technology partners. Suppliers of direct material provide us with the input factors for the BOM and the BOS. An evaluation of all suppliers of direct material is made annually along the five dimensions: commercial criteria, quality, technology, logistics and sustainability. The combination of all five factors is decisive for supplier selection. At the beginning of 2014, we evaluated 84 (early 2013: 85) percent of our direct material suppliers. In 2013, over 95.5 (2012: 87.0) percent (mf\*) of these suppliers were certified according to DIN ISO 9001 and 78.8 (2012: 42.4) percent (mf) according to DIN ISO 14001. We perform on-site quality audits on average every two to three years for all direct material suppliers with a significant risk assessment. Criteria for the risk assessment are, for example, whether the supplier is new, what type of material the supplier supplies, the country in which the supplier is located and which local standards therefore apply, which certifications the supplier has, the results of material tests, and if there were complaints. Audits look for deviations in the areas of production, quality assurance systems, change management, shipping and accounting. Audits are performed on an ad hoc basis where a concrete reason exists. In 2013, fewer than 17 percent of suppliers of BOM and BOS were audited by SOLARWORLD on the basis of a risk assessment. Normally, the share of BOM and BOS is approximately 30 percent per year. In the future, the material sustainability risks in the value chain will be taken into account more strongly during these on-site visits. A risk analysis of the value chain is in the planning stage. For us, a first step in the right direction is our Supplier Code of Conduct, which was sent by email to all main suppliers at the start of 2013 and at the same time was integrated into the contract design, and for which a confirmation from the main suppliers was requested at the beginning of 2014.

/ 64-12 / Our supply chain is strongly characterized by suppliers of direct material. They make up more than 50 percent of procurement costs. The quality of these input factors is extremely important for the quality of our products. Many of these manufacturers are internationally renowned companies with the corresponding market presence. At almost 5 percent of expenditures, suppliers of operating supplies (e.g. energy, water) have only a limited influence. In 2013 a total of around 350 million euros went to suppliers and service providers. We work with a broad spectrum of suppliers and service providers, which provide various services for us: from legal advice to translation agencies and local restaurants. We currently have a total of over 3,500 suppliers and service providers. The number of second-tier suppliers and third-tier suppliers can hardly be estimated. So far we can only assume that every important supplier has a similar number of suppliers and service providers we ourselves have, and that these suppliers in turn have suppliers and service providers as well. A reliable statement needs to be predicated on such an analysis. We will pursue this topic further as part of our sustainable supplier management.

\* © Legend • p. S002 //

## S014

Until 2012, we primarily established business relations with suppliers in our geographical area (local sourcing). Because our production facilities are located in Germany and the United States, the majority of our suppliers were therefore also in Europe and the United States. Due to extreme cost pressure, we have decided to distance ourselves from this strategy and to search worldwide for the suppliers with the best conditions (global sourcing). As a result, now only 47 percent of procurement costs are paid to suppliers located in Europe and the United States. In Asia, it has now reached 52 percent; and in other countries less than 1 percent.

When deciding to terminate a supplier contract, the market share represented by SOLARWORLD is considered, since no supplier should be pushed out of the market as a result of such a decision. Similarly, SOLARWORLD should not be dependent upon one supplier, i.e. so-called “single sourcing” should be avoided. For the implementation of the SOLARWORLD Supplier Sourcing Strategy (4S), annual checks are performed across departments with colleagues from, for example, Product Management, Quality Management, Research and Development or Sales regarding which suppliers, technologies and procurement markets should be used in the coming years.

In light of the current economic situation, in 2012 and 2013 commercial criteria had to take precedence in supplier management. However, SOLARWORLD continues to pursue the approach of investing in long-term business relationships and developing suppliers. The Supplier Development Program was set up for this reason. We have been hosting supplier events since 2012 where we encourage discussion of sustainability-related topics. As a business partner, we always want to act in a fair and proper way. A good example of this is our transparent and fair bidding process.

We make contractual provisions to share the risk with our suppliers so that we can better utilize material in line with our needs. We also use consignment warehouses, through which we reduce our own material stocks and default risks. In 2012 and 2013, we experienced no production downtime due to material shortages.

Child and forced labor are absolutely forbidden in the entire SOLARWORLD group. Our Supplier Code of Conduct also strictly forbids this. Nevertheless, we recognize a certain risk in the value chain as a result of the global sourcing strategy. We have not yet been able to qualify this in more detail, because the risk assessment is still pending. Until now, the tracing of the source, origin or production conditions for second and third-tier suppliers has been achieved through self-reporting, for example regarding the non-use of conflict minerals. As a result, the importance of the analysis and evaluation of the supply chain is increasing for SOLARWORLD. Since this reorientation, we have been evaluating direct material suppliers once annually in regard to their sustainability in the supplier ratings. The result is included in the overall evaluation with a weighting of 15 percent.

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As part of the financial restructuring, comprehensive evaluations of the procurement procedures were performed, which were followed by far-reaching measures. We report on this in detail in the Management Report. ➔ Global Supply Chain – Procurement • p. 056//

#### **MATERIAL INPUT / ENERGY / WATER / COMPLAINT ACTIONS REGARDING ECOLOGICAL ASPECTS / DEVELOPMENT AND DISSEMINATION OF ENVIRONMENTALLY FRIENDLY TECHNOLOGIES / PRECAUTIONARY PRINCIPLE**

With our products, we supply the technology for transforming solar energy into electric power. Hence, we make a direct contribution to protecting the environment. ➔ Environment • p. 062// Future research and development activities 2014 • p. 115// Material input, energy and water consumption are important aspects because they represent a powerful cost lever for the group, have direct environmental effects, and also have a social component through the access to and distribution of resources. Accordingly, environmental offences must be avoided under all circumstances, since they could cause very high costs and damage the public image of the group, cause long-term damage to the ecosystem and pose health hazards to the population. For SOLARWORLD as a manufacturer of solar power solutions, the development and dissemination of environmentally friendly technologies is a central theme of business operations. Our stakeholders expect that SOLARWORLD play a leading role here. Economic and ecological effects are closely linked in this topic, and often move in the same direction. For example, efficiency measures usually pay off twice. Trade-offs occur when this is not the case and the effects run counter to one another. For example, when the use of another substance results in better environmental impacts, but at a higher cost. Our aim is to take greater account of the environmental impacts of our business partners. For example, we perform a life cycle analysis for our products from the extraction of raw materials on. Our influence on the supply chain is described under the aspect of procurement practices.

The SOLARWORLD group has an efficient integrated management system with corresponding responsible people at the global and local levels. The principles of the management system are set out in the corporate policy and are implemented through individual programs in all areas of the company. @ <http://www.solarworld.de/en/group/global-strength/corporate-management/corporate-policy/> An external assessment is performed as part of the certification according to the quality management standard DIN ISO 9001, the environmental management standard DIN ISO 14001 and the BS OSAHS DIN ISO 18001. We have also been certified according to the energy management standard DIN ISO 50001 since 2013. The audits identified no material deviations. We also possess an established Total Production Management (TPM), which is aimed at comprehensive process optimization and efficiency improvements. For this, we received the 2013 TPM Silver Award.

Since the start of 2013, we have set ourselves global environmental goals with a time horizon to 2020 that are also part of our Changemaker Manifest. These goals are broken down across individual sites and translated into specific measures. We report annually on the progress, and beginning in 2014, the assessment will be made internally on a quarterly basis.

## S016

External stakeholders such as suppliers or local communities are not included in the efficiency controls of QHSE process within SOLARWORLD. However, they are able to submit written or oral questions to SOLARWORLD. Trainings on availability and accessibility of complaints and redress procedures in the area of QHSE are not offered to stakeholders.

## 03 ENVIRONMENTAL TARGETS 2020

	Unit	Base year 2012	Target 2020/ percentage change	Status 2013/ percentage change
<b>Energy &amp; climate protection</b>				
Groupwide energy consumption	kWh/Wp	0.63	0.47 -25 %	0.59 -6 %
Cumulated energy demand (life cycle)	MJ <sub>eq</sub> /Wp	21.6	18.4 -15 %	17.8 -17 %
Groupwide CO <sub>2</sub> emissions	kg CO <sub>2eq</sub> /Wp	0.45	0.38 -15 %	0.31 -31 %
Global Warming Potential (life cycle)	kg CO <sub>2eq</sub> /Wp	1.3	1.1 -15 %	1.1 -15 %
Average CO <sub>2</sub> emissions from passenger cars in the SOLARWORLD vehicle fleet (new passenger cars)	g CO <sub>2eq</sub> /km	152 (all passenger cars)	95 -38 %	130 -14 %
<b>Water</b>				
Specific volume of water consumption	m <sup>3</sup> /MWp	2,253	2,028 -10 %	2,958 +31 %
Specific volume of waste water discharge	m <sup>3</sup> /MWp	1,738	1,564 -10 %	2,550 +46 %
<b>Waste</b>				
Specific volume of waste	t/MWp	26.9	24.2 -10 %	25.5 -5 %

For many years, we have had a point of contact for outside parties and interested stakeholders who want to learn about the environment and system safety. This external complaints management system is based on defined internal processes. In the US, this process has long been established. In 2013, across the entire Freiberg site, the workflows for approval management were expanded, for example through the introduction of an HSE (Health, Safety, Environment) preliminary examination in all projects. The workflow for updating legal and other requirements was optimized through regular meetings of the legal affairs committee. The subsequent communication rounds off the improved legal sources management at the site. There were no complaints registered in 2012 and 2013.

/ 64-14 / The precautionary principle has been institutionalized in our company through our risk management system, the integrated management system (quality, health, safety and environmental management system), sustainability management system and the Internal Auditing department. If there is any danger of serious or irreversible damage, uncertainties in scientific assessment should not serve as a reason for

postponing cost-effective measures to prevent environmental damages and health impairment until a later date. This basic orientation is also underscored by our voluntary disclosures such as reporting along the framework of the Global Reporting Initiative and participation in the Carbon Disclosure Project (CDP). ➞ [Corporate management and control • p. 033](#) // [Group management report forecast • p. 086](#) //

An energy management system according to DIN ISO 50001 was phased in at the Freiberg site of DEUTSCHE SOLAR GMBH and was certified in the first quarter of 2013. In 2013, the process of the energy management system was also rolled out in DEUTSCHE CELL GMBH, SOLAR FACTORY GMBH and SOLARWORLD INNOVATIONS GMBH. The certification according to DIN ISO 50001 will be achieved for DEUTSCHE CELL GMBH and SOLAR FACTORY GMBH in the first quarter of 2014. In this way, we continue to contribute to the continual and sustainable improvement of the environmental impact and energy savings.

At the Hillsboro site, significant progress was made with the roll-out of the energy management system, which gained ISO 50001 certification in the second quarter of 2013. SOLARWORLD received a grant from the Energy Trust of Oregon to cover the costs of introducing this program. To reduce emissions, an older NO<sub>x</sub> scrubber was replaced by a more up-to-date model in the local production. The new NO<sub>x</sub> scrubber increases the efficiency in handling chemicals. As a result, the emissions could be reduced and operating costs are lower because of the reduction in chemical usage. To save the resource water, an improved fluoride waste water filter is used to extract more water than before from the filter press cake. This means that less water is transported to landfill, resulting in a reduction in the waste volume per production unit. Disposal costs have also fallen as a result. For better waste utilization, Polystyrene blocks used for cell packaging, which used to be discarded as general waste, are now collected and recycled. The use of isopropyl alcohol (IPA) for cleaning purposes is measured in all areas by now and had to be reduced by 40 percent in 2012. Demonstrably less isopropyl alcohol (IPA) was used, however, not all departments reached the target in 2012, because many measures which were implemented brought about the associated reductions only in 2013. An IPA dilution system was put into operation in February 2013. The system reduced IPA usage there by more than 40 percent. A similar station was installed in module production in the course of 2013.

Crystal growing activities and wafer production were ended at the Hillsboro site on August 31, 2013. This had a major influence on the electricity consumption numbers. Because of diverse adaptations in cell technology processes and with this in cell production, continuous improvement measures in the energy field in 2013 are difficult to define. VOC (Volatile Organic Compounds) emissions were reduced by the use of less concentrated IPA by 27.5% compared to the previous year. IPA is used primarily for general cleaning of production facilities. To minimize the effect on ambient air, two additional air scrubbers were installed at the Hillsboro site: a NO<sub>x</sub> scrubber and an ammonia scrubber. At the Hillsboro site, more wood and plastic was recycled to avoid waste. This reduced the waste management costs. The Green Team led two collection drives for electronic waste and also organized an employer commuter challenge.

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## S018

At the Camarillo site, two leased SOLARWORLD buildings were restored and returned to the city of Camarillo in 2012. There was a large amount of material to dispose of, but 85.2 percent was recycled and only 14.6 percent went to landfill. The production was shut-down at this site in 2012. Due to the production stop, the environmental impact of the Camarillo site in 2013 is comparable to that of the Bonn site. There are no dangerous, health-related or environmentally relevant effects.

**EMPLOYMENT / OCCUPATIONAL HEALTH AND SAFETY / COMPLAINT ACTIONS REGARDING HUMAN RIGHTS**

The topic of employment, including working conditions, as well as occupational health and safety are very central themes for the preservation of the working capacity and therefore for the productivity of a company, as well as for workers' quality of life and persons close to them. Violations of basic human rights are considered particularly serious in our culture, which is why suitable precautions for complaints are also especially important.

Our goal is to be a desirable employer, which means we want to continue to be an attractive employer and to create a working environment where people treat each other with respect and appreciation. Our Code of Conduct codifies our aim, which we apply groupwide. Via our competence model, factors such as sustainability and integrity are explicitly included in the selection, assessment and career development of our employees. The competence model runs consistently through all areas: from employee recruitment and retention to employee and manager development (including talent management). In this way, we want to ensure that we bring the right person with the right skills to the right position. People who stand up for real values and engage themselves are a good fit for us. To make the company culture and this commitment more measurable, the first groupwide employee survey will be carried out in 2014. ➔ *Employees • p. 066 // Future human resources development • p. 116* // The HR strategy and the mentioned measures were developed by the Chief Information, Brand & Personnel Officer and the Global Head of Human Resources and Organizational Development in 2011 based on a comprehensive survey (around 200 interviews with employees and managers).

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Responsibility for employment, occupational health and safety, as well as complaint actions regarding human rights lies first and foremost with the management board and compliance organization.

☉ *G4-56 • p. S029*// Further responsibility for this topic rests in the company with the HR department, with health and safety management, as well as with every single manager. Accordingly, complaints can be submitted to all of these contact points. Legislation in the countries in which we have based our own companies is extensive, in particular in the EU and in the U.S. In the future, as a result of the orientation of our purchasing strategy and through our cooperations (e.g. joint ventures), risks will increase in particular outside of our company boundaries. Topics which could be taken for granted due to high local standards will increasingly come to the fore. Assessments in the context of the integrated management system and the internal audit established no material findings.

We document our high standards in health and safety for others, and in 2012 we gained BS OHSAS 18001 certification for SOLAR FACTORY GMBH, the SOLARWORLD holding company, and for module production and logistics at SOLARWORLD INDUSTRIES AMERICA INC at our Hillsboro site. Health and Safety Committees exist in Freiberg, Hillsboro and Bonn. The Health and Safety Committees do not have binding decision-making powers, but rather the ability to make suggestions. Regarding impacts on local communities, the Health and Safety Committees dealt with light and noise level registers, as well as plant safety. To prevent accidents and raise employees' awareness, a variety of prevention activities were carried out in Freiberg in 2012. The shuttle service was reorganized to be more flexible, helping to reduce the number of commuting accidents. An initiative to use hand rails was launched, information was distributed to employees and signs were installed (significant reduction in accidents followed). The electronic accident register for recording, following up and analyzing accidents was optimized. Documentation and procedures for risk assessments for work equipment or machinery were standardized and expanded to include an assessment of hazardous substances. Safety inspection tours, evacuation and emergency exercises are carried out and analyzed at regular intervals. Further light and noise level registers were created in specific areas and measures were implemented to reduce noise and optimize lighting. With the cooperation of employees, continuous checks were carried out on safety glasses, gloves and shoes. A company policy was introduced to reinforce the wearing of this personal protective equipment. Moreover, our system for managing external companies was enhanced and standardized. Training measures at Freiberg included for instance courses in first aid, conducting industrial trucks and cranes, instructions on respiratory protection, on the use of chemical suits, on performing gas measurement, accessing containers, and many more. The German trade association for raw materials and the chemical industry (Berufsgenossenschaft für Rohstoffe und chemische Industrie) provided input for specialist subjects such as producing risk assessments and explosion protection. As an occupational health management measure, and with the involvement of external interest groups, three "health days" covering various topics (e.g. skin protection, ergonomics, nutrition) were held at Freiberg. As part of our health promotion plan, training sessions for safe lifting and carrying were offered along with massages and back strength exercises.

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## S020

In 2013, the activities of 2012 successfully continued and optimized. At all three sites in Freiberg, Germany, cooperative efforts were carried out with various health insurance companies, orthopedists and physical therapist health days, with heavy employee participation, (which provided osteoporosis measurements, foot measurements and relaxation exercises, etc.). Several blood donation days supported the Freiberg hospital.

The Green Team initiated the event “City Biking” or “Bike to Work” (where health and environmental protection intersect). For continuing awareness, many training opportunities were offered, for example, fire extinguisher training, occupational safety training for on-call managers, technologists, safety officers and team leaders, first aid training including defibrillators and details on department-specific issues. The existing emergency teams received additional training, and a new emergency response team incl. new equipment was formed. Numerous emergency and evacuation drills were successfully performed with the fire department and disaster management. Together with the colleagues, personal protective equipment was again tested in 2013 for comfort and its technological standard (e.g. safety footwear with cushioning to relieve the musculoskeletal system, lightest safety goggles and the test of new cut protection clothing for handling glass).

Our accident and event reporting has also made progress: With the event “near miss accidents”, we were able to convince employees to report critical situations and dangerous actions in the work process, making their own workplaces safe and adapting it to their health needs. Remodeling measures in production were actively accompanied in order to optimize workplaces from a safety and ergonomic perspective. All of these activities were positively assessed, for example, in the control audit of the SOLAR FACTORY GMBH for BS OHSAS 18001.

In the U.S., all incidents whether they are employee injuries or operational disruption at production facilities are fully investigated and reviewed, so that each services as a learning experience and a method of continuous improvement. Employee awareness of potential dangers at the workplace continues to improve with monthly and quarterly safety meetings and training. When a work incident provides significant learning potential, these are reviewed with all appropriate staff. Through continuous controlling of work hygiene and ergonomics at the workplace, a healthy work environment is created or the respective conditions are reviewed. As in Freiberg, health measures in Hillsboro in 2012 focused on ergonomics in production. Ergonomic risks were quantified and prioritized for each department. Self-determined targets were achieved in all work groups. In addition, three company-wide blood donation campaigns were sponsored in the U.S. Furthermore, the following activities were organized: a pedometer challenge, a “run for fresh water,” a service delivering fresh farm produce to employees as well as annual biometric health checks and thorough health assessments. SOLARWORLD INDUSTRIES AMERICA INC received the Fit Friendly Worksite Award in 2012 from the American Heart Association (AHA), for its company health events. Reports from the insurance companies indicate that our employees claimed fewer insurance benefits. We believe this is partly due to our activities. Due to the good aftercare and reintegration after accidents, we could drastically reduce the lost time.

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2013 was a year of big change for our locations in the U.S. The resources and the budget were very limited making it difficult to continue previous health and safety measures to the same degree as in previous years. The focus was rather put on maintaining certification in health and safety, as well as ergonomics and best integration of safety into operation work instructions and procedures. We sponsored a pedometer challenge, organized an onsite blood drive and conducted two flu shot clinics. For the second year in a row, we received the Gold Level Fit Friendly Award from the American Heart Association for our wellness initiatives. In addition, the Green Team organized a food drive for local charity.

As part of the supplier audits performed under the heading of procurement practices, attention is also given to compliance with social and occupational safety and health, and working conditions (type of employment contract, compensation, working hours, breaks, vacation, disciplinary and dismissal practices, maternity leave, working environment, occupational health and safety, quality of housing (if provided) and basic supply services like drinking water, cafeterias and access to medical care). But these points are not widely verifiable for us as outsiders, especially since our supplier audits are announced in advance. We are aware that this represents a weakness in our verification processes. That is why we are all the more eager to perform the risk analysis of our value chain in order to better estimate the risks. Our supplier relationships should continue to be characterized by trust. We are convinced that we can achieve more through dialog and supporting suppliers in their development towards sustainable corporate management than through monitoring alone. If we learn of cases in which people are working for suppliers and do not receive the social and occupational safety and health or the decent working conditions to which they are entitled, we seek dialog with the supplier and add this point to the package of measures that the supplier must work through if it wants to continue the business relationship with us. Formal support programs for suppliers and their employees are not yet used.

Since the start of our joint venture project in Qatar, i.e. over the past two years, 11 million working hours were completed by an average of 3,000 workers without significant accidents.

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## S022

In all compliance cases, whistleblowers can contact the compliance organization. Messages can also be sent anonymously via the homepage. Contact can also be made by email to [@integrity@solarworld.de//](mailto:@integrity@solarworld.de//). These channels can also be used in case of violations of human rights and for pointing out social impact. Especially for employees of the SOLARWORLD group and the most important suppliers, SOLARWORLD SpeakUp is available. ☉ [G4-57 + 58](#) • p. S30// SOLARWORLD SpeakUp is part of the compliance training for all group employees at time of hire and basic as well as refresher compliance trainings. In addition, all information can always be found on our intranet site. Our contact persons with our suppliers were informed by email about SpeakUp at the beginning of 2013. Information about it can also be found on our homepage. All information received will be discussed in the Compliance Committee and followed up on until the cases are resolved. We are not yet holding special training for human rights aspects, since we do not yet have indications that significant risks exist in the company or in our value chain. The complaint processes will presumably be one of the topics in case of an audit of the compliance management system by Internal Auditing.

#### LOCAL COMMUNITIES / ANTI-CORRUPTION EFFORTS / POLITICS / GRIEVANCE MECHANISMS REGARDING SOCIAL IMPACT

Companies like to be described as “Corporate Citizens” because they are a part of their communities and their behavior also influences outside company walls. The aspect of social impact includes very diverse topics: e.g. compliance violations like corruption, but also lobbying by companies and involvement or lack of involvement of companies in local communities. Compliance is very important to SOLARWORLD and the company deals transparently with lobbying. Involving the local community in major decisions, e.g. construction of new production facilities, is crucial to ensure that the needs of the stakeholders are comprehensively included in the decision-making process. SOLARWORLD does not have specific company policies, processes or declarations on protecting the collective rights of local communities, but it is self-evident for us that residents are included in decisions that will significantly affect them. In such cases we hold events like stakeholder dialogs, for example with residents in case of new plant construction or the implementation of a solar farm by a customer. Care is taken that all stakeholder groups are appropriately represented. In the context of the activities of SOLARWORLD SOLICIUM GMBH ☉ [G4-S01 + S02](#) • p. S102//, as well in the context of solar projects, consultations took place, but they were not organized by SOLARWORLD rather by respective governments or customers. We send sales employees to such consultations. Apart from this, in 2012 and 2013 no other consultations took place.

Motivated by our vision for a worldwide fair sustainable development, we have made it a goal since 2007 under Solar2World to make decentralized energy solutions available to all people. To date, we have carried out an aggregate of 638.1 kWp worldwide with these projects, 65% of which has been fully installed and the rest of which is currently being implemented. Through collaboration with our project partners and SOLARWORLD volunteers it was possible to install 27 (2012:78) kWp in 2013.

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The rights of works councils are clearly regulated by law at our sites. Regulations on topics subject to co-determination are agreed upon with the works council. For example, the works council has comprehensive co-determination rights regarding the regulation of occupational health and safety. Indirectly, the works council or individual members are networked with diverse bodies. On occasion, the works council also takes a public position on certain topics (e.g. SOLARWORLD as employer, jobs in Freiburg, infrastructure frameworks or the topic of energy transition).

Anti-corruption is one of the central pillars of our compliance management system. ➔ [Compliance management system • p. 034](#)// The corruption risk is reduced through various measures: the four-eye principle, the standardization of contracts, in particular regarding commission payments, the group-wide work instructions on gifts and invitations, the opportunity to provide anonymous tips through SOLARWORLD SpeakUp, as well as annual trainings. Conflicts of interest must be indicated and affected persons may not be involved in decision-making processes. When conflicts of interest could result from employment outside of the work for SOLARWORLD, written approval for beginning this employment must be sought. Approval must also first be received from the manager for investments with significant financial interests in companies of competitors, customers or suppliers by an employee or close relative. Financial or tangible gifts to other organizations in the form of donations and sponsoring will only be approved by authorized employees (i.e. the Management Board/the Managing Directors and Marketing Direktor). A list of all of our donations and sponsoring activities must be sent to the Compliance Committee every year. Until now, trainings have only been offered for employees of the SOLARWORLD group. Participation is mandatory for managers in so-called risk areas, and the focus and illustrative examples are also tailored to these risk areas. The training contents are then passed on by managers to their team. Initial training of all new employees is provided by HR at the start of employment. The Management Board and the Supervisory Board are responsible for educating themselves about compliance. We have not offered compliance training for business partners; however, suppliers and service providers are contractually bound to the Supplier Code of Conduct. All important information on the topic is available for employees on the compliance intranet site. With the exception of the United Nations Global Compact ☉ [Communication on Progress • p. S111](#)// we do not participate in collective action activities.

SOLARWORLD conducts lobbying work in order to help solar energy become competitive, and is an advocate of political funding programs. This relates for example to compensation through the German Renewable Energy Sources Act (EEG). We are also working worldwide for free access to the electricity grid for power producers because that is a prerequisite for solar energy to be competitive with other sources of power. In general terms, we work politically for climate protection, the conservation of resources, sustainable development and ethical management. That means our lobbying activity is in conformity with our declared principles. Our trade case against dumping prices is also explained by these principles in that we are supporting fair competition through the case. In the global supplier selection process, sustainability is one of the five assessment criterion.

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The complaint processes already described for violations of human rights also apply to information regarding social impact.

An assessment of the management approach to the named social impact has not yet occurred. Anti-corruption efforts and the complaint processes will be examined in case of an audit of the compliance management system by Internal Auditing.

#### **CUSTOMER HEALTH AND SAFETY / LABELING OF PRODUCTS AND SERVICES / COMPLIANCE REGARDING PRODUCT AND CUSTOMER RESPONSIBILITY / SHARE OF NEW CUSTOMERS**

Our products are designed to allow health and safety risks to be excluded to the best possible extent. This is constantly taken into account for products manufactured by us and evaluated throughout the entire product development, research and development, certification, manufacturing and production, marketing and advertising, storage, sales and supply, in the use phase and customer service, as well as disposal, re-use and recycling. This applies to 100 percent of products manufactured by us. We supply information on the correct handling and recyclability of our products. Our products are certified and have the necessary approvals in each sales market. Product and customer responsibility are part of the quality management system audit by the DIN ISO and product certifications (product realization) (e. g. Product-FMEAS (Failure Mode and Effects Analysis), risk assessment, process evaluation (technical, economical), as well as functional specifications). SOLARWORLD has never had a significant recall in the history of the company.

We are in close contact with our authorized installers. We have further strengthened this contact through the founding of the Partner Advisory Board in 2012. For example, we use the Partner Advisory Board as a so called focus group to test new products (e. g. development of the SUNTOOL Mobile App for Ipad, SOLARWORLD Kit easy or the Glass-to-Glass Model Sunmodule protect). A FMEA (Failure Mode and Effects Analysis) is performed preemptively as part of quality management in order to discover potential product weaknesses. Here, three areas (significance of the fault, probability of occurrence and probability of detection) are examined and key figures are applied. These three key figures are multiplied together to produce a risk priority number (RPN) that determines if and which measures we must undertake before the product is introduced in order to eliminate identified weaknesses. The measures are time-bound and controlled, so that the RPN can be calculated again after a renewed evaluation. The product can be introduced after the successful elimination of possible defects and weaknesses. Alternatively, we obtain selective feedback on processes and tools to improve them (e. g. for automated query processing, lead routing, or for the development of the SUNTOOL App to measure roofs with the Ipad). Furthermore, the Partner Advisory Board accompanies us the yearly Specialist Partner Seminar as a source of credibility to motivate other specialist partners from craftsman to craftsman. Year after year, analysis of customer satisfaction provides us with important feedback for continuous improvement. The survey is addressed to all SOLARWORLD customers worldwide. Our customers will receive a link via email, allowing them to participate in the survey online. The evaluation of the survey is carried out anonymously by the independent Servicebarometer Institute in Munich.

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The questionnaire is available in German, English, French and Italian and covers satisfaction with our service, the evaluation of the quality of our products and the evaluation of our brand. In order to get a picture that is as comprehensive as possible, at the beginning of 2014, we also surveyed free installers who have a business relationship with us in addition to our wholesale customers and authorized installers. 93.1 % are satisfied to very satisfied. ☉ *G4-PR5 • p. S105*//The share of new customers (active customers with more than 1000 Euros revenue per year) represents a central parameter in Sales. The share of new customers refers on the one hand to all installers who work together with us. In 2013, we were able to acquire 39 percent new customers. On the other hand, the key figure refers in particular to the group of installers, especially authorized installers. In 2013, new authorized installers comprised 35 percent.

#### CONFIRMATION BY THIRD PARTY

/ 64-33 / Like the Group Management Report and Financial Statements, the present report was subjected to audit inspection by BDO AG Wirtschaftsprüfungsgesellschaft. During its audit, BDO observed the Generally Accepted Assurance Principles for the Audit or Review of Reports on Sustainability Issues established by the Institute of Public Auditors in Germany (IDW). ☉ *Confirmation • p. S129*// This standard (PS 821) includes and exceeds the standards contained in ISAE 3000. Since the report from the previous year was only published in an unaudited form as a result of the restructuring of the SOLARWORLD group, in this report we include information from the period of the previous year, thus closing the gap in the annual audit by the auditors.

#### SUPERVISORY BODIES

/ 64-40 + 41 / Members of the Management Board are chosen with the aim of bringing together the necessary technical expertise and the necessary management experience for core issues in the SOLARWORLD group. The Chief Executive Officer, **Dr.-Ing. E. h. Frank Asbeck**, holds a degree in agricultural engineering and an honorary doctorate from the Faculty of Chemistry and Physics of TU Bergakademie Freiberg. He was involved in development projects in Africa before setting up SOLARWORLD AG. He is a founding member of the Green Party. **Frank Henn (Dipl.-Wirtschaftsing.)** draws on experience in sales and marketing in multinational companies. He has been Chief Sales Officer of SOLARWORLD AG since 2004. **Philipp Koecke (Dipl.-Kfm. tech.)** joined SOLARWORLD AG after working in the finance and banking sector. He has been SOLARWORLD AG's Chief Financial Officer since 2003. **Colette Rückert-Hennen (attorney)** was a lawyer before working in tourism for 20 years. She has extensive experience in international management and has been Chief Officer responsible for Brand and People since 2011 and for Information Technology since Spring 2013. Boris Klebensberger (Dipl.-Ing.), Chief Operations Officer left SOLARWORLD on February 7, 2013.

The CEO is also the company's founder and main shareholder. There has been a high degree of continuity in the composition of the Management Board since the company's founding. These are not managers with short-term appointments, and this serves to counteract any tendency in corporate manage-

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ment toward making fast profits. ☉ [G4-51](#) • p. S028// There are no cross-holdings, there are no controlling shareholders, and the relationships to related companies have already been presented. ☉ [Reporting scope and boundary](#) • p. S008//

Members of the Supervisory Board are elected by the Annual General Meeting. The Supervisory Board is comprised of the Chairman **Dr. Claus Recktenwald** and the Supervisory Board members **Dr. Georg Gansen** and **Marc M. Bamberger**. The term of appointment for Dr. Claus Recktenwald and Marc M. Bamberger in each case ends with the conclusion of the next ordinary Annual General Meeting of SOLARWORLD AG. Dr. Georg Gansen is appointed until the conclusion of the Annual General Meeting which decides on the approval of the Supervisory Board's actions and the Management Board's actions for the fiscal year ending December 31, 2017. Dr. Claus Recktenwald is an attorney and partner of the law firm of Schmitz Knoth Rechtsanwälte in Bonn. Dr. Georg Gansen is an attorney and corporate legal counsel of the Deutsche Post AG located in Bonn, and through this international management activity in the legal department of an international group of companies, brings an international professional background to the Supervisory Board. Marc M. Bamberger is a management consultant in Wiesbaden. Because of his expertise in the area of restructuring, he was added to the Supervisory Board. Dr. Georg Gansen and Marc M. Bamberger do not maintain any contractual relations with the company and are both privately and professionally independent. No Supervisory Board member is older than 68 years. Dr. Alexander von Bossel left the Supervisory Board of SOLARWORLD AG on August 7, 2013. An expansion of the Supervisory Board from three to six members has been agreed to. Dr. Claus Recktenwald is simultaneously chairman of the Supervisory Board of SOLARPARC AG, Bonn and member of the Supervisory Board of VEMAG Verlags- und Medien Aktiengesellschaft, Cologne, and member of the advisory boards of Grünenthal GmbH and of Grünenthal GmbH & Co. KG, Aachen. Dr. Georg Gansen is member of the Supervisory Board of SOLARPARC AG, Bonn.

/ **G4-43** / The Management Board and Supervisory Board are educating themselves independently about sustainability.

#### MANAGEMENT, ASSESSMENT AND MONITORING OF SUSTAINABILITY PERFORMANCE AND COMPLIANCE

/ **G4-36** / The entire Management Board commits itself to sustainability and compliance. In particular, these two topics are the responsibility of the Chief Information, Brand & Personnel Officer, Colette Rückert-Hennen. The Global Manager Sustainability, Dr. Felicia Müller-Pelzer, reports to her. At the same time, she is also Global Compliance Officer and in this function autonomous. The Supervisory Board receives an annual compliance report from her, a copy of which is also delivered to the Management Board. In case of serious compliance incidents, information is sent immediately to the Supervisory Board. ☉ [G4-56](#) • p. S029//

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/ 64-42 / The strategic development of the company's purpose is the responsibility of the Management Board.

/ 64-45 / To this end, it seeks guidance and suggestions from the most important managers. We bring economic, ecological and social aspects together via our management instruments (→ Corporate Management and Control • p. 033// so that they can be considered together. We are certified according to DIN ISO 9001, DIN ISO 14001, DIN ISO 50001 and BS OHSAS 18001. Opportunities and risks are covered comprehensively by our risk management. (→ Group management report forecast • p. 086// Achievement of all Group targets is reviewed at least once every year. We also give a highly detailed disclosure of our sustainability performance via our reporting. (→ Global Compact (Communication on Progress) • p. S111// (② GRI-Index • p. S118// The Board is informed by top management of important topics that led to stakeholder consultations. (② Stakeholder • p. S034// Powers for economic, ecological and social topics are delegated by the Management Board to managers and other employees through job descriptions in which the tasks and responsibilities are clearly defined. Furthermore, powers can be assigned on a project basis. Authorizations are given through the respective management.

/ 64-37 + 49 + 50 / Employees have the possibility to approach the Management Board with information and suggestions, either through their managers or directly. At our sites in Freiberg and Bonn, employees can also raise their concerns via the Works Council. Under German law, in many areas there are certain aspects which are subject to co-determination, which means that although employees cannot issue direct instructions to the Management Board, they are able to exert influence via the works council and prevent undesired developments from occurring. There are no designated workforce representatives on the Management Board. Stakeholders can also directly approach the Management Board and the Supervisory Board with information and suggestions. Special communication mechanisms have not yet been implemented.

Stock corporation law regulates the exchange between Shareholders and the Supervisory Board or the Management Board. Shareholders have a right to participation (§ 118 Sec. 1 of the German Stock Corporation Act (AktG)) and information at the Annual General Meeting (AGM) (§ 131 Sec. 1 AktG) and can exert influence by speaking and voting at the AGM (§§ 12, 134 AktG, SOLARWORLD AG's statute), submitting counter-proposals (§ 126 AktG), demanding amendment of the agenda (§ 122 Sec. 2 AktG, with 5 % or more of voting rights or a shareholding of at least € 500,000.00), submitting proposals for the election of the supervisory board members (receipt by the company at least 14 days before the AGM, § 127 AktG), and calling an extraordinary general meeting (§ 122 AktG, provided that on a cumulative basis at least 5 % of the nominal capital is represented). In May 2012, the main topics discussed at the AGM were: the difficult sector situation due to dumping by Chinese competitors and the change in the Renewable Energy Sources Act, the U.S. trade case (goal, timing, impact, transferability onto the European Union), cost reduction measures (shut-down of the production in Camarillo, further capacity adjustments), staff reduction, reduction of production costs, question on production innovation, group result 2011 (impairments, sense of the proposed distribution of dividends (countermotions on this topic), financial situation (question on reasonably likely covenant breach or plans to repurchase of bonds for debt reduction) as well as independence of the Supervisory Committee. In 2013, SOLARWORLD held two extraordinary general meetings (July 11 and August 7). The main topics discussed



## S028

were: Reasons for the destruction of half of the capital stock of SOLARWORLD AG through losses, causes of the financial crisis (dumping, price collapse in all markets, competition with China), the necessity of restructuring SOLARWORLD AG, planned financial restructuring measures (capital reduction, capital increase by a contribution in kind, reduction in debts, financial participation by an investor from Qatar and by Dr. Frank Asbeck in the restructuring), planned operative restructuring measures (staff reductions, competitiveness of the company, procurement optimization, value impairments), expansion of the number of Supervisory Board members (incl. reasons), as well as the appointment of a new Supervisory Board (incl. independence of the Supervisory Board, financial expertise and diversity in the Supervisory Board). ➞ *The stock* • p. 037// *Financial restructuring* • p. 042//

/ 64-44 / The Management Board and the Supervisory Board take questions from shareholders at the AGM. Shareholders vote on whether to approve the Management Board's actions during the past year. Aspects of sustainability are also captured by the evaluation of the company leadership, but no dedicated performance assessment yet exists. ➞ *Remuneration report* • p. 128// ⌚ *G4-51* • p. S028//

/ 64-46 + 47 / Based on the corporate strategy, the Management Board defines the essential features of the risk policy and manages the company accordingly. Global Opportunity and Risk Management reporting to the Management Board is done monthly, as well as immediately in case of very important effects. In turn, the Management Board is responsible for risk reporting to the Supervisory Board. Taking into account the acceptable overall risk level, the Management Board assesses all options available to the company to counteract the risks identified as being a threat to the company's survival. The Supervisory Board is involved in an advisory capacity in all decisions concerning fundamental structural measures. The materiality limits will be assessed at least annually (at the start of a fiscal year) for appropriateness and, when required, adapted to changed conditions or requirements. This assessment is performed at the local level by the local risk manager in coordination with the management of the subsidiary and consultation with the global risk manager, as well as at the group level by the global risk manager in consultation with the Management Board. ➞ *Opportunity and risk management system* • p. 087//

## COMPENSATION

/ 64-51 / Variable compensation for Management Board members is linked in part to the development of the dividend. The compensation of top executives and the Managing Directors of subsidiaries contains an individual variable linked to individual target agreements. All employees receive a variable portion which is calculated based on the consolidated result and the group bonus. The variable portion is, depending on the level within the hierarchy (the higher, the larger) and department area (i.e. higher in Sales) between 5 and 50 percent of the fixed salary. Severance pay in the event of leaving the company is not negotiated in advance (there are no "golden parachutes"). There is no specific compensation component for sustainability aspects as these are supposed to be taken into account via the strategic target of sustainable corporate governance. To avoid conflicts of interest, SOLARWORLD does not offer any stock-based compensation elements. In this way, we wish to ensure that our top management will not strive for short to mid-term share-price increases but will rather act for the benefit of long-term corporate suc-

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cess. There are no hiring bonuses or payments as recruitment incentive, termination payments or reclamations. Due to the results, the Supervisory Board received no performance-related compensation in 2013. In the coming General Meeting, a purely fixed compensation for the Supervisory Board will be proposed. In Germany, SOLARWORLD offers a retirement savings program in the form of direct insurance and a pension fund. The Management Board and the Supervisory Board do not receive a complementary retirement savings plan.

/ 64-52 / SOLARWORLD introduced a groupwide remuneration system in 2013. Collective agreements are one element of this system. Furthermore, we carry out an annual benchmarking with the service provider Redford and adjust compensation accordingly (most recently in early 2014). The goal is always typical market compensation compared to other solar companies. Management Board compensation is

/ 64-53 / assessed annually. The question of the compensation of SOLARWORLD AG supervisory bodies was not raised by shareholders. For additional details on compensation of the Management Board and Supervisory Board, we refer to the management report. ➞ Corporate management and control • p. 033 // Remuneration report • p. 128 //

/ 64-54 + 55 / The relationship of the annual remuneration of the highest-paid employee to average annual employee remuneration is reported separately for basic salary and bonus: The differences in Germany are €216,457 euros for basic salary (the highest compensation is equivalent to six times the average) and, due to inventions by employees, €232,423 for bonuses (the highest compensation is equivalent to 32 times the average). In the U.S., the differences are not as pronounced: The difference is €77,512 euros for basic salary (the highest compensation is equivalent to twice the average) and €22,813 for bonuses (the highest compensation is equivalent to eight times the average). Additional information on salaries is located in ☉ G4-LA13 • p. S098 //

#### COMPANY'S PURPOSE, ETHICS AND INTEGRITY

/ 64-56 / Our vision ➞ Group Management Report 2013 • p. 024 // has always been based on the principle of sustainability. These guiding principles statements apply throughout the SOLARWORLD group and are implemented by means of our management instruments and by the examples set by our senior executives. In the course of 2012, the Compliance Management System at SOLARWORLD has been put on a firmer footing and was communicated to all employees in mid-February 2013. The focus has been on the groupwide strengthening of a corporate culture which promotes integrity. SOLARWORLD has a Compliance Committee comprising the Global Compliance Officer, Chief Information, Brand & Personnel Officer, the Chief Financial Officer, the senior auditor (Internal Auditing), the head of Group Accounting, the head of Group Controlling (incl. Risk Management) and the global head of Human Resources & Organizational Development. The main tasks of the Compliance Committee are to gather information from across the company and analyze compliance cases, to decide on action to be taken in serious compliance cases, to develop and implement improvement measures, to close gaps in corporate guidelines, and continually improve the compliance organization.

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## S030

Training was conducted throughout the group in 2012 and 2013 in the focus areas identified during a risk analysis. Particular importance is attached to dialog on the subject of integrity and compliance.

Our principles are enshrined in our Code of Conduct, which follows international standards (e.g. those of the International Labor Organization and the United Nations Global Compact): for instance with regard to our working practices, the safeguarding of human rights, our social responsibility and our product responsibility. Our Code of Conduct is substantiated by further corporate policies and guidelines, such as the corporate policy on quality, health, safety, and the environment. The document was fundamentally revised in 2012 and communicated groupwide.

/ 64-57 + 58 / Questions can be addressed to all Compliance Officers in the company, as well through our whistleblowing system SOLARWORLD SpeakUp, which is part of the Compliance organization and is operated by our Dutch service provider People Intouch B. V. It is available to employees and suppliers. Employees are informed of this system when hired, as well as in compliance trainings. The information can be found at any time on the compliance intranet site. Suppliers are informed via email and the homepage. SOLARWORLD SpeakUp is continuously available to employees in the languages German, English, Spanish and French, and to suppliers in German and English. It is managed by the Global Compliance Officer, and the Compliance Committee is automatically involved with every tip. Users can remain anonymous (as permitted by law). All retaliation is strictly forbidden by the Code of Conduct. We received one tip in 2013. Through a simple message exchange between the messenger and the Global Compliance Officer, the messenger could be shown a solution that was later proven to have been implemented. All other target groups are able to contact the Compliance Committee via @ [integrity@solarworld.de](mailto:integrity@solarworld.de) //. Alternatively, there is a contact form on the homepage that can be completed anonymously and which goes directly to the Global Compliance Officer.

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SOLARWORLD signed up to the United Nations Global Compact in 2009 and has pledged to work for its 10 Principles. This includes making explicit reference to them in the SOLARWORLD Code of Conduct. We will also try to commit our business and contract partners to complying with similar standards. In this context, we adopted the SOLARWORLD Supplier Code of Conduct in 2009. It came into force in early 2011, and, together with SOLARWORLD SpeakUp, was communicated in March 2013 to the main suppliers, who represent around 70 percent of purchasing expenditures in 2012. The Supplier Code of Conduct requires our business partners to comply with all applicable environmental and social legislation, rules and standards and to operate an efficient system to identify and eliminate potential hazards. In addition, our suppliers are encouraged to make their contractors and other business partners comply with these standards, too. ➔ *Corporate management and control* • p. 033// *Strategy and action* • p. 028// *Employees* • p. 066// @ [www.solarworld.de/vision//](http://www.solarworld.de/vision//)

## PARTICIPATION IN INITIATIVES

/ G4-15 / SOLARWORLD participates in the following initiatives.

### 04 PARTICIPATION IN INITIATIVES

	Time-frame	Locations	Established by/including	Motivation
Application of: a) DIN ISO 9001 b) DIN ISO 14001 c) DIN ISO 50001 d) BS OHSAS 18001	Since: a) 2004 b) 2010 c) 2013 d) 2012	a) SOLARWORLD group b) SOLARWORLD group (since 2014 without sales sites in ROW) c) Production sites d) SOLAR FACTORY GMBH, SOLARWORLD Holding, SOLARWORLD INDUSTRIES AMERICA INC (module production and logistics)	a)– c) ISO d) BSI	Voluntary
Member of the UN Global Compact	Since 2009	SOLARWORLD group	United Nations	Voluntary
Reporting in accordance with KPNs and KPIs for ESG by EFFAS/DVFA	Since 2008	SOLARWORLD group	EFFAS/DVFA	Voluntary
Code of Conduct	Since 2013	SOLARWORLD group	Employees	Voluntary
Reporting under the GRI framework	Since 2007	SOLARWORLD group	GRI, based on a worldwide multi-stakeholder dialogue	Voluntary
Participation in the NetJets Climate Initiative ☉ G4-EN17 • p. S060//	Since 2007	SOLARWORLD group	NetJets	Voluntary
Participation in the Carbon Disclosure Project (CDP)	Since 2005	SOLARWORLD group	Institutional investors	Voluntary

## MEMBERSHIPS

/ 64-16 / SOLARWORLD holds the following memberships:

## 05 VOLUNTARY MEMBERSHIP OF ASSOCIATIONS AND ADVOCACY ORGANIZATIONS

Organization	Since	Member	Function
FlaSEIA (Florida Solar Energy Industries Association)	1989	SOLARWORLD AMERICAS LLC *	Board member
Semiconductor, Environmental, Safety and Health Association	1989	SOLARWORLD INDUSTRIES AMERICA INC.*	Member
SEIA (Solar Energy Industries Association)	1990	SOLARWORLD INDUSTRIES AMERICA INC.*	Board member
ASQ (American Society for Quality)	1992	SOLARWORLD INDUSTRIES AMERICA INC.	Member
UL/PV section	1997	SOLARWORLD INDUSTRIES AMERICA INC.*	Advisory Council member
UL/PV section	1997	SOLARWORLD AMERICAS LLC	Advisory Council member
NFPA (National Fire Prevention Association)	1998	SOLARWORLD INDUSTRIES AMERICA INC.*	Member
DGS (Deutsche Gesellschaft für Sonnenenergie) e.V., Munich, Germany	1998	SOLARWORLD AG	Member
Eurosolar, Bonn	1999	SOLARWORLD AG	Member
FSEC (Florida Solar Energy Center)	2000	SOLARWORLD AMERICAS LLC*	Board member
Freiberger Interessengemeinschaft der Recycling- und Entsorgungsunternehmen (F.I.R.E.) e.V.	2002	DEUTSCHE SOLAR GMBH	Member
Dresdner Gesprächskreis der Wirtschaft und Wissenschaft e.V.	2002	DEUTSCHE SOLAR GMBH	Member
Bundesverband Solarwirtschaft	2003	SOLARWORLD AG/Milan Nitzschke	Member
Silicon Saxony e.V.	2003	DEUTSCHE SOLAR GMBH	Member
VIK (Verband der industriellen Energie- und Kraftwirtschaft)	2005	DEUTSCHE SOLAR GMBH	Member
European Photovoltaic Industry Association (EPIA), Brüssel	2006	SOLARWORLD AG/Milan Nitzschke	Board member
“Technische Universität Bergakademie Freiberg” foundation	2006	Prof. Dr. Peter Woditsch	Member of the foundation council
Stifterverband für die Deutsche Wissenschaft	2006	Mario Behrendt (before Prof. Dr. Peter Woditsch)	Member of the regional trust for central Germany
The Association of Chartered Certified Accountants (ACCA) and the Malta Institute of Accountants (MIA)	2006	Cheryl Liew	Member
Bundesverband Solarwirtschaft	2007	Milan Nitzschke (previously Dr.-Ing. E. h. Frank Asbeck)	Board member
OSEIA (Oregon Solar Industry Association)	2007	SOLARWORLD AMERICAS LLC	Board member
Zoologisches Forschungsmuseum Alexander Koenig, Leibniz-Institut für Biodiversität der Tiere	2007	Dr.-Ing. E. h. Frank Asbeck	Chairman of the trustees of the Alexander-Koenig-Gesellschaft

Organization	Since	Member	Function
Columbia-Willamette Compensation Group	2007	SOLARWORLD INDUSTRIES AMERICA INC.	Member
International Facility Management Association	2007	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Oregon Solar Industry Association	2007	SOLARWORLD INDUSTRIES AMERICA INC.	Board member
Portland Business Alliance	2007	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Portland Human Resource Management Association	2007	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Bergstädtischer Sportclub Freiberg e.V.	2008	DEUTSCHE SOLAR GMBH	Supervisory Board member
CALSEIA (California Solar Energy Industry Association)	2008	SOLARWORLD AMERICAS LLC	Member
Oregon BEST (Oregon Built Environment and Sustainable Technologies Center)	2008	SOLARWORLD INDUSTRIES AMERICA INC.	Board member
Foundation council of the Mittelsächsisches Theater foundation	2008	Mario Behrendt (since 2009, prior Prof. Dr. Peter Woditsch)	Member
Oregon Business Association	2008	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Oregon Society of CPA	2008	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Westside Transportation Alliance	2008	SOLARWORLD INDUSTRIES AMERICA INC.	Member
U.N. Global Compact	2009	SOLARWORLD AG	Member
Deutsche Gesellschaft für Qualität	2009	Jörg Müller	Member
SiSoC (Silicon Solar Consortium)	2010	SOLARWORLD INDUSTRIES AMERICA INC.	Chairman of the Industry Advisory Board
Centre of Excellence for TPM at Ansbach University @ <a href="http://www.cetpm.de//">www.cetpm.de//</a>	2010	DEUTSCHE SOLAR GMBH/ Mario Behrendt/Ralf Petzold	Member
Oregon Business Council	2010	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Association of the United States Army	2010	SOLARWORLD AMERICAS LLC	Member
Oregon Business Council	2010	SOLARWORLD INDUSTRIES AMERICA INC.	Member
SEMI (Semiconductor Equipment and Materials Institute) North America	2010	SOLARWORLD INDUSTRIES AMERICA INC.	Member
American Institute of CPAs	2010	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Financial Executives International	2010	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Gesellschaft für Datenschutz (GDD) e.V.	2011	DEUTSCHE SOLAR GMBH/ Thomas Leuschel	Member
Greater Portland Construction Partnership	2011	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Made in the USA Foundation	2011	SOLARWORLD INDUSTRIES AMERICA INC.	Member
PMI (Project Management Institute)	2011	SOLARWORLD INDUSTRIES AMERICA INC.*	Member
South African Photovoltaik Industry Association	2011	SOLARWORLD AFRICA (PTY) LTD.	Member
Sustainable Energy Society of Southern Africa	2011	SOLARWORLD AFRICA (PTY) LTD.	Board member of the PV-division
South African-German Chamber of Commerce	2011	SOLARWORLD AFRICA (PTY) LTD.	Advisory board member
Enerplan	2011	SOLARWORLD FRANCE SAS	Member
InSoCo	2011	SOLARWORLD FRANCE SAS	Member

Organization	Since	Member	Function
SEAS (Singapore)	2011	SOLARWORLD ASIA PACIFIC PTE LTD.	Member
Hillsboro Chamber of Commerce	2012	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Hillsboro Rotary Club	2012	SOLARWORLD INDUSTRIES AMERICA INC.	Member
Renewable Energy & Energy Efficiency	2012	SOLARWORLD INDUSTRIES AMERICA INC.*	Advisory board member
Photovoltaik Austria	2012	SOLARWORLD AG	Member
MX: Membership in Manufacturing Excellence (DEUTSCHE SOLAR GMBH)	2012	DEUTSCHE SOLAR GMBH	Member
Utah Solar Energy Association (UT Solar)	2012	SOLARWORLD AMERICAS LLC	Member
Solar Oregon	2012	SOLARWORLD AMERICAS LLC	Member
Hawaii Solar Energy Association	2012	SOLARWORLD AMERICAS LLC	Member
Solar Electric Power Association	2013	SOLARWORLD AMERICAS LLC	Member
Solar Austin Foundation	2013	SOLARWORLD AMERICAS LLC	Member

\* This includes the former Shell Solar and/or Siemens Solar and/or Arco Solar.

STAKEHOLDERS

STAKEHOLDER GROUPS

/ 64-24 / The stakeholder groups involved in the decisions taken by SOLARWORLD are primarily employees, customers (wholesalers, installers, but also end customers), SOLARWORLD group suppliers, banks/creditors and governments/authorities. Shareholders and investors are included as stakeholder group in this section. Other stakeholders included here are analysts and brokers as intermediaries, NGOs, competitors, local residents, associations and trading communities, employees’ representatives or organizations, the press and interested members of the public.

IDENTIFICATION AND SELECTION OF STAKEHOLDERS

/ 64-25 / Based on Mason and Mitroff, 1981, and the criteria of the AccountAbility Standards AA 1000 SES, we use the following questions to determine the stakeholder groups for our activities:

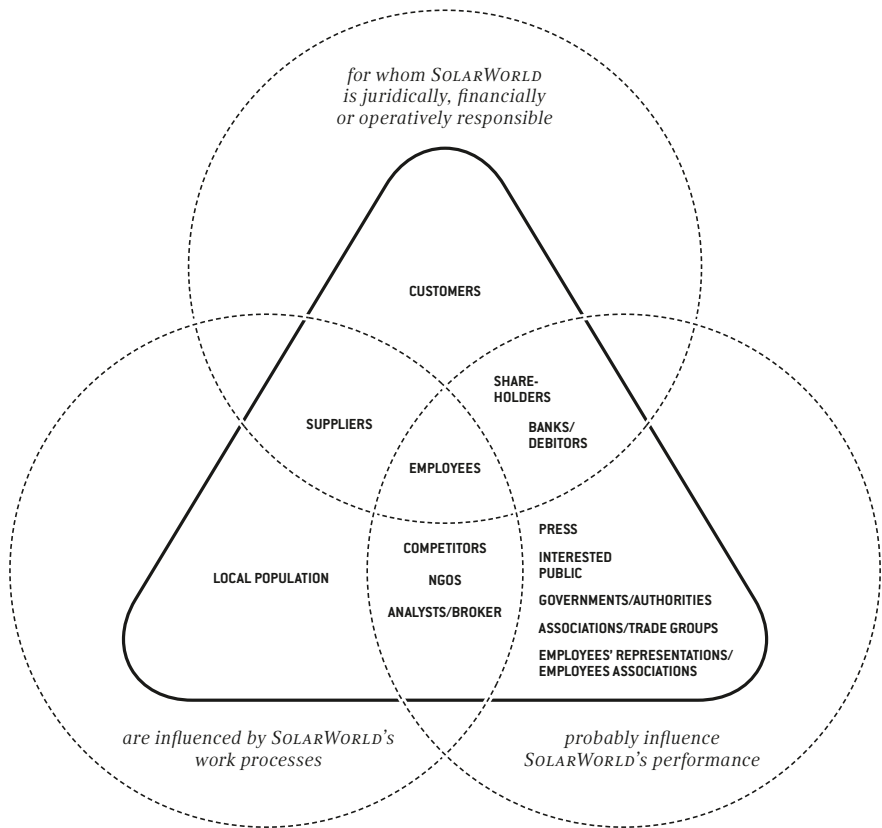
- Who are we responsible for (in legal/financial/operational terms)?
- Who is directly or indirectly affected by/dependent on our activities or the impact of such activities?
- Who is in a position to influence (hamper/promote) or decide about implementation of our activities?
- Who are we in close contact with or with who do we maintain long-term relationships?
- Who has voiced their opinion on issues of relevance to us?
- Which groups (formed by demographic or other characteristics) are likely to be interested in our activities and the results of these activities?

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We maintain contacts with all stakeholder groups, with a particularly focus on the main stakeholders. Our main stakeholders are those for whom we are directly responsible.

06 STAKEHOLDER

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The figure above provides an overview of our stakeholders based on the scheme underlying the AA 1000 Standard which is made available by a member organization, the not-for-profit Institute of Social and Ethical Accountability.



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## ENGAGEMENT OF STAKEHOLDERS

/ 64-26 / The needs of all stakeholder groups are currently already incorporated but they are analyzed to varying degrees of depth. SOLARWORLD carries out an internal analysis for all stakeholder groups, based on information available within the company and in external studies. Every year, we conduct surveys among our customers → *Customers express high satisfaction with quality and service • p. 053//* and our suppliers. Systematic customer surveys are carried out among our wholesalers and installers. So far, end customers have only been interviewed on an ad-hoc basis since such surveys require a lot of time and effort. In the mid-term, we hope to do this for our other stakeholder groups, too. In the future, our employee surveys will be more comprehensive and be carried out in a comparable way groupwide.

We also maintain close links with the communities at our sites, for instance during the Girls Day at our sites in Germany and the U.S.. The girls receive a talk on the company and the training opportunities, tour the production, and in closing are allowed to lend a hand themselves to a specific task in production. In our Solar2World projects @ [www.solarworld.de/sustainability//](http://www.solarworld.de/sustainability//) we work closely with the local stakeholders (e.g. communities and NGOs) in order to offer solutions that will give the population the maximum benefit and can be continued by the local people themselves after completion of the project.

At Freiberg in August 2012, the first supplier day organized by SOLARWORLD gave us the opportunity for in-depth discussions with our main suppliers. For example, we presented and talked about the SOLARWORLD sustainability and compliance management in the context of the supplier assessment. SOLARWORLD's approach was well received by the participants, who saw it as being highly positive. In 2013, the second supplier day took place at the same time as the Intersolar in Germany.

Thanks to our membership in associations and interest groups as well as our cooperative initiatives with scientific institutions, we maintain a regular dialogue on social policy issues with stakeholders. We exchange ideas on topics like Life Cycle, Recycling and Sustainability with among others the EPIA (Sustainability Group), Silicon Valley Toxics Coalition (SVTC), as well as within the Solar Energy Industry Association (SEIA). We also make our expertise available by way of presentations at conferences for example at Point Carbon Forum World Summit 2012 in Berlin. The trade case in the U.S. and the trade complaint in the European Union was also one of the main topics of discussion with various stakeholder groups.

At both the start of 2012 and 2013, selected experts were interviewed. The most important sustainability topics and priorities of those questioned were identified, the past performance of SOLARWORLD in these areas assessed, and opportunities for improvement revealed. The results of these interviews were taken into account in the materiality analysis. ☞ *G4-18 • p. S005//*

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**In 2012, the Expert Panel was comprised of the following participants:**

- Dr. Matthias Fawer (Bank Sarasin & Cie AG, Switzerland) representing the capital market
- Thomas Merten (iöW/future e.V. – verantwortung unternehmen) as expert for sustainability ratings
- Aiko Bode (Fenix Outdoor AB publ., Sweden) as company representative with many years of management experience in the areas of sustainability and compliance
- Günter Niggeloh (Elektro Niggeloh GmbH & Co. KG, Germany) and Martin Weihsweiler (Degen Bedachungen, Germany) representing SOLARWORLD Authorized Installers
- Ms. Marion Wenge (3M, Germany) representing suppliers
- The members of the SOLARWORLD Green Teams (groupwide) representing the workforce.

**In 2013, the Expert Panel was expanded and made more international. Participants were:**

- Dr. Matthias Fawer (Notenstein Privatbank AG, Switzerland) representing the capital market
- Dr. Udo Westermann (iöW/future e.V. – verantwortung unternehmen, Germany) and Dustin Mulvaney (University of California, Berkeley, USA) as experts for sustainability ratings
- Mariska de Wild-Scholten (Smart Green Scans, Netherlands) as expert for lifecycle analyses in photovoltaics and Tom Smith (Sedex Information Exchange Limited, London) as expert for value chain analyses
- Aiko Bode (Fenix Outdoor AB publ., Sweden) as company representative with many years of management experience in the areas of sustainability and compliance
- Stefano Romano (Sonepar, Italy), Helge Hill (e-line GmbH & Co. KG, Germany), Robert Soppart (EP SOPPART, Germany), Holger Wührmann (H. & H. Wührmann, Germany) and Dennis Köster (Köster Elektro-Technik, Germany) representing SOLARWORLD Authorized Installers
- Peter Berghofer (Ulbrich of Austria GmbH, Germany), Igor Ruzansky (Bekaert Slovakia, Slovakia), Jörg Eckert (Heraeus, Germany) representing suppliers
- Employees (groupwide survey)
- Colette Rückert-Hennen (SOLARWORLD AG) representing the SOLARWORLD Management Board

We also offer all stakeholders the opportunity to contact us any time via @ [placement@solarworld.de//](mailto:placement@solarworld.de//) and @ [sustainability@solarworld.de//](mailto:sustainability@solarworld.de//). Since 2009, stakeholders have had the alternative option of sending us a message – even anonymously if they so wish – via a contact form on the website.

The Communications on Progress follows the 10 Principles of the Global Compact and is made through group reporting procedures, which means it is available to all stakeholders. Stakeholder initiatives can even influence the implementation of these principles, for example, via networks built by/ with stakeholders or standards requested by stakeholders.

As a result, the company is largely aware of the needs and will take them into account in its decision-making processes.

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## 07 STAKEHOLDERS

Main stakeholders	Instruments
Employees	Direct contact, employee surveys, Works Council, company suggestions scheme
Applicants	Direct contact, company presentations
Customers (wholesalers, installers, end customers)	Direct contact, annual customer survey
Suppliers	Direct contact, supplier surveys, supplier day
Shareholders and investors	Direct contact, feedback after road shows, corporate news, Annual General Meeting
Banks/creditors	Direct contact, noteholders' meeting
Residents/local population	Direct contact e.g. during events on the SOLARWORLD site, in the event of concerns or complaints voiced // for Solar2World projects direct involvement in the project
Other stakeholders	Instruments
Analysts/brokers	Direct contact, feedback after road shows, investor days, corporate news
Governments/authorities	Direct contact, interviews
Non-governmental organizations (NGOs)	Networks, discussion forums
Interested public	Reporting, corporate news
Employees' representatives/ employee associations	Direct contact in meetings and negotiations
(Professional) associations/ industrial trading groups	Direct contact via networks, trade shows, etc.
Competitors	Market research, informal discussions
Press	Interviews, press releases, press conferences

## QUESTIONS AND CONCERNS RAISED BY STAKEHOLDERS

/ 64-27 / In the course of implementing the Compliance Management System in early 2013, various questions regarding the design of the Code of Conduct and SOLARWORLD SpeakUp were discussed with the Works Council during the last years and especially during the year 2012. SOLARWORLD SpeakUp was tested with the Works Council prior to introduction. The Works Council in Bonn was founded at a later date (early 2014). Compliance was also sometimes a topic in customer contact. In the reporting period, there were no extraordinary questions or concerns regarding the sustainability of our business operations not covered under other items of our GRI reporting.

In 2012, the environmental protection-relevant principles 7 – 9 of the Global Compact were addressed in several discussions with private investors and in a private investor forum. In the course of 2013, the following topics were discussed with (shareholders, investors and other persons interested in the company (eg. press, customers, suppliers)): Restructuring of the SOLARWORLD group, trade complaints, latest news on the joint venture Qatar Solar Technologies, acquisition of Bosch Solar, HR policies,

preservation of jobs and employee interests, new products, lead content of products, use of conflict minerals, recycling of solar modules at product end of life, impact on biodiversity and expectations on the company founder.

Investor Relations accompanied the restructuring, organized the invitation of creditors to the respective meetings and provided comprehensive information to the capital market. In response to specific enquiries, Investor Relations explained the situation and provided information on the process, resolutions and deadlines. Questions were addressed to the company founder relating to, for example, the use of his private assets and the purchase of new shares. Investor Relations explained the difference between private assets and company shares. Furthermore, Investor Relations explained that the purchase price fixed between the company founder and the creditors for the new shares is linked to special conditions (obligation to hold the shares until the end of the General Meeting, which will decide on the discharge of the Supervisory Board for the fiscal year 2018, or until repayment of a significant portion of the financial liabilities by SOLARWORLD AG). This is intended to further strengthen the stability of the group.

Public Relations accompanied the communications part of the restructuring in close consultation with Investor Relations. This included, in addition to the sending of company announcements and further informational materials, direct contact with journalists – both upon request and actively, such as by holding press events. For this, press conferences and interviews were planned, coordinated and held. Requests regarding, for example, the SOLARWORLD-supported trade proceedings in the USA and the EU, the joint venture in Qatar or the acquisition of Bosch Solar Energy, were answered by the group spokesperson or company founder himself, either orally or in writing. Accompanying the acquisition of Bosch Solar Energy, in addition internal and external company announcements (for example, overviews of production sites and capacities), informational material was created and distributed upon request. All widely distributed company announcements can be viewed on the company website at any time. Product information is distributed by the Public Relations department, both upon request by journalists and in the form of articles in trade journals and magazines, and as press releases.

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## AWARDS

Our awards are an endorsement of our strategy, our high quality standard and the brand SOLARWORLD.

**CHANGEMAKER 2014**

In February 2014, SOLARWORLD was accepted into the Changemaker program of the Utopia



Foundation. Companies that become Changemakers publically commit to transparency and to dialog on Germany's largest website for sustainable consumption. The level of the voluntary commitments is assessed by an independent expert network of the Utopia Foundation. The Utopia Changemaker Manifest is a voluntary commitment by responsible companies for sustainable corporate management. The Changemakers use their profiles to report regularly on progress and setbacks in achieving their goals.

**GERMAN DESIGN AWARD 2014**

The SOLARWORLD SUNCHARGER was honored in February 2014 by the German Design Council, one of the leading international centers of design excellence, with the German Design Award in the category "Special Mention". With this international premium award, an expert jury pays tribute to work whose design exhibits particularly successful aspects or solutions. The cell phone-sized solar power system unifies three functions: It serves as a power supply, reserve battery and solar charger. The SUNCHARGER was already recognized in 2012 with the Red Dot Design Award for its excellent design.

**"EXCELLENT" IN PV+ TEST 2013**

The Sunmodule Plus SW 245 poly is the only module according to actual test standards from the TÜV Rheinland and Solarpraxis AG to earn a "very good" result. Since 2011, the PV+Test has offered an independent seal of approval according to the highest standards, orientation in the choice of modules and continuous comprehensive assessment of solar modules. The module test assesses the product not only according to performance criteria, but also according to invariance to deterioration (age resistance), electrical safety, processing, quality of the accompanying documentation, guarantee conditions, and the ease of installation. SOLARWORLD sees this as confirmation of its strategy to consistently invest in top technology made in Germany and as proof that it pays off for clients to put trust in the quality of SOLARWORLD.

**GREEN BRANDS**

In November 2013, Solar World AG was awarded the GREEN BRANDS quality seal. The seal is presented annually to brands with a proven track record of environmentally sustainable actions both inside and outside the company. GREEN BRANDS is an international and independent brand marketing organization headquartered on the "emerald isle" of Ireland. The internationally acknowledged certificate is awarded following a very challenging three-stage process (nomination, validation and final evaluation by an independent jury). The award underpins the SOLARWORLD group's environmental responsibility and sustainable corporate management.

**GOOD DESIGN AWARD 2013 (THE SUNCHARGER)**

In December, the SOLARWORLD SUNCHARGER received an award from one of the oldest and most recognized programs for design, the GOOD DESIGN Award. Since 1950, the Chicago Athenaeum and the Europe Center of Architecture Design and Urban Studies have supported high standards for design processes which are reflected in high-quality products, durability and a strong public recognition. Applications for the GOOD DESIGN program are evaluated and judged by an expert jury of renowned design experts, leading industry specialists and the design press. This is done based on the criteria of the original program from 1950 for the highest aesthetic quality in the form of innovative design, new technologies, forms, materials, constructions, concepts, functions, usefulness, energy efficiency and environmental compatibility.

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**GERMAN CUSTOMER CHAMPIONS 2013**

In April 2013, SOLARWORLD was recognized during the nationwide “German Customer Champions” competition. Initiators of the competition are the Deutsche Gesellschaft für Qualität e. V. (DGQ) and the forum! Markforschung GmbH. Each year, the scientific advisory board seeks the company with the best customer relations during an “all-round customer relation check”. For this, the initiators of the competition questioned randomly selected SOLARWORLD customers. Companies are recognized which thrill their customers and, through excellent customer-oriented leadership, create the conditions for the long-term success of these relationships.

**FIT-FRIENDLY WORKSITE AWARD, GOLD**

In 2012 and 2013, SOLARWORLD received the American Heart Association's Gold award for a Fit-Friendly Worksite in the U.S. This award recognizes employers who excel in promoting wellness and physical activity in the workplace and champion a healthy work culture within the company.

**CETPM-AWARD (SILVER) FOR DEUTSCHE SOLAR**

Deutsche Solar GmbH became the world's first company in the solar industry to pass an audit for the silver CETPM Award by the Centre of Excellence for TPM (CETPM). The role of the CETPM, an institution at the Ansbach University of Applied Sciences, is to see companies through operational improvement processes and audit their success in terms of the degree of operational excellence. TPM (Total Productive Management) is the world's most popular improvement system for optimizing production processes and increasing system efficiency. The TPM principle has been in place at SolarWorld's Freiberg location since 2007.

**SVTC (SILICON VALLEY TOXICS COALITION), SCORECARD RANKING, 5<sup>TH</sup> PLACE (2012: 3<sup>RD</sup> PLACE)**

In its survey, non-profit enterprise Silicon Valley Toxics Coalition (SVTC) assesses companies according to a variety of criteria such as environment, health and safety, sustainability, workers' rights and social fairness.

Aspects considered include product return systems and recycling, workers' health and safety, a life cycle analysis and analysis of the use of chemicals, and disclosure statements. In the 2013 ranking, SolarWorld achieved fifth place with 64 points, behind Trina Solar (77 points), Yingli (75 points) and SunPower (69 points).

**GERMAN INDUSTRY PRIZE 2013 (CATEGORY: „ENERGY AND ENVIRONMENT“)**

The newly developed battery system SUNPAC 2.0 belongs to the “Best of” in the German Industry Prize 2013. The Industry Prize is given out in 14 categories including for example Engineering and Fluid Technology, Energy and Environment or Suppliers. An independent, top-class jury – consisting of 30 professors, scientists and specialist journalists – nominate the individual category winners and then an overall winner is chosen from this pool based on overall performance. Decisive criterion for the jury’s decision are the economic, social, ecological and technological benefit.

**MOST POPULAR EMPLOYERS 2012 (TRENDENCE), 16<sup>TH</sup> PLACE**

In the “German engineering edition” of the survey conducted by research institute Trendence, German students approaching their final exams and graduates of engineering sciences voted SOLARWORLD 16<sup>TH</sup> most popular employer in 2012. The vote reflects awareness of the company among young people starting out in their careers, and its attractiveness to this group. This recognition encourages us to continue to position ourselves as a desirable employer in future, and to offer worthwhile incentives to potential candidates.

**CORPORATE REGISTER CR REPORTING AWARDS, 4<sup>TH</sup> PLACE IN “BEST INTEGRATED REPORT” (2011: 2<sup>ND</sup> PLACE)**

In the year 2012 CR Reporting Awards, SOLARWORLD achieved 4th place in the “Best Integrated Report” category. SOLARWORLD therefore received the same ranking it did in 2010. 2012 was the fifth time the award was presented by Corporate Register. Awards are given in nine different categories relating to reporting. A total of 93 companies from 27 countries took part in the competition in 2012.

**BEST ANNUAL REPORTS (MANAGER MAGAZIN), 3<sup>RD</sup> PLACE (TECDAX) (2011: 2<sup>ND</sup> PLACE)**

In the renowned “best annual reports” competition run by manager magazin, SOLARWORLD came 3rd in the TecDAX category in the year 2012. Two teams of expert assessors from the University of Münster each independently examine the reports in terms of content and design. The four best reports from each index are additionally scrutinized by an expert jury, which considers their conciseness, credibility and reporting efficiency. The competition is the most comprehensive of its kind in Germany.



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**RED DOT DESIGN AWARD, WINNER IN “ANNUAL REPORT” CATEGORY**

reddot design award  
winner 2012

In 2012, the Design Zentrum Nordrhein Westfalen awarded the red dot design award in the “Annual Report” category to the SOLARWORLD Annual Group Report and integrated customer magazine. This international award for communication design has been presented since 1993, and provides a prestigious comparison platform for design and global trends. A panel of 15 international experts judged almost 7,000 entries from 43 countries in 2012, presenting the coveted awards in 21 categories. In addition to the annual report award, SOLARWORLD Suncharger won the red dot design award early in 2012.

**ECON AWARD, GOLD**

In November 2012, SOLARWORLD received the highly desired gold Econ Award for corporate communication for its 2011 Annual Group Report and international customer magazine. Presented since 2007 by the Econ publishing house and Handelsblatt group, the award honors the best corporate communication in the German-speaking area. The jury, comprising ten distinguished specialists in corporate communication, chooses the winner based on a detailed criteria catalog. In addition to financial indicators, it includes areas such as innovative design, brand presentation and value management. SOLARWORLD scored highly, emerging as category winner, for its authentic presentation style and inclusion of sustainability in its reporting.

**GERMAN ENERGY EFFICIENCY PRIZE 2012**

The SUNPAC solar storage system by SOLARWORLD won the German Energy Efficiency Prize in the “electricity savings” category. The prize was awarded by ENERGIESPAREN magazine, the German energy advisor network Deutsches Energieberater-Netzwerk e.V. (DEN), and Bausparkasse Schwäbisch Hall. The most promising candidates in four categories were selected, and the winner of each category was chosen by readers and online users. SOLARWORLD’s SUNPAC battery system emerged victorious in its category thanks to its efficiency and innovative, user-friendly design.

**MADE IN THE USA FOUNDATION HALL OF FAME**

In July 2012, SOLARWORLD was proclaimed winner in the “Solar Panels” category by Made in the USA, a nonprofit organization, and inducted into their Hall of Fame. The American organization has presented the award since 2010 to recognize companies for quality products, competitive strength and innovative force in their industry within the U.S. market. SOLARWORLD won in its category for maintaining exceptional working conditions and environmental standards, for creating jobs in the U.S. market, and for its efforts to uphold fair competition against competitors in the global solar market.

**SPIRIT OF INDEPENDENCE AWARD, 2012 CLEAN ENERGY SUPPLIER OF THE YEAR AWARD**



SOLARWORLD became the supplier of the year in the renewable energy sector in 2012. The award is presented by Affiliated Distributors, an independent association of companies in the construction trade and industry in the United States.

**PID (POTENTIAL INDUCED DEGRADATION) FREE CERTIFICATION**



In 2012, SOLARWORLD modules were awarded this quality seal by PV Evolution Labs (PVEL) in the United States, an independent photovoltaic test laboratory. The modules made by SOLARWORLD achieved the best possible rating, proving once again that compared to products by other manufacturers, SOLARWORLD modules are more efficient and have a longer life cycle.

**OEKOM RESEARCH, 2012: PRIME A (2010: PRIME A)**



In 2012, SOLARWORLD was reassessed by oekom research and awarded a rating of PRIME A. As a result, the SOLARWORLD stock qualifies as an ecological and social investment.

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## PERFORMANCE INDICATORS

## ECONOMIC PERFORMANCE INDICATORS

## / G4-EC1 / DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED

## 08 DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED // IN K€

	2013	2012	2011	2010	Comment
a) Income	510,172	760,621	1,311,659*	1,430,187	Sales revenues + other operating income + net income from investments accounted for using the equity method + interest and other financial income
<b>Distributed monetary value</b>					
b) Operating expenses	-591,406	-1,263,799	-1,411,068*	-1,086,431	Changes in inventory of products + own work capitalized + material costs + depreciation + other operating expenditure
c) Salaries and company benefits	-112,366	-129,378	-138,224*	-126,282	Personnel expenditure
d) Payments to capital providers	-71,803	-55,257	-65,716*	-68,853	Interest and other financial expenses + net earnings from financial instruments
e) Payments to public authorities	-3,383 Germany: -2,091, USA: -1,177, Singapore: -48, South Africa: -67	-4,945 Germany: -4,780, USA: -78, Singapore: -70, South Africa: -17	-23,023* Germany: -21,237, USA: -54, Singapore: -397, South Korea: -1,336	-55,172	Taxes on income (without deferred taxes) ➔ 36. Income taxes • p. 181 //
f) Investments in the community	-101	-375	-508*	-392	Donations in money and in kind (donations to political parties are not included and have not been made since 2010)
<b>Retained monetary value (negative: reversal of retained monetary value)</b>	<b>-268,887</b>	<b>-693,133</b>	<b>-326,880*</b>	<b>93,057</b>	Main impact 2012 from extraordinary amortization ➔ 32. Amortization and depreciation • p. 177 //

\* Based on the results of the discussion in the International Accounting Standards Board (IASB), SOLARWORLD revised its accounting method and made an adjustment to reflect the state of this discussion. Interest from made and received advances is no longer compounded. ➔ Development of material income line statement items • p. 073 // Comments on the income statement • p. 175 //

Our management takes account of the opportunities and risks related to climate change for our business activities. ➔ *Individual risks* • p. 090// *Opportunity report* • p. 108// For SOLARWORLD, we see more opportunities rather than risks as our products help mitigate climate change and our technology will achieve long-term competitive advantages for us in the energy market. The following information also appears in our annual report to the Carbon Disclosure Project (CDP) and may where necessary in May 2014 be updated. For SOLARWORLD, the following regulatory, physical and other risks and opportunities result.

#### 09 REGULATORY, PHYSICAL AND OTHER RISKS

Risk driver	Description	Potential impact	Time-frame	Direct/Indirect	Likelihood	Magnitude of impact
Renewable energy regulation	Amendments of renewable energy regulation to the disfavor of solar power use in each key solar market	Reduced demand for goods/services	Current	Indirect (Client)	Very likely	High
Fuel/energy taxes and regulations	Higher operational costs for transportation (goods) and employee commuting to and from work	Other: Increased costs in the value chain	Current	Direct	Likely	Medium
Uncertainty surrounding new regulation	Uncertainty of further development of renewable energy regulation in each key solar market	Reduced demand for goods/services	1-5 years	Indirect (Client)	Likely	Medium
International agreements	Lack of binding agreements in favor of solar power	Reduced demand for goods/services	6-10 years	Indirect (Client)	More likely than not	Low-medium
Other physical climate drivers	We are as exposed to climate change (e.g. extreme weather events) as are other companies, but we are not especially vulnerable to one of the factors mentioned.	Reduction/disruption in production capacity	Current	Direct	More likely than not	Medium-high
Reputation	The public discussion about regulation for renewable energies and about the EU trade complaint is partly in disfavor of solar industry.	Reduced demand for goods/services	Current	Indirect (Client)	Very likely	Medium-high

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The mentioned risks in case of occurrence could result in financial implications: reduction in output, increased costs and risk to business. Part of our risk management, are for instance activities for restructuring and streamlining of our business, financial restructuring of our company and contributing to the political discussion. The major physical risks identified by the International Panel on Climate Change (IPCC) include: sea level rise, water shortage, hurricanes and typhoons, as well as floods and droughts, depending on the region. SOLARWORLD is not especially exposed to physical climate risks due to its geographic location, but there is a general exposure to extreme weather events. The financial implications could be high if the company's buildings and equipment are damaged, if day-to-day business has to be interrupted or the up- or downstream value chain is affected. This risk is managed through our regular insurances covering storm, hail, snow load, avalanches, floods, subsidence and landslides, and indirectly even fire hazard (e. g. if forest fires would spread to our building). Apart from property damage, business interruption is also insured against damages at SOLARWORLD or at our suppliers. The total financial risk is reduced, but cannot be completely covered due to deductibles, maximum indemnities and maybe even exclusion of benefits. Regarding the reputational risk, the financial implications can be a reduction in output. Part of our risk management activities are for instance stakeholder dialogues and the continued participation in the political discussion. In total, the cost of the bundle of counteractions is estimated to be lower than the costs the company would have to bear without those counteractions.

**10 REGULATORY, PHYSICAL AND OTHER OPPORTUNITIES**

Opportunity driver	Description	Potential impact	Time-frame	Direct/ Indirect	Likelihood	Magnitude of impact
General environmental regulations, including planning	As awareness on the climate change issues increases worldwide, new regulations will be implemented, which will aim to reduce emission targets through the establishment of low-carbon products and technologies among other measures. Especially after the nuclear accident in Fukushima, politicians increasingly recognize that renewable energies are one of the key solutions. Over the last years the use of lowcarbon products as a means for climate protection has been developing into an important market worldwide. For companies like SOLARWORLD AG whose products offer solutions in mitigation of climate change, regulatory policies for climate protection represent an important business opportunity.	Increased demand for existing products/services	1-5 years	Direct	More likely than not	Medium-high

Opportunity driver	Description	Potential impact	Time-frame	Direct/Indirect	Likelihood	Magnitude of impact
International agreements	The European Union has agreed to reduce its GHG emissions by 20 percent by the year 2020; one of its ways to achieve this is by increasing the share of renewable energy in the energy mix up to 20 per cent until 2020. Many countries within the EU have therefore established regulations to support the development and installation of renewable energies through feed-in tariffs, green bonus systems, renewable energy standards as well as rebate programs. Germany has agreed to increase its renewable energies target to 25 percent by the year 2020.	Increased demand for existing products/services	6-10 years	Direct	More likely than not	Medium-high
Carbon taxes	A better internalization of external effects supports the use of renewable energies such as solar power.	Increased demand for existing products/services	6-10 years	Indirect (Client)	More likely than not	Medium
Product labeling regulations and standards	Credible labels for high product quality and high ecological and social performance help customers in decision making	Increased demand for existing products/services	1-5 years	Indirect (Client)	Likely	Medium
Fuel/energy taxes and regulations	Increasing costs for fossil fuels support the use of renewable energies such as solar power.	Increased demand for existing products/services	1-5 years	Indirect (Client)	Likely	Medium-high
Other physical climate opportunities	Changes in physical climate parameters are a clear argument for solar power. Severe weather events make the population more aware of the danger.	Increased demand for existing products/services	6-10 years	Indirect (Client)	Likely	Medium-high
Reputation	Reputation of a company that invests in clean products and a sustainable society	Premium price opportunities	1-5 years	Direct	More likely than not	Medium-high
Changing consumer behaviour	Solar applications becoming more popular, focus on high-quality producers	Increased demand for existing products/services	1-5 years	Direct	More likely than not	Medium-high
Reputation	Reputation of a company that invests in clean products and a sustainable society	Wider social benefits	1-5 years	Direct	More likely than not	Medium-high

Regarding the regulatory chances, financial implications can arise from potential volume growth and opportunity to achieve a premium price in the market for our high-quality products. Solar power is one of the key answers to climate change and stricter regulation on climate change increase our business potential. The methods used to manage this opportunity are marketing campaigns to raise awareness, lobbying for political support in favour of a sustainable energy supply, as well as restructuring and streamlining of our company to be able to meet future demand. The portion of costs associated cannot be shown as these actions are broader than just targeting climate change mitigation and adaptation, but the costs are estimated to be lower than the positive financial impacts. Regarding the physical chance, the financial implications of raised awareness for climate change are very positive for the company as this reinforces its core business goals. We are also continuously engaged in public discussion. The costs cannot be separated from the general marketing costs, but the costs are estimated to be lower than the positive financial impacts. Regarding the first reputational opportunity, financial implications can arise from a broad range of factors, such as stronger brand recognition. With regard to changing consumer behaviour and the second reputational chance, the financial impli-

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cations can arise from more support from stakeholders. Especially for the least mentioned opportunity driver, the reputation of a company, positive financial implications can arise from more support from stakeholders and the image of being an attractive company to potential employees. The methods to manage this opportunity are a sustainable corporate management and communication regarding our sustainability performance via campaigns, the annual reporting etc., as well as corresponding marketing measures when addressing (potential) employees. The portion of costs associated cannot be shown as these actions are broader than just targeting climate change mitigation and adaptation, but the costs are estimated to be lower than the positive financial impacts.

The total expended costs for dealing with risks and opportunities are not yet being assessed.

### COVERING THE OBLIGATIONS FROM THE SALARY-BASED PENSION PLAN

/ G4-EC3 / Benefit plans over and above statutory pension provisions are contribution-based. A final salary-based commitment exists in only one case. Employees who were employed at the former Munich site are entitled to direct pension commitments (final salary-based pension commitments). In 2013, these obligations totaled 8,772 (2012: 8,605) k€. ➔ 22. Retirement benefits • p. 171 //

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**FINANCIAL ASSISTANCE RECEIVED FROM GOVERNMENT**

/ G4-EC4 / There is no government body holding shares in SOLARWORLD AG. In the year 2012, the previous years' values of the investment grants received were adjusted ex-post. The corresponding data reflected the dissolution of the deferred investment grants in the previous years. The data was adjusted to the respective cash-effective received amounts.

**⑪ FINANCIAL ASSISTANCE RECEIVED FROM GOVERNMENT // IN K€**

	2013	2012	2011	2010
Investment grants	10	27,508	23,906	3,344
Research grants	7,195	5,261	3,938	2,179

In Germany, the group pays no EEG levy (equals approx. 8 million euros) and no electricity tax (equals approx. 2 million euros).

**STARTING SALARIES VERSUS MINIMUM WAGE**

/ G4-EC5 / As a rule, we pay salaries above minimum wage at all sites. In Germany, the difference between this and the 8.50 euros minimum wage announced for 2015 is 1.86 euros. In the United States, the difference between the minimum wage of 9 USD in California and 9.10 USD in Oregon is 1.50 USD in California and 1.40 USD in Oregon.

**LOCALLY BASED HIRING OF EMPLOYEES**

/ G4-EC6 / We are an international group and mainly recruit locally at our various sites, although in this matter, there is no company guideline. We try to keep the number of “expatriates” down. Under various non-discrimination provisions (federal agreement on application of equal opportunities legislation (AGG) in Germany, rules and regulations by the Equal Employment Opportunity Commission (EEOC) and Affirmative Action in the U.S.) and pursuant to our groupwide Code of Conduct, local candidates must not be given preference nor discriminated against in the recruitment process.

For all management levels, we disclose the percentage of locally hired employees. At SOLARWORLD AG, figures for the expat status of executive staff are estimated because in some cases data on the original place of residence before joining the company are not available.



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## ⑫ LOCALLY BASED HIRING OF EMPLOYEES

Locally hired executive staff/employees	2013	2012	2011	2010
<b>Percentage local (board members and managing directors)</b>				
Germany	100 %	100 %	100 %	100 %
U.S.	75 %	100 %	100 %	100 %
Rest of the world	60 %	–	–	–
<b>Percentage local (1<sup>st</sup> tier of management)</b>				
Germany	100 %	96 %	96 %	100 %
U.S.	60 %	90 %	100 %	91 %
Rest of the world	–	40 %	–	–

At the other management tiers, we have 1 percent „expatriates“ in the USA, and at the remaining sales locations in the rest of the world 50 percent.

## INFRASTRUCTURE INVESTMENTS AND SERVICES PROVIDED MAINLY FOR PUBLIC BENEFIT

/ 64-EC7 / Significant investments in infrastructure and services provided mainly for public benefit were not made in 2012 and 2013. We assume that positive and negative impacts of our activities balance each other out. A needs analysis was, however, not performed. We do support such investments through our partnership with Water Missions International, for example through module donations to schools. We were also lending support through a donation to a crowdfunding campaign for solar installations in public spaces (libraries, schools, etc.) in Portland, Oregon.

## SELECTION OF LOCALLY BASED SUPPLIERS

/ 64-EC9 / There is no company guideline under which preference is given to local suppliers. The geographical position plays a minor role in selecting suppliers since the equipment and commodity market is an international market. The selection is made according to commercial criteria as well as to the criteria quality, technology, logistics and sustainability, with local manufacturers having a logistical advantage. For our (not-for-profit) Solar2World projects, we involve local partners as far as possible (in particular for rack technology and installation). The term “locally based” is defined in a way that is analogous to our segments (IAS 14). ➞ 39. *Segment reporting* • p. 184//

The main locations are our production sites in Freiberg and in Hillsboro. Accordingly, we define the EU and the U.S. as local markets (77 percent of procurement expenditures).

ENVIRONMENTAL PERFORMANCE INDICATORS

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In the following, data quality will be classified into six categories (the abbreviations are stated behind the figures):

ep	= estimated & preliminary
cp	= calculated & preliminary
mp	= measured & preliminary
ef	= estimated & final
cf	= calculated & final
mf	= measured & final

MATERIALS USED

/ 64-EN1 / Our advanced life cycle analysis enables us to state the materials used in terms of weight. Non-renewable materials only account for a tiny proportion of total material consumption because a large proportion of the total is water.

19 MATERIALS USED // IN t

Group	2013	2012
Total materials used	1,156,075 cf	1,345,799 cf
Thereof materials purchased from external suppliers	1,143,012 cf	1,322,182 cf
Thereof materials obtained from internal sources	13,064 cf	23,614 cf
Non-renewable materials	144,525 cf	94,692 cf
Direct materials	112,921 cf	54,104 cf

We are careful in the use of hazardous substances. In our production, we use the following substances that are generally classified as dangerous: hydrogen fluoride (HF), lead (Pb), nitric acid (HNO<sub>3</sub>), phosphorous oxychloride (POCl<sub>3</sub>), silane (SiH<sub>4</sub>), sodium hydroxide (NaOH), hydrochloric acid (HCl), acetic acid (CH<sub>3</sub>COOH), sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), potassium hydroxide (KOH), nitrous oxide (N<sub>2</sub>O) as well as minimal quantities of ammonia (NH<sub>3</sub>).

It is our declared aim to keep the use of dangerous substances to an absolute minimum. In absolute figures, that can be seen in year to year comparison: While in 2012 we were still using 9,376 kg group-wide, in 2013 it was only 4,862 kg.

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At the site in Hillsboro, Ore, the reduced material usage can be explained by the polystyrene recycling activities. Furthermore, the closure in the crystallization and wafer sector has led to a significant material usage reduction. At the Freiberg site, the lower numbers can be explained by reduced production.

SECONDARY RAW MATERIALS (RECYCLING INPUT MATERIALS)

/ G4-EN2 / Reliable data on our recycling rate for many input factors are not available to us. Therefore, we can only state here the proportion that is recycled directly at our site. The percentage therefore appears to be disproportionately low. The recycling rate could be increased in Freiberg and Hillsboro, on the other hand the transport of goods between Freiberg and Hillsboro increased, which has resulted in a temporary interruption of the recycling loops in Freiberg. Since 2012, the packaging material transported to Hillsboro is passed on to an external recycling partner and is therefore excluded from this analysis.

14 RECYCLING INPUT MATERIALS

Group	2013	2012
Recycled input materials (without upstream chain) in t	22,270 cf	24,629 cf
Percentage of recycled input materials	1.93 % cf	1.83 % cf


ENERGY CONSUMPTION INSIDE THE ORGANIZATION

/ G4-EN3 / In the SOLARWORLD group, direct energy consumption mainly consists of non-renewable primary energy sources. To estimate consumption in megajoules (MJ), we used factors from the Ecoinvent database and conversion factors from the GRI. The available data is patchy for the Bonn, France, South Africa and Singapore sales locations. This is partly due to the fact that settlements are received with delay, which means they cannot be taken into account in the report. Also, in some cases, a flat fee is charged for consumption as part of the office rent. The missing data was estimated based on the previous year's values or comparable locations, with the result that all major factors have been taken into account. The applied calculation factors are taken from the „Indicator Protocols Set EN3“ version 3.1 of the Global Reporting Initiative. Due to the decrease in production, the direct primary energy consumption declined in 2012 correspondingly. As a result of reduced production capacity utilization in 2013, the media network is no longer optimally coordinated with production. This affects the key energy numbers despite reduced consumption compared to the previous year. Furthermore, as a result of new processes and the resulting non-optimized production yields – but also pilot production in the wafer and cell area – an efficient operational management is only possible to a limited extent, which additionally influences the cumulative key energy numbers. One positive thing to note is that DEUTSCHE SOLAR GMBH has increased the use of recycling material, which also has an influence on


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DEUTSCHE CELL GMBH and SOLAR FACTORY GMBH, but which is hardly clear in the overall consideration of the key energy numbers. The low numbers for heating oil are clearly due to the weather, since the winter in 2013 was especially warm.

#### 15 DIRECT PRIMARY ENERGY CONSUMPTION

	2013	2012	2011	2010
<b>Direct primary energy consumption in kWh (group)</b>	<b>56,119,088.9 ep</b>	54,291,232.2 ep	55,560,851.7 ep	56,113,851.3 ef
of which gas (in m <sup>3</sup> , until 2011 in kWh)	<b>5,195,484.2 ep</b>	5,286,108.5 ep	55,227,197.1 ep	55,948,582.6 ef
of which heating oil (in t, until 2011 in l)	<b>1.7 ep</b>	2.7 ep	6,088.8 ep	5,173.4 ef
of which diesel (in t, until 2011 in l)	<b>265.1 ep</b>	11.5 ep	26,528.6 ep	11,585.4 ef
of which gasoline (in t, until 2011 in l)	<b>187.4 ep</b>	0.0 ep	151.4 ep	227.4 ef
of which other (in t, until 2011 in l)	<b>0.0 ep</b>	0.0 ep	0.0 ep	0.0 ep
<b>Direct primary energy consumption in MJ (group)</b>	<b>203,336,522.9 cp</b>	206,086,696.0 cp	204,163,524.2 cp	206,191,299.1 cf
of which gas	<b>202,675,836.7 cp</b>	205,477,229.4 cp	202,945,553.8 cp	205,596,457.3 cf
of which heating oil	<b>68,724.9 cp</b>	108,513.0 cp	137,048.6 cp	116,442.8 cf
of which diesel	<b>589,721.3 cp</b>	499,161.6 cp	1,074,963.3 cp	469,450.6 cf
of which gasoline	<b>2,240.0 cp</b>	1,792.0 cp	5,958.5 cp	8,948.4 cf
of which other	<b>0.0 cp</b>	0.0 cp	0.0 cp	0.0 cf
<b>Total primary energy consumption in MJ (group), i.e. direct and indirect consumption</b>  <b>EN4 • p. S063//</b>	<b>2,595,288,485.8 cp</b>	3,944,160,740.1 cp	5,082,495,299.4 cp	4,944,072,145.7 cf

Previous year's data has been slightly adjusted because of an improved database.

It is not possible for us to give a breakdown into renewable and non-renewable energy sources as this depends on the local electricity mix. However, we can provide ratios for the respective electricity mix. For the estimation of the consumption in megajoules (MJ), we use factors from the Ecoinvent database as well as conversion factors by the GRI. Data on the energy payback times are in the Management Report.  **Environment • p. 062//** The available data is patchy for the Bonn, France, South Africa and Singapore sales locations. This is partly due to the fact that settlements are received with delay, which means they cannot be taken into account in the report. Also, in some cases, a flat fee is charged for consumption as part of the office rent. The missing data was estimated based on the previous year's values or comparable locations, with the result that all major factors have been taken into account. Indirect primary energy consumption was lower in 2012 in accordance with the reduced production. As a result of reduced production capacity utilization in 2013, the media network is no longer optimally coordinated with production. This affects the key energy figures despite reduced consumption

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compared to the previous year. Furthermore, as a result of new processes and the resulting non-optimized production yields – but also pilot production in the wafer and cell area – an efficient operational management is only possible to a limited extent, which additionally influences the cumulative key energy numbers. One positive thing to note is that DEUTSCHE SOLAR GMBH has increased the use of recycling material, which also has an influence on DEUTSCHE CELL GMBH and SOLAR FACTORY GMBH, but which is hardly clear in the overall consideration of the key energy numbers. Primary energy consumption at the Hillsboro site mainly decreased as a result of the closure of production areas. For example, the draw furnaces in the crystallization area had an above-average energy consumption compared to other production facilities. Furthermore, processes in the cell area were also changed to new systems whose energy consumption is significantly lower compared to the old systems. Like the production site in Freiberg, the Hillsboro site has set the goal of continuously reducing energy consumption through DIN ISO 50001 certified energy management.

**16) INDIRECT PRIMARY ENERGY CONSUMPTION**

	2013	2012	2011	2010
<b>Secondary energy consumption in kWh (group)</b>	<b>207,634,719.0 ep</b>	324,485,594.1 ep	423,466,299.9 ep	411,274,379.1 mf
of which electricity	207,634,719.0 ep	324,485,594.1 ep	423,093,706.9 ep	410,649,430.1 mf
of which local heat	0.0 ep	0.0 ep	372,593.0 ep	624,949.0 mf
<b>Secondary energy consumption in MJ (group)</b>	<b>747,484,988.4 cp</b>	1,168,148,138.8 cp	1,524,478,679.7 cp	1,480,587,764.6 cf
of which electricity	747,484,988.4 cp	1,168,148,138.8 cp	1,523,137,344.9 cp	1,478,337,948.2 cf
of which local heat	0.0 cp	0.0 cp	1,341,334.8 cp	2,249,816.4 cf
<b>Primary energy consumed to produce secondary energy in MJ (group)</b>	<b>2,391,951,962.9 cp</b>	3,738,074,044.1 cp	4,878,331,775.2 cp	4,737,880,846.7 cf
of which electricity	2,391,951,962.9 cp	3,738,074,044.1 cp	4,874,039,503.8 cp	4,730,681,434.2 cf
of which local heat	0.0 cp	0.0 cp	4,292,271.4 cp	7,199,412.5 cf
<b>Self-generated electricity in kWh (own PV systems) fed into the grid</b>	<b>8,648,224.6 ep</b>	9,869,288.9 ep	9,786,268.3 ep	65,630.0 mf
<b>Proportion of renewable energies in %</b>	<b>0.4 ep</b>	0.3 ep	0.2 ep	0.1 mf

Previous year's data has been slightly adjusted because of an improved database.

## ENERGY CONSUMPTION OUTSIDE OF THE ORGANIZATION

/ G4-EN4 + EN5 / In our life cycle analysis, we calculate the total energy consumption, the cumulated energy demand (CMD), from cradle to gate. For this, we use the Simapro software and the Ecoinvent database. The energy intensity is expressed per production unit, i.e. watt peak. In 2013, was 17.8 MJeq/Wp group-wide (of which 15.68 MJeq/Wp was outside of the organization). With a sales volume of 548 MW, in absolute figures this is equivalent to 9,754.4 TJeQ (of which 8,590 TJeQ is outside of the organization). For detailed information, please consult the Management Report. ➔ Environment • p. 062 //

/ G4-EN6 + EN7 / Only part of the energy savings can be directly attributed to conservation and efficiency initiatives, and also be measured. In 2013, the share of this reduction in Freiberg for 2013 and under the assumption of full utilization works out to 25.55 MJ. This includes savings in fuel, electrical power, and heat and cooling. In total, the energy requirements of products manufactured by SOLARWORLD were reduced by 144 kJ/Wp compared to the previous year (this internal share was calculated in a manner similar to the life-cycle analysis). Due to constantly changing production processes in the USA, energy saving measures were hardly effective in 2013, since consistent work procedures were seldom achieved.

## TOTAL WATER WITHDRAWAL

/ G4-EN8 / We do not reuse any water from other organizations but we do recirculate our own water in production. The available data is patchy for the Bonn, France, South Africa and Singapore sales locations. This is partly due to the fact that settlements are received with delay, which means they cannot be taken into account in the report. Also, in some cases, a flat fee is charged for consumption as part of the office rent. The missing data was estimated based on the previous year's values or comparable locations, with the result that all major factors have been taken into account. Due to the decrease in production, the total water withdrawal declined in 2012 correspondingly. As a result of reduced production capacity utilization in 2013, the media network is no longer optimally coordinated with production, whereby the water figures underwent a negative development, despite reduced consumption. Furthermore, as a result of new processes and the resulting non-optimized production yields – but also pilot production in the wafer and cell area (at both production sites) – efficient operational management is only possible to a limited extent, which has an additional negative influence on the cumulative key water numbers.

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**17 TOTAL WATER WITHDRAWAL**

	2013	2012	2011	2010
Total water withdrawal in m <sup>3</sup> (group)	<b>1,168,417 ep</b>	1,260,735 ep	1,466,030 ep	1,431,642 ef
of which surface water	<b>577,878 ep</b>	541,301 ep	676,269 ep	638,751 mf
of which rainwater	<b>0 ep</b>	0 ep	0 ep	0 mf
of which water from municipal water supply	<b>590,539 ep</b>	719,434 ep	789,260 ep	792,891 mf
of which ground water	<b>0 ep</b>	0 ep	500 ep	0 ef

**/ G4-EN9 / AFFECTED WATER SOURCES**

No water sources are affected by SOLARWORLD.

**WATER RECYCLED AND REUSED**

/ G4-EN10 / We recirculate production water. The available data on water extraction is patchy for the Bonn, France, South Africa and Singapore sales locations. This is partly due to the fact that there is a delay before utility bills are sent out, which means they cannot be taken into account in the report. Also, in some cases, a flat fee is charged for utilities as part of the office rent. The missing data was estimated based on the previous year's values or comparable locations, with the result that all major factors have been taken into account. The amount of water reused was lower in 2012 and 2013 in accordance with the reduced production.

The provision of water of various qualities is required to ensure the wafer production of DEUTSCHE SOLAR GMBH. The untreated source of this water is a reservoir, from which process water is produced through disinfection, pH value adjustment, flocculation and subsequent filtration. After being processed into production water, ca. 35 percent of the untreated water withdrawn is then treated in softening, desalinization and disinfection steps to complete desalinization. Process water flowing into production is used primarily for cooling (ca. 35 percent) and to supply production systems (ca. 50 percent). The completely desalinated water is used almost exclusively in production, in particular for cleaning. Only a small portion (< 10 percent) is used to supply associated processes (ventilation and air conditioning, analysis laboratories). After the treatment stage, production waste water is discharged into the municipal drainage system and channeled to the water treatment plant. The water is neutralized to ensure the water quality required by the water authority and the association for sewage treatment. The waste water is also subject to continuous quantity and quality checks. A small part of more polluted waste water is fed to an external, professional disposal (< 1 percent of total waste water). Various saving measures are realized in the implementation of the sustainable water and energy policies of the company. For example, the concentrates from the water treatment process or the volume

flows from online measuring devices are returned to the process water treatment process. Water-saving measures within production include: cascade rinses, water recycling and the optimization of rinse times and water amounts. The coolant required during the sawing and polishing of silicon blocks is also processed in a multi-stage filtration process, where up to 80 percent of it is recycled. A disinfection stage produces the required sterility.

The water supply and waste water disposal facilities are state-of-the-art and are subject to constant monitoring and maintenance by qualified specialists. System monitoring is supported by manual and automatic measuring technology, as well as by extensive water analyses as part of the self-monitoring by our internal laboratory and accredited external laboratories. At the Hillsboro site, the quantity of recovered water has decreased as a result of the closure of crystallization and wafering.

**⑩ WATER RECYCLED AND REUSED**

	2013	2012	2011	2010
Water recycled/reused in m <sup>3</sup> (group)	135,474 ep	187,020 ep	288,560 ep	216,894 ef
Water recycled/reused as a percentage of total water withdrawal (group)	11.6 % cp	14.8 % cp	19.7 % cp	15.2 % cf

**IMPACT ON BIODIVERSITY**

/ G4-EN12 / We have insured risks resulting from the German Environmental Damage Act (USchadG). USchadG governs liability claims resulting from damage inflicted on protected species and natural habitats, as well as water and soil damage. We are not aware of any major impacts on biodiversity in protected areas or in areas of high biodiversity outside protected areas relating to our activities, products or services at our sites. However, ground is sealed as a result of our activities. In this context, in 2012, renaturation of a service road was to be carried out in the Saxonia industrial area in Freiberg. This is now planned for 2014.

**GREENHOUSE GAS EMISSIONS**

/ G4-EN15 + EN16 / As part of the Carbon Disclosure Project, we produce an annual “Programme Response” which is essentially a greenhouse gas report. The most recent report is always available to download from our website. The below mentioned data were identified with help of the GHG Protocol’s calculation tools. The error rates that may be caused by the estimates and the calculation tools are not known. An update of the figures can be given in the report for the Carbon Disclosure Project (May 2013). Information about the CO<sub>2eq</sub> payback time of our products can be found in the Management Report.

➔ Environment • p. 062 // The available data is patchy for the Bonn, France, South Africa and Singapore sales locations. This is partly due to the fact that settlements are received with delay, which means

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they cannot be taken into account in the report. Also, in some cases, a flat fee is charged for consumption as part of the office rent. The missing data was estimated based on the previous year's values or comparable locations, with the result that all major factors have been taken into account. Due to the decrease in production, the greenhouse gases declined in 2012 and 2013 correspondingly. Greenhouse gas emissions were lower in 2012 and 2013 in accordance with reduced production.

**19 GREENHOUSE GAS EMISSIONS**

	2013	2012	2011	2010
Direct and indirect emissions in tCO <sub>2eq</sub> (Group, CDP Scope 1+2)	<b>95,699.6 cp</b>	139,371.8 cf	188,638.5 cf	178,885.8 cf
Direct emissions in tCO <sub>2eq</sub> (Group, CDP Scope 1)	<b>11,613.4 cp</b>	10,728.9 cf	11,753.5 cf	11,565.4 cf
Indirect emissions in tCO <sub>2eq</sub> (Group, CDP Scope 2)	<b>84,086.2 cp</b>	128,643.0 cf	176,884.9 cf	167,320.5 cf

Previous year's data has been slightly adjusted because of an improved database.

/ G4-EN19 / Greenhouse gas emission reductions as a direct result of initiatives to reduce emissions are associated with initiatives to reduce energy consumption. However, these are not yet distinguished groupwide from the total reductions achieved; therefore, the calculation is not yet possible.

**OTHER GREENHOUSE GAS EMISSIONS**

/ G4-EN17 + 18 / Apart from the before mentioned greenhouse gases, there are no emissions of other substances harmful to the climate. Other indirect emissions from entrepreneurial activities, which are a consequence of the corporate activity, but which are not caused by own or controlled sources (Scope 3 emissions) are calculated based on our life-cycle-analysis. For bought goods and services in 2013, we calculated 348,140 (2012: 320,507) tCO<sub>2eq</sub>. For operational waste we calculated 543 (2012: 564) tCO<sub>2eq</sub>. The calculation is based on both production sites. An update of the figures can be given in the report for the Carbon Disclosure Project (May 2014). We offset part of our flight emissions (100 percent of our emissions attributable to NetJets planes) by participating in the NetJets Climate Initiative.

**20 COMPENSATED FLIGHT EMISSIONS**

	2013	2012	2011	2010
NetJets Climate Initiative in tCO <sub>2eq</sub>	<b>207.7</b>	170.9	340.1	182.5

Detailed information can be found in the Group Management Report. ➞ Environment • p. 062//

**NO<sub>x</sub>, SO<sub>x</sub> AND OTHER SIGNIFICANT AIR EMISSIONS**

/ G4-EN21 / Emissions of the substances listed below relate only to production in the United States. Figures for Freiberg are not available as yet. All emissions lie below the legal limits. Other air emissions occur in the form of carbon monoxide (CO). These are calculated using calculation tools for air emissions (“air district formulas”). NO<sub>x</sub> in exhaust air is very process-dependent. For example, in Hillsboro, we are producing significantly more due to a process change. In Freiberg, NO<sub>x</sub> was only measured in random tests. Continuous measurements have just recently begun.

**(21) NO<sub>x</sub>, SO<sub>x</sub> AND OTHER SIGNIFICANT AIR EMISSIONS // IN t**

	2013	2012	2011	2010
Hazardous air pollutants in t	<b>0.00 ep</b>	0.00 ep	0.24 ep	0.35 cf
NO <sub>x</sub> in t	<b>9.07 ep</b>	5.80 ep	8.74 ep	5.51 cf
Fine dust (PM10) in t	<b>0.45 ef</b>	0.50 ep	0.53 ep	0.46 cf
Persistent organic pollutants in t	<b>0.00 ef</b>	0.00 ep	0.00 ep	–
SO <sub>x</sub> in t	<b>0.27 ep</b>	0.20 ep	0.30 ep	0.22 cf
Exhaust gas and fugitive emissions in t	<b>0.00 ef</b>	0.00 ep	1.03 ep	–
VOC in t	<b>28.20 ep</b>	27.30 ep	29.33 ep	20.63 cf
Other standard air emissions in t	<b>3.80 ef</b>	4.00 ep	2.31 ep	1.94 cf

Previous year's data has been slightly adjusted because of an improved database.

**WATER DISCHARGE**

/ G4-EN22 / All water is discharged into the municipal drainage system. So far, we have very little information on the exact treatment methods. At our production sites and at our large sales locations in Bonn and in Camarillo, strict German and U.S. legal requirements are in force. Our waste water is not reused by other companies. The available data is patchy for the Bonn, France, South Africa and Singapore sales locations. This is partly due to the fact that settlements are received with delay, which means they cannot be taken into account in the report. Also, in some cases, a flat fee is charged for consumption as part of the office rent. The missing data was estimated based on the previous year's values or comparable locations, with the result that all major factors have been taken into account. Due to the decrease in production, the water discharge declined in 2012 and 2013 correspondingly. As a result of reduced production capacity utilization in 2013, the media network is no longer optimally coordinated with production, whereby the waste water figures underwent a negative development despite reduced consumption. Furthermore, as a result of new processes mainly in the wafer sector and the resulting non-optimized production yields – but also pilot production in the wafer and cell area – efficient operational management is only possible to a limited extent, which has an additional negative influence on the cumulative key waste water numbers.

**22 WATER DISCHARGE**

	2013	2012	2011	2010
Total waste water discharge in m <sup>3</sup> (group)	1,012,111 ep	997,022 ep	1,404,641 ep	1,339,407 mf

Previous year's data has been slightly adjusted because of an improved database.

**WASTE BY DISPOSAL METHOD**

/ G4-EN23 / Due to the decrease in production, the amount of waste declined in 2012 and 2013 correspondingly. In addition, the recycling was improved in Hillsboro and thereby the amount of waste could be further reduced. Waste is delivered to disposal companies and processed in accordance with regulations. SOLARWORLD checks this by performing its own audits of the service provider. The available data is patchy for the Bonn, France, South Africa and Singapore sales locations. This is partly due to the fact that settlements are received with delay, which means they cannot be taken into account in the report. Also, in some cases, a flat fee is charged for consumption as part of the office rent. The missing data was estimated based on the previous year's values or comparable locations, with the result that all major factors have been taken into account.

**23 WASTE AND RECYCLING**

	2013	2012	2011	2010
Total weight of waste in t (group)	10,012.50 ep	14,811.26 ep	21,826.94 ep	20,730.83 mf
of which hazardous waste in t (group)	1,292.90 ef	1,351.95 ep	1,487.14 ep	2,264.90 mf
of which recycled or reused (group)	0.0 % ef	0.0 % ep	13.8 % ep	–
of which non-hazardous waste in t (group)	8,719.60 ep	13,459.31 ep	20,339.80 ep	18,465.93 mf
of which recycled or reused (group)	28.1 % ep	28.1 % ep	56.6 % ep	90.9 % mf

Previous year's data has been slightly adjusted because of an improved database. As of the year 2010, data from Freiberg is available, but the percentages fluctuate considerably from year to year. Data collection has to be reviewed with regard to that in the future.

A breakdown of data by waste disposal method is not yet available for Freiberg. Our sites in the U.S. have collected data for each disposal method via the service providers:

24 WASTE BY DISPOSAL METHOD // IN t

Camarillo	2013	2012	2011
Landfilled non-hazardous waste	10.5	24	327
Recycled non-hazardous waste	11	124	274
Incinerated hazardous waste	0	0	2.91
Hillsboro			
Composted non-hazardous waste	5.8	9.6	6.4
Reused non-hazardous waste	28.8	22.5	0
Reused hazardous waste	0	0	10.1
Recycled non-hazardous waste	1,194.7	2,629.2	4,542.1
Recovered non-hazardous waste	139.5	977.7	931.8
Incinerated hazardous waste	2.4	9.1	1.5
Landfilled hazardous waste	0.2	0.4	0
Landfilled non-hazardous waste	2,132.9	2,053.7	2,834.3
Waste water treatment (non-hazardous waste)	405.9	617.5	647.4

SIGNIFICANT SPILLS

/ G4-EN24 / In the reporting period, as in the previous year, there were no significant spills (chemicals, oils, fuels). SOLARWORLD has insured risks resulting from the German Environmental Liability Act (UHG). UHG covers liability claims for bodily injury and damaged property resulting from the spread of harmful substances via the “environmental paths” of soil, water, and air (e.g. health problems in the neighborhood following a fire, death of fish after discharging toxic production waste water, and the associated loss of earnings of a fishery or increased costs at the sewage treatment plant).

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S064

INITIATIVES TO MITIGATE ENVIRONMENTAL IMPACTS

/ G4-EN27 / The products of SOLARWORLD have no significant environmental impact in terms of material input, water consumption, emissions, discharge water, noise or waste. The modules can be recycled at the end of their useful lives. Our life cycle analysis shows that we are continuously improving our product, and hence our sales are compensating for ever greater volumes of emissions.

**25** INITIATIVES TO MITIGATE ENVIRONMENTAL IMPACTS

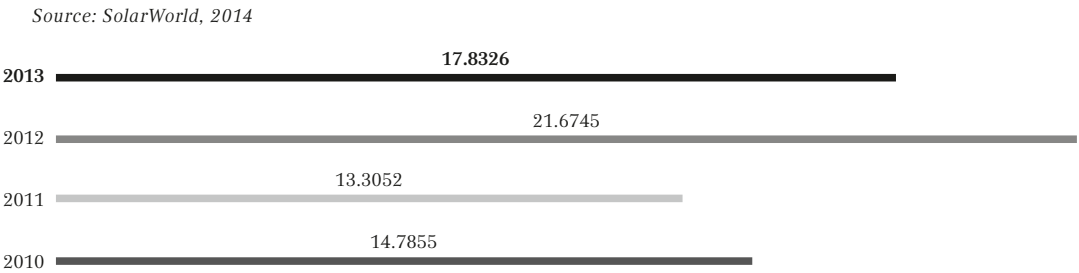
	2013	2012	2011	2010
Total holding area (group)	906,182 ep	924,694 ep	465,288 ep	413,279 cf
of which sealed area (group)	348,155 ep	337,808 ep	274,595 ep	136,915 cf
of which built-over area (group)	185,980 ep	188,909 ep	85,200 ep	55,693 cf

In our life cycle analysis, in addition to the analysis described in the Management Report [➔ \*Environment\* • p.062//](#), we also examine further environmental impacts resulting from the manufacturing process as a whole, i.e. from the extraction of raw materials. Over the last two years, we have achieved a clear improvement in nearly all impacts.

Up to and including 2011, the life cycle analysis could only be calculated for the Freiberg production site. As of 2012, it includes production in the United States.

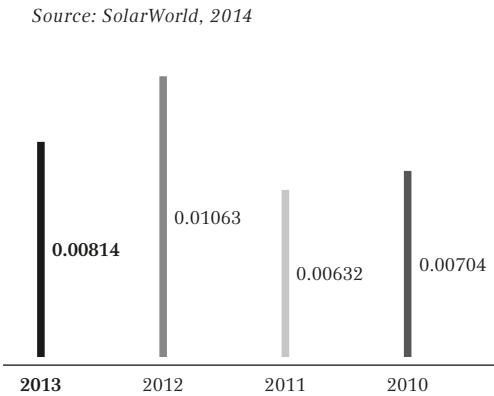
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②⑥ CUMULATIVE PRIMARY ENERGY DEMAND // IN MJ<sub>eq</sub>/WP

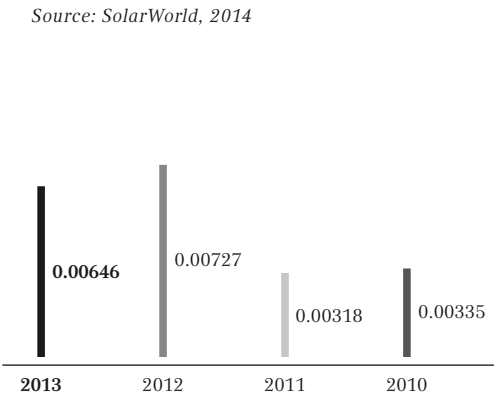


As of 2012, data from the U.S. has been included.  
**Cumulative energy demand:** The cumulative primary energy demand describes how much energy is needed for the production of a watt peak (Wp).

②⑦ ABIOTIC DEPLETION // IN KG SB<sub>eq</sub>/WP



②⑧ ACIDIFICATION // IN KG SO<sub>2eq</sub>/WP



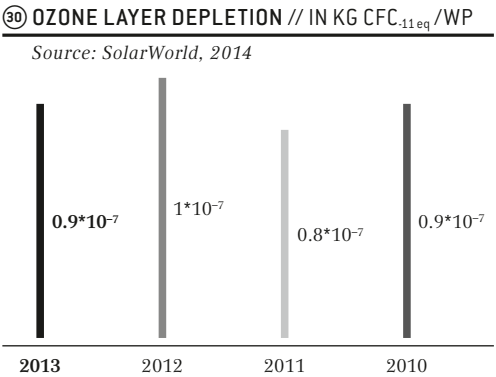
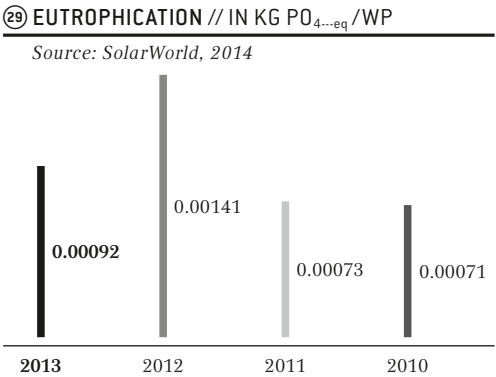
As of 2012, data from the U.S. has been included.

**Explanation of the impact categories**

**Abiotic depletion:** Consumption of abiotic raw materials means the consumption of energy sources, ores and other mineral raw materials, and involves pressures on the environment and changes in the state of the environment.

**Acidification:** Soil and water are damaged due to acidification, e.g. due to high concentrations of CO<sub>2</sub> or nitrogen, acid rain, or fertilizer.

S066

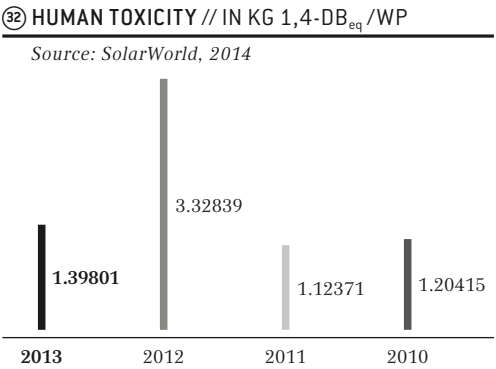
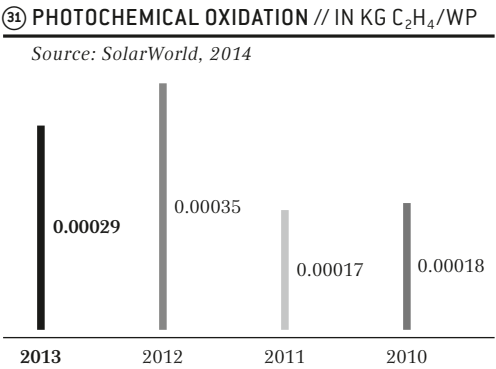


As of 2012, data from the U.S. has been included.

Explanation of the impact categories

**Eutrophication:** Eutrophication means the enrichment of soil and water by nutrients, especially nitrates and phosphates, resulting in overfertilization which can disturb the species composition.

**Ozone layer depletion:** The destruction of the ozone layer is primarily caused by gaseous halogen compounds, resulting in a harmful intensity of ultraviolet (UV) radiation.



As of 2012, data from the U.S. has been included.

Explanation of the impact categories

**Photochemical oxidation:** Photochemical oxidation (known as “summer smog”) is caused by reactions between nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) under UV radiation.

**Human toxicity:** Human toxicity means the harmful impact of numerous poisonous substances (e. g. heavy metals and organic substances) on the human organism.

Further information on successes in the area of environmental management can be found in the section of the disclosures on management approach. G4-DMA • p. S010//

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## RECYCLING OF USED MODULES AND PACKAGING MATERIALS

/ G4-EN28 / The WEEE (Waste Electrical and Electronic Equipment) directive regulates the proper recycling of waste electrical and electronic equipment and its financing by manufacturers at the European level. This law for the disposal of electronic waste, which in the future also defines discarded solar modules as electronic waste, has been revised at the European level. The European Union requires the implementation of WEEE2 in national law by February 2014. At the time of implementation, a free return system for solar modules will be created in all European Union countries. Producers and distributors will then share responsibility for accepting and properly disposing of returned solar modules. Activities to implement WEEE2 began in January 2014 and some countries have already ratified WEEE2 into national law. However, most EU countries will begin implementation of WEEE2 over the course of 2014.

Until now, SOLARWORLD has committed to the voluntary acceptance of old modules in Germany in order to reflect the importance of environmental protection and in particular the proper disposal of old modules. Since 2013, this voluntary take-back obligation has been expanded to all countries in the European Union. We also have partner companies in the U.S. to carry out recycling.

With the implementation of WEEE2 in the EU member states, the right of return changes fundamentally for consumers. Previously accepted voluntarily by SOLARWORLD, in the future, old modules will be brought by owners to municipal waste disposal centers or, for large quantities, picked up at the source location. Requests for pickup and disposal pass through a central point, the so-called national Registers. They use a lottery system based on market share to inform a manufacturer, which is then responsible for the proper disposal of the old modules. According to information from the disposal industry, significantly reduced prices for the recycling of old modules can be expected in the future. This depends primarily on settled legislation, and furthermore on the development of the required disposal technology at certified waste management companies. Certified waste management companies are currently able to recycle old modules in such a way that almost all of the reusable material can be fed into production processes as secondary raw materials.

Owing to the long service life of solar modules, we do not yet have any significant volumes of returned products to report. In contrast, packaging materials are already produced at product delivery.

Due to the decrease in production, the amount of packaging materials declined correspondingly. In addition, the recycling was improved in Hillsboro in 2012 and thereby the amount of packaging materials could be further reduced. Our products are packaged to protect them during transportation, not for advertising purposes. In Germany, we have contracted out recycling and reuse operations to Inter-seroh Dienstleistungen GmbH. The properly reported quantities of authorized packaging materials are determined by Inter-seroh on the basis of their inspection specification (as of September 2007) (in particular based on purchasing statistics, invoices and delivery notes) and are attested by auditors. These figures do not include materials taken back and recycled via a different collection system or in the framework of our own collection system as well as packaging material which has verifiably been

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S068

exported. Data was not yet available for 2013, which is why the data from 2012 was used as an estimate. Interseroh sorts and recycles 100 percent of materials by material types. Historical values can be found in the previous year's report.

33 PACKAGING MATERIALS

Locations	Bonn	Freiberg	Camarillo	Hillsboro
Packaging materials	Carton/cardboard: 79.6 t	Carton/cardboard: 492.72 t	None	Paper: 244.7 t
	Wood: 627.0 t	Wood: 70 t		Wood: 375.0 t
	Plastics/PE-film/strapping bands/polystyrene/PE protective corners/PP: 60.9	Plastics/polystyrene/PUR/stretch film/polystyrene/strapping bands: 559 t		Stretch film: 19.3 t
				Plastic pallets and barrels: 5.6 t
				Strapping bands: 3.2 t
				Polystyrene/PUR: 9.8 t
				Other recycling (incl. hard plastic waste): 18.8 t
Total 2013 in t	767.4	1,121.7	0 t	647.4
Total 2012 in t	767.4	1,102.2	123.4	680.8
Total 2011 in t	996.2	1,038.9	274.1	900.8

At our sales locations in France, South Africa and Singapore, the only waste materials are office and kitchen waste, which are disposed of in accordance with local legislation and are not material.

COMPLAINTS REGARDING ECOLOGICAL IMPACT

/ 64-EN34 / Complaints were neither in the year 2012 nor in the year 2013 registered.

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## SOCIAL PERFORMANCE INDICATORS

S069

In the following, all data is measured and final (mf), unless otherwise indicated.

### TOTAL WORKFORCE BY EMPLOYMENT TYPE, EMPLOYMENT CONTRACT AND REGION

/ 64-10 / Due to personnel adjustment measures, the number of employees decreased groupwide in 2012 by 21 percent and another 6.6 percent in 2013. Thanks to comprehensive restructuring measures, in 2012 we could fill 63 percent of the open vacancies internally and 32 percent in 2013.

International comparisons of employment conditions and employment contracts are valid only to a certain extent. For the U.S., a breakdown into permanent and fixed-term employment contracts is not possible due to legal differences (weak protection from dismissal, frequent lack of written employment contracts). The share of employees with a permanent contract in Freiberg has almost remained the same. At SOLARPARC AG, it grew to 100 percent. By contrast, at SOLARWORLD AG the share fell from 87 percent to 76 percent in the course of the restructuring process and due to the challenging economic position, which makes long-term planning more difficult. For some employees, this reduces job security. But due to the lack of predictability, SOLARWORLD is unable to completely prevent this in terms of the stability of the company.

The share of part-time workers varies slightly from year to year at a low level, primarily due to those returning from parental leave. A clear trend has yet to be discerned. In contrast to Germany, in the United States a high share of part-time employees is seen as a negative signal, since it can indicate underemployment. We can rule out that a substantial part of the organization's activities are performed by full-time employees who are legally considered self-employed or by persons who are not employees or subject to directives; this also applies to employees and personnel subject to directives from contractual partners. Statements from previous years were minimally corrected based on improved information. For further information about employees, please consult the Management Report. Previous year's data has been slightly adjusted because of an improved database. For further information about employees, please consult the Management Report. © *Employees • p. 066 // Future strategic alignment of the group • p. 112 //*

The economic position of the group necessitated staff cutbacks in 2012 and 2013. Despite involving job loss, this measure is sustainable, since as a result the remaining jobs can be preserved and the stability of the company increased. More efficient processes and structural changes enable more streamlined structures. In order to reduce staff due to lower capacity in an employee-friendly manner, we were forced to allow fixed-term contracts to expire in 2013, and also used resignations as opportunities to not restaff these positions (natural fluctuation). We were able to limit the additional reduction in permanent employees in DEUTSCHE SOLAR GMBH to 11, since we were able to place the remaining employees in subsidiaries at the site.

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S070

The share of trainees has also decreased in the face of the economic situation of the company. In the long term, this trend must be monitored in light of the shortage of skilled labor and the responsibility of companies for training.

Due to capacity reasons, we already drastically reduced the share of temporary workers in 2011 and 2012. Measured on a full-time equivalent basis, the number of temporary workers sank by 70 percent from 2010 to 2011 and by 63 percent from 2011 to 2012. In 2013, the number of temporary workers increased by 76 percent.

### 34 TOTAL WORKFORCE BY EMPLOYMENT TYPE, EMPLOYMENT CONTRACT AND REGION

Germany	2013	2012	2011	2010
Total headcount (incl. temporary workers)	1,647	1,685	2,158	2,075
Total headcount (excl. temporary workers)	1,447	1,559	1,756	1,495
Employees excl. trainees (FTE)	1,369.55	1,462	1,654.30	1,396.19
Employees excl. trainees	1,397	1,486	1,674	1,408
of which women	303	323	344	276
of which men	1,094	1,163	1,330	1,132
Part-time workers	56	58	55	41
of which women	45	45	43	34
of which men	11	13	12	7
Employees on permanent contract	1,307	1,380	1,447	1,274
of which women	266	293	303	242
of which men	1,041	1,087	1,144	1,032
Temporary workers (people)	200	126	402	580
of which women	47	37	77	–
of which men	153	89	325	–
Temporary workers (FTE)	111.41	52	218	733
of which women	27.4	14	40	–
of which men	84.01	38	178	–
Temporary workers taken over	15	15	123	–
Trainees	50	73	82	87
of which women	5	15	16	15
of which men	45	58	66	72

U.S.	2013	2012	2011	2010
Total headcount (incl. temporary workers)	723	846	1,048	1,257
Total headcount (excl. temporary workers)	607	769	919	861
Employees excl. trainees (FTE)	607	769	919	861
Employees excl. trainees	607	769	919	861
of which women	165	205	236	241
of which men	442	564	683	620
Part-time workers	0	1	1	0
of which women	0	1	0	0
of which men	0	0	1	0
Employees on permanent contract	0	0	0	0
of which women	0	0	0	0
of which men	0	0	0	0
Temporary workers (people)	116	77	129	396
of which women	35	21	29	–
of which men	81	56	100	–
Temporary workers (FTE)	116	77	129	395
of which women	35	21	29	–
of which men	81	56	100	–
Temporary workers taken over	33	35	260	–
Trainees	0	0	0	–
of which women	0	0	0	–
of which men	0	0	0	–

S072

Rest of the world	2013	2012	2011	2010
Total headcount (incl. temporary workers)	19	27	27	20
Total headcount (excl. temporary workers)	19	27	27	20
Employees excl. trainees (FTE)	19	27	25	20
Employees excl. trainees	19	27	27	20
of which women	10	11	11	7
of which men	9	16	16	13
Part-time workers	1	1	1	1
of which women	1	1	1	1
of which men	0	0	0	0
Employees on permanent contract	11	26	25	20
of which women	6	11	11	7
of which men	5	15	14	13
Temporary workers (people)	0	0	0	0
of which women	0	0	0	–
of which men	0	0	0	–
Temporary workers (FTE)	0	0	0	0
of which women	0	0	0	–
of which men	0	0	0	–
Temporary workers taken over	0	0	0	–
Trainees	0	0	0	0
of which women	0	0	0	0
of which men	0	0	0	0

Group	2013	2012	2011	2010
Total headcount (incl. temporary workers)	2,389	2,558	3,233	3,352
Total headcount (excl. temporary workers)	2,073	2,355	2,702	2,376
Employees excl. trainees (FTE)	1,995	2,258	2,598	2,277
Employees excl. trainees	2,023	2,282	2,620	2,289
of which women	478	539	591	524
of which men	1,545	1,743	2,029	1,765
Part-time workers	57	60	57	42
of which women	46	47	44	35
of which men	11	13	13	7
Employees on permanent contract	1,318	1,406	1,472	1,294
of which women	272	304	314	249
of which men	1,046	1,102	1,158	1,045
Temporary workers (people)	316	203	531	976
of which women	82	58	106	–
of which men	234	145	425	–
Temporary workers (FTE)	227	129,3	347	1,128
of which women	62	35	69	–
of which men	165	94	278	–
Temporary workers taken over	48	50	383	–
Trainees	50	73	82	87
of which women	5	15	16	15
of which men	45	58	66	72

S074

## ATTRITION RATE

/ G4-LA1 / The attrition rate in 2012 increased sharply compared to the previous year due to the extensive HR activities in the group. In 2013, the attrition rate at the Freiberg site decreased slightly compared to the previous year, which is interpreted as a positive signal. In the U.S., the attrition rate at the Camarillo and Hillsboro sites again increased due to restructuring and the combining of the sites. At the Bonn site, the attrition rate increased significantly due to, among other things, the necessary restructuring. In terms of sustainability, these figures must be monitored.

## 35 ATTRITION RATE

Hirings 2013	Germany	U.S.	ROW	Group
Men	54	39	2	95
Percentage	70 %	71 %	50 %	70 %
Women	23	16	2	41
Percentage	30 %	29 %	50 %	30 %
<b>Percentage of newly hired employees 2013</b>				
up to age 30	42 %	44 %	50 %	43 %
aged 31-40	38 %	27 %	0 %	32 %
aged 41-50	13 %	16 %	50 %	15 %
aged over 50	8 %	13 %	0 %	10 %
<b>Percentage of employees leaving 2013</b>				
up to age 30	33 %	29 %	33 %	30 %
aged 31-40	32 %	29 %	33 %	31 %
aged 41-50	23 %	22 %	33 %	23 %
aged over 50	11 %	20 %	0 %	16 %
<b>Employees leaving the company 2013</b>				
Voluntarily, men	72	87	5	164
Percentage	49 %	39 %	56 %	44 %
Voluntarily, women	21	38	2	61
Percentage	14 %	17 %	22 %	16 %
Termination by employer, men	36	80	2	118
Percentage	25 %	37 %	22 %	31 %
Termination by employer, women	17	16	0	33
Percentage	12 %	7 %	0 %	9 %
<b>Attrition rate 2012</b>	<b>8 %</b>	<b>29 %</b>	<b>43 %</b>	<b>15 %</b>

Hirings 2012	Germany	U.S.	ROW	Group
Men	37	59	3	99
Percentage	70 %	66 %	60 %	67 %
Women	16	31	2	49
Percentage	30 %	34 %	40 %	33 %
<b>Percentage of newly hired employees 2012</b>				
up to age 30	42 %	30 %	80 %	37 %
aged 31-40	29 %	29 %	20 %	29 %
aged 41-50	23 %	19 %	0 %	20 %
aged over 50	6 %	21 %	0 %	15 %
<b>Percentage of employees leaving 2012</b>				
up to age 30	34 %	33 %	38 %	33 %
aged 31-40	34 %	24 %	38 %	29 %
aged 41-50	23 %	20 %	25 %	22 %
aged over 50	9 %	23 %	0 %	16 %
<b>Employees leaving the company 2012</b>				
Voluntarily, men	73	103	4	180
Percentage	28 %	43 %	50 %	36 %
Voluntarily, women	11	39	3	53
Percentage	4 %	16 %	38 %	11 %
Termination by employer, men	146	76	1	223
Percentage	58 %	32 %	13 %	44 %
Termination by employer, women	23	23	0	46
Percentage	9 %	10 %	0 %	9 %
<b>Attrition rate 2012</b>	<b>13 %</b>	<b>24 %</b>	<b>31 %</b>	<b>16 %</b>



**BENEFITS TO EMPLOYEES**

/ G4-LA2 / SOLARWORLD offers various non-cash benefits to the employees. All employees throughout the group are entitled to take parental leave, the amount varies, however, very much from country to country. In the U.S., employees are entitled to life assurance, health insurance, and disability insurance. At SOLARPARC and at the site in Singapore, they are entitled to life assurance, and in France and South Africa to health insurance. Pension schemes are offered at all locations except Singapore. Depending on the location, further non-cash benefits are provided locally: Groupwide, at certain management levels or in certain positions (e.g. field staff), employees have the right to a company car. In Freiberg, there are shuttle buses as well as financial support for lunch and various preventive health care measures. SOLARPARC AG sponsors job tickets for employees. In Germany, employees have a right to one day of special leave for special occasions. SOLARWORLD provides special leave beyond this in case of marriage, death of marriage partner and death of parents or children. In the U.S., we grant wage payments, which are legally not mandatory there, e.g. in case of sickness, bereavements, during holidays or if employees are appointed as jurors. Furthermore, employees receive bonus payments if they contribute to the corporate success, e.g. with inventions. Beyond that the company covers costs for further education and training. Veterans receive a “Military Pay” in the U.S. Part-time employees have entitlements equivalent to those of full-time employees. Apart from the generally accessible non-cash benefits (e.g. the shuttle service), there are no benefits for temporary workers as they are employed by their employment agency. In so far as there are any entitlements, they exist with respect to the actual employer. We do not grant stock options.

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PARENTAL LEAVE

/ G4-LA3 / Among male employees, it is difficult to document how many are entitled to parental leave as we only find out about this entitlement if employees come to us and tell us they have become a father. This data is not collected yet in the U.S. In the U.S., all employees who become parents are entitled to parental leave, but only for a few weeks. For the return rates, it was assumed that all employees who took parental leave returned (which in the U.S. is the norm inter alia because the parental leave is very short).

The return rate describes the share of the total workforce that has returned from parental leave. The retention rate describes the share of the total workforce that has returned from parental leave and thereafter remained with the company for 12 months.

Encouraged by financial incentive in Germany, more and more men are taking parental leave, in general for two months. At the Freiberg site, consistently increased numbers of employees taking parental leave show that even in the tense economic phase in which the company finds itself, family planning is not affected. In Bonn, no significant changes have been observed.

36 PARENTAL LEAVE

Germany	2013	2012	2011
Women entitled to take parental leave	61	38	28
Men entitled to take parental leave	196	90	97
Women who took parental leave	41	34	12
Men who took parental leave	47	35	31
Percentage of employees who took parental leave	6.1 %	4.4 %	2.4 %
Women who returned to their job at the end of parental leave	15	12	12
Men who returned to their job at the end of parental leave	43	36	29
Women who were still employed in the company 12 months after the end of parental leave	34	6	7
Men who were still employed in the company 12 months after the end of parental leave	87	33	6
Return rate after parental leave (percentage of the total workforce)	4.0 %	3.1 %	2.3 %
Retention rate after parental leave (percentage of the total workforce)	8.4 %	2.5 %	0.7 %

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S078

U.S.	2013	2012	2011
Women entitled to take parental leave	0	0	–
Men entitled to take parental leave	0	0	–
Women who took parental leave	5	6	15
Men who took parental leave	9	19	9
Percentage of employees who took parental leave	2.3 %	3.3 %	2.6 %
Women who returned to their job at the end of parental leave	5	4	15
Men who returned to their job at the end of parental leave	9	17	9
Women who were still employed in the company 12 months after the end of parental leave	0	0	0
Men who were still employed in the company 12 months after the end of parental leave	0	1	0
Return rate after parental leave (percentage of the total workforce)	2.3 %	2.7 %	2.6 %
Retention rate after parental leave (percentage of the total workforce)	0.0 %	0.1 %	0.0 %

Rest of the world	2013	2012	2011
Women entitled to take parental leave	0	1	1
Men entitled to take parental leave	0	1	1
Women who took parental leave	0	1	0
Men who took parental leave	0	1	1
Percentage of employees who took parental leave	0.0 %	7.4 %	3.7 %
Women who returned to their job at the end of parental leave	0	0	0
Men who returned to their job at the end of parental leave	0	1	1
Women who were still employed in the company 12 months after the end of parental leave	1	0	1
Men who were still employed in the company 12 months after the end of parental leave	0	0	0
Return rate after parental leave (percentage of the total workforce)	0.0 %	3.7 %	3.7 %
Retention rate after parental leave (percentage of the total workforce)	5.3 %	0.0 %	3.7 %

Group	2013	2012	2011
Women entitled to take parental leave	61	39	29
Men entitled to take parental leave	196	91	98
Women who took parental leave	46	41	27
Men who took parental leave	56	55	41
Percentage of employees who took parental leave	4.9 %	4.1 %	2.5 %
Women who returned to their job at the end of parental leave	20	16	27
Men who returned to their job at the end of parental leave	52	54	39
Women who were still employed in the company 12 months after the end of parental leave	35	6	8
Men who were still employed in the company 12 months after the end of parental leave	87	34	6
Return rate after parental leave (percentage of the total workforce)	3.5 %	3.0 %	2.4 %
Retention rate after parental leave (percentage of the total workforce)	5.9 %	1.7 %	0.5 %

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## S080

## EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS

/ 64-11 / The end of 2013 began with the preparation of a vote for the joint Works Council of the SOLARWORLD AG and SOLARPARC AG. 10% of the employees ran for election in the Works Council. The vote took place on January 20, 2014, 74.3 percent of the eligible voters participated – a good voter turnout as the ordinary turnout of first time Works Council elections is between 65 and 80 percent. The constitutive session of the newly elected Works Council took place on January 27. The Works Council consists of 9 members, therefrom 4 women and 5 men.

In Freiberg there is a Works Council (which currently has 15 Works Council members), a representative body for youth and trainees, a representative body for people with severe disabilities, and a company bargaining agreement concluded with the German Mining, Chemical and Energy Workers' Union IG BCE (applicable to: DEUTSCHE SOLAR GMBH, DEUTSCHE CELL GMBH, SOLAR FACTORY GMBH, SOLAR-WORLD INNOVATIONS GMBH). As a matter of course, we comply with all legal rules and regulations in this regard (especially with the German Works Constitution Act (BetrVG)). Transparent processes in selecting applicants, recruitment, promotion to another location or upwards promotion towards a more senior position and dismissal are ensured through legal, bargaining-related and site-specific rules (e.g. a works agreement for vacancies). It is always our aim to seek cooperation with the Works Council and they are assured the appropriate time off to do so and provided with the materials and space they need, as well as funding for training, etc. Alongside day-to-day exchange, there is a regular meeting structure for the parties within the company and within the Works Council bodies. The Works Council and the youth and trainees' representatives have their own pages/zones on the intranet. These bodies can also use the notice boards (in all buildings on the Freiberg site) and send emails to employees. The trade union that organizes within the company (IG BCE) is also granted appropriate information and communication facilities. The Works Council and employees naturally also exchange information during consultation hours, workforce meetings and surveys. In connection with the implementation of necessary operational changes in 2013 (personnel and structural adjustment measures), the company and Works Council held intense negotiations. Finally, however, thanks to the constructive and responsible conduct of both parties within the company, rational compromises were reached in accordance with the circumstances.

Not all Freiberg employees fall under the arrangements and provisions of the existing company agreement. However, since the company agreements, informal agreements etc. represent collective bargaining agreements, the collective agreements cover all employees as a matter of principle, with the exception of the company boards (management boards and managing directors) and top executives („leitende Angestellte“, see German Industrial Relations Act for definition).

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In the U.S., we generally don't have a labor union representing employees. Thus, at our U.S. sites, the percentage of employees falling under collective agreements has decreased to zero as the only union existed at the Vancouver site, which was closed down in 2010.

All employees at our sales location in France are also covered by collective agreements.

### ③7 EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS

Germany	2013	2012	2011	2010
Employees falling under collective agreements	1,120	1,179	1,362	1,263
Percentage (in relation to total headcount, excl. temporary workers)	77 %	76 %	78 %	84 %
U.S.	2013	2012	2011	2010
Employees falling under collective agreements	0	0	0	0
Percentage (in relation to total headcount, excl. temporary workers)	0.0 %	0 %	0 %	0 %
Rest of the world	2013	2012	2011	2010
Employees falling under collective agreements	5	6	7	3
Percentage (in relation to total headcount, excl. temporary workers)	26 %	22 %	26 %	15 %
Group	2013	2012	2011	2010
Employees falling under collective agreements	1,125	1,185	1,369	1,266
Percentage (in relation to total headcount, excl. temporary workers)	54 %	50 %	51 %	53 %

## S082

## HEALTH AND SAFETY

/ G4-LA5 / In Freiberg, there are various occupational health and safety committees:

Company	Committee type	Level	Average number of participants	Percent	Max. number of participants	Percent
DEUTSCHE SOLAR GMBH	Occupational safety committee	Top-level managers, managing director, expert for occupational safety, works council, company physician, safety officers	18-20	2.70 %	65	9.57 %
DEUTSCHE CELL GMBH	Occupational safety committee		13	5.91 %	18	8.18 %
SOLARFACTORY GMBH	Occupational safety committee		12	3.69 %	16	4.92 %
SOLARWORLD INNOVATIONS GMBH	Occupational safety committee		10	6.37 %	22	14.01 %
DEUTSCHE SOLAR GMBH	Occupational health and safety working group	Top-level managers, managing director, expert for occupational safety, operator, safety officers	18-20	2.70 %	85	12.51 %
DEUTSCHE SOLAR GMBH, DEUTSCHE CELL GMBH, SOLARFACTORY GMBH, SOLARWORLD INNOVATIONS GMBH	Company health management system	Top and mid-level managers, employees from various departments	15	1.95 %	31	4.03 %
DEUTSCHE SOLAR GMBH, DEUTSCHE CELL GMBH, SOLARFACTORY GMBH, SOLARWORLD INNOVATIONS GMBH	Company integration management (53 instances in 2013)	Top and mid-level managers, works council, representative body for people with severe disabilities, affected employees, health manager	24	1.74 %	24	1.47 %
DEUTSCHE SOLAR GMBH	TPM ingot occupational safety, environmental protection, workplace safety	Employees of the QHSE department, employee safety and TPM manager	6	0.88 %	10	1.47 %

Occupational health and safety committees in the United States are comprised of at least four members (two selected from the employer and two from the employees). The committee represents less than 1 percent of employees. Representatives selected from the employees can belong to any level of the hierarchy.

In Bonn, we have an occupational safety committee for the occupational health and safety area, which includes a total of six employees, including the expert for occupational safety. They make up 2 percent of employees. Employee representatives can belong to any level of the hierarchy.

/ G4-LA6 / Absenteeism is expressed as the absentee rate (AR). We do not measure the lost day rate (LDR) but lost hours as this parameter is more precise. In Bonn, the planned working time has to be estimated in some cases as the number of days of leave varies, especially among part-time employees. Hence, in all cases, the standard value of 27 days of leave was used.

Reportable occupational accidents involve an inability to work for at least three days. Absence due to accidents relate to the planned working time (Exception U.S.: There, the data is collected in calendar days). The accident statistics also include persons who are performing an activity for us but who are not employees of the SOLARWORLD group (e.g. student assistants). Because of the good aftercare and reintegration after accidents, we could reduce the lost time considerably. As in the previous year, there were no work-related fatalities. This also applies to the joint ventures of SOLARWORLD AG.

➔ Employees • p. 066//

Absentee rates and occupational disease rates relate to the overall workforce but do not include self-employed contractors. Throughout the group, we make sure that working conditions for external contractors are as safe as they are for our employees. At SOLARWORLD AG, 28 (2012: 7) external contractors work for our company. These external contractors are integrated into our company's organizational structure and are trained correspondingly. These contractors are integrated into the organizational structure of our company and are trained accordingly. The employer is informed by the responsible manager at SOLARWORLD about health and safety regulations. As in the previous year, one independent contractor works at SOLARWORLD INNOVATIONS GMBH and receives occupational safety training just like the SOLARWORLD employees. In 2012, one external contractor still worked at DEUTSCHE SOLAR GMBH, and in 2013 none. There have not been any incidents. In the U.S., the number of external contractors is not documented. Fluctuations in the rate of absence are normal and vary greatly from company to company. The long-term trend is therefore particularly significant. To date, no significant changes have been observed. Changes in the injury rate also vary from company to company. Overall, no significant changes have been observed. The change in absences due to accidents also varies from company to company. Overall, no significant changes have been observed. As before, there have been no fatalities.

At SOLARWORLD AG, costs are incurred from a global policy provided by insurers Barmenia, and there are several items relating to health insurance benefits. In 2012, these totaled € 51,316.09 and in 2013 the total was € 39,021.14. These bonuses do not include the bonus for short-term foreign travel (< 90 days). Since it is not clear which locations these should be attributed to, this amount was not included in the summary. In Bonn, the costs for the cafeteria, for free drinks and fruit, as well as for the masseur, were included in the calculation for the first time. At DEUTSCHE CELL GMBH, expenditures grew sharply due to the regularly required mandatory company physical examination. Besides this, there were no significant changes.

/ G4-LA7 / Due to the frequency of work-related illnesses, the highest priority in preventative health care is given to ergonomics, followed by other burdens, for example due to stress, noise, temperature and psycho-

/ G4-LA8 / logical pressure both in production and in administration. Health and safety at work play an important role for us at the operational level. Many of these topics are subject to co-determination and are therefore regularly discussed with the Works Council (in Freiberg and in Bonn) and additional bodies, and measures jointly decided. Agreements with unions do not exist.

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S084

**38 INJURIES, OCCUPATIONAL DISEASES, LOST DAYS, ABSENTEEISM AND WORK-RELATED FATALITIES**

Germany	2013	2012	2011	2010
Planned working time in hours (men, excl. temporary workers)	2,343,935	2,687,585	2,786,925	2,987,371
Planned working time in hours (women, excl. temporary workers)	557,016	674,548	651,026	—
Actual hours worked (men, excl. temporary workers)	1,858,160	1,878,148	2,572,959	—
Actual hours worked (women, excl. temporary workers)	463,399	567,680	554,168	—
Actual hours worked (men, incl. temporary workers)	2,114,746	2,593,215	3,142,498	3,965,640
Actual hours worked (women, incl. temporary workers)	535,688	683,790	741,016	—
Absentee rate (hours lost/planned working time)	5.9 %	5.1 %	4.2 %	3.8 %
Absence due to sickness in hours (men)	140,353	132,583	115,808	114,923
Absence due to sickness in hours (women)	29,917	38,727	29,381	—
Number of employees reporting sick (men)	972	1,074	1,017	1,028
Number of employees reporting sick (women)	271	304	249	—
Sickness rate, total	70.1 %	68.6 %	72.1 %	68.8 %
of which men	78.2 %	77.9 %	80.3 %	—
of which women	21.8 %	22.1 %	19.7 %	—
Number of reportable occupational accidents (men incl. temporary workers)	25	30	29	47
Number of reportable occupational accidents (women incl. temporary workers)	5	4	6	—
Absence due to accidents in hours (men, excl. temporary workers)	3,720	4,022	4,520	4,848
Absence due to accidents in hours (women, excl. temporary workers)	168	88	436	—
Number of fatalities (men, incl. temporary workers)	0	0	0	0
Number of fatalities (women, incl. temporary workers)	0	0	0	0
Accident rate (per 1,000 employees, men, incl. temporary workers)	17.6	19.3	16.9	22.7
Accident rate (per 1,000 employees, women, incl. temporary workers)	14.2	8.9	13.7	—
<b>Total direct costs for employee health and safety in the calendar year in €</b>	<b>436,184</b>	<b>266,541</b>	<b>322,113</b>	<b>300,627</b>
Standardized injury rate (IR) – Men, incl. temporary workers (number of injuries/actual hours worked)*200,000)	2.4	2.3	1.8	2.4
Standardized injury rate (IR) – Women, incl. temporary workers (number of injuries/actual hours worked)*200,000)	1.9	1.2	1.6	—
Standardized lost day rate (LDR) – Men (absence due to accidents in days/actual hours worked)*200,000)	50.0	53.5	43.9	—
Standardized lost day rate (LDR) – Women (absence due to accidents in days/actual hours worked)*200,000)	9.1	3.9	19.7	—
Standardized absentee rate (AR) – Men (absence in days/actual hours worked)*200,000)	1,888.3	1,764.8	1,125.2	—
Standardized absentee rate (AR) – Women (absence in days/actual hours worked)*200,000)	1,614.0	1,705.5	1,325.4	—

U.S.	2013	2012	2011	2010
Planned working time in hours (men, excl. temporary workers)	1,147,016	1,420,506	1,332,320	1,614,113
Planned working time in hours (women, excl. temporary workers)	434,762	511,636	460,000	—
Actual hours worked (men, excl. temporary workers)	995,235	1,288,655	1,180,551	—
Actual hours worked (women, excl. temporary workers)	362,627	440,548	389,817	—
Actual hours worked (men, incl. temporary workers)	1,122,319	1,485,120	1,313,813	1,113,136
Actual hours worked (women, incl. temporary workers)	420,304	516,588	435,960	—
Absentee rate (hours lost/planned working time)	1.7 %	1.8 %	1.6 %	1.5 %
Absence due to sickness in hours (men)	18,865	25,140	20,557	24,716
Absence due to sickness in hours (women)	8,189	9,903	7,361	—
Number of employees reporting sick (men)	522	666	698	738
Number of employees reporting sick (women)	205	250	241	—
Sickness rate, total	94.0 %	89.7 %	100.0 %	85.7 %
of which men	71.8 %	72.7 %	74.3 %	—
of which women	28.2 %	27.3 %	25.7 %	—
Number of reportable occupational accidents (men incl. temporary workers)	1	1	5	4
Number of reportable occupational accidents (women incl. temporary workers)	1	2	8	—
Absence due to accidents in hours (men, excl. temporary workers)	168	180	2,472	820
Absence due to accidents in hours (women, excl. temporary workers)	984	120	1,792	—
Number of fatalities (men, incl. temporary workers)	0	0	0	0
Number of fatalities (women, incl. temporary workers)	0	0	0	—
Accident rate (per 1,000 employees, men, incl. temporary workers)	1.8	1.3	6.4	—
Accident rate (per 1,000 employees, women, incl. temporary workers)	4.6	7.4	30.2	3.2
<b>Total direct costs for employee health and safety in the calendar year in €</b>	<b>590,941</b>	<b>546,297</b>	<b>860,984</b>	<b>83,289</b>
Standardized injury rate (IR) – Men, incl. temporary workers (number of injuries/actual hours worked)*200,000)	0.2	0.1	0.8	0.7
Standardized injury rate (IR) – Women, incl. temporary workers (number of injuries/actual hours worked)*200,000)	0.5	0.8	3.7	—
Standardized lost day rate (LDR) – Men (absence due to accidents in days/actual hours worked)*200,000)	4.2	3.5	52.3	—
Standardized lost day rate (LDR) – Women (absence due to accidents in days/actual hours worked)*200,000)	67.8	6.8	114.9	—
Standardized absentee rate (AR) – Men (absence in days/actual hours worked)*200,000)	473.9	487.7	435.3	—
Standardized absentee rate (AR) – Women (absence in days/actual hours worked)*200,000)	564.5	562.0	472.1	—

S086

Rest of the world	2013	2012	2011	2010
Planned working time in hours (men, excl. temporary workers)	30,850	39,610	31,653	74,137
Planned working time in hours (women, excl. temporary workers)	23,409	17,811	16,884	
Actual hours worked (men, excl. temporary workers)	28,570	37,362	30,393	1,057
Actual hours worked (women, excl. temporary workers)	21,717	16,891	15,696	
Actual hours worked (men, incl. temporary workers)	28,570	37,362	32,153	8,089
Actual hours worked (women, incl. temporary workers)	21,717	16,891	15,696	
Absentee rate (hours lost/planned working time)	1.1 %	1.1 %	1.2 %	1.4 %
Absence due to sickness in hours (men)	224	296	338	1,028
Absence due to sickness in hours (women)	348	328	264	
Number of employees reporting sick (men)	8	11	9	–
Number of employees reporting sick (women)	10	11	9	–
Sickness rate, total	86.7 %	85.7 %	–	–
of which men	44.4 %	50.0 %	50.0 %	–
of which women	55.6 %	50.0 %	50.0 %	–
Number of reportable occupational accidents (men incl. temporary workers)	0	0	0	0
Number of reportable occupational accidents (women incl. temporary workers)	0	0		
Absence due to accidents in hours (men, excl. temporary workers)	0	4	0	0
Absence due to accidents in hours (women, excl. temporary workers)	0	0		
Number of fatalities (men, incl. temporary workers)	0	0	0	0
Number of fatalities (women, incl. temporary workers)	0	0		
Accident rate (per 1,000 employees, men, incl. temporary workers)	0	0	0	0
Accident rate (per 1,000 employees, women, incl. temporary workers)	0	0		
<b>Total direct costs for employee health and safety in the calendar year in €</b>	<b>282</b>	<b>133,397</b>	<b>17,198</b>	<b>4,839</b>
Standardized injury rate (IR) – Men, incl. temporary workers (number of injuries/actual hours worked)*200,000)	0.0	0.0	0	0
Standardized injury rate (IR) – Women, incl. temporary workers (number of injuries/actual hours worked)*200,000)	0.0	0.0	0	
Standardized lost day rate (LDR) – Men (absence due to accidents in days/actual hours worked)*200,000)	0.0	2.7	0.0	–
Standardized lost day rate (LDR) – Women (absence due to accidents in days/actual hours worked)*200,000)	0.0	0.0	0.0	–
Standardized absentee rate (AR) – Men (absence in days/actual hours worked)*200,000)	196.0	198.1	278.0	–
Standardized absentee rate (AR) – Women (absence in days/actual hours worked)*200,000)	400.6	485.5	420.5	24,314.1

Group	2013	2012	2011	2010
Planned working time in hours (men, excl. temporary workers)	3,521,801	4,147,701	4,150,898	4,675,621
Planned working time in hours (women, excl. temporary workers)	1,015,187	1,203,995	1,127,910	
Actual hours worked (men, excl. temporary workers)	2,881,965	3,204,164	3,783,903	–
Actual hours worked (women, excl. temporary workers)	847,743	1,025,119	959,681	–
Actual hours worked (men, incl. temporary workers)	3,265,635	4,115,697	4,488,464	5,086,865
Actual hours worked (women, incl. temporary workers)	977,708	1,217,270	1,192,672	
Absentee rate (hours lost/planned working time)	4.4 %	3.9 %	3.3 %	3.0 %
Absence due to sickness in hours (men)	159,441	158,019	136,703	140,667
Absence due to sickness in hours (women)	38,453	48,958	37,006	
Number of employees reporting sick (men)	1,502	1,751	1,724	1,778
Number of employees reporting sick (women)	486	562	498	
Sickness rate, total	77.5 %	75.7 %	82.2 %	74.8 %
of which men	75.6 %	75.7 %	77.6 %	–
of which women	24.4 %	24.3 %	22.4 %	–
Number of reportable occupational accidents (men incl. temporary workers)	26	31	34	51
Number of reportable occupational accidents (women incl. temporary workers)	6	6	14	
Absence due to accidents in hours (men, excl. temporary workers)	3,888	4,206	6,992	5,668
Absence due to accidents in hours (women, excl. temporary workers)	1,152	208	2,228	
Number of fatalities (men, incl. temporary workers)	0	0	0	0
Number of fatalities (women, incl. temporary workers)	0	0	0	0
Accident rate (per 1,000 employees, men, incl. temporary workers)	13.1	13.3	13.5	15.2
Accident rate (per 1,000 employees, women, incl. temporary workers)	10.4	8.2	19.6	
<b>Total direct costs for employee health and safety in the calendar year in €</b>	<b>1,027,407</b>	<b>946,234</b>	<b>1,200,294</b>	<b>388,756</b>
Standardized injury rate (IR) – Men, incl. temporary workers (number of injuries/actual hours worked)*200,000)	1.6	1.5	1.5	2.0
Standardized injury rate (IR) – Women, incl. temporary workers (number of injuries/actual hours worked)*200,000)	1.2	1.0	2.3	
Standardized lost day rate (LDR) – Men (absence due to accidents in days/actual hours worked)*200,000)	33.7	32.8	46.2	–
Standardized lost day rate (LDR) – Women (absence due to accidents in days/actual hours worked)*200,000)	34.0	5.1	58.0	
Standardized absentee rate (AR) – Men (absence in days/actual hours worked)*200,000)	1,383.1	1,232.9	903.2	–
Standardized absentee rate (AR) – Women (absence in days/actual hours worked)*200,000)	1,134.0	1,194.0	964.0	

## S088

## INITIAL AND FURTHER TRAINING FOR EMPLOYEES

/ G4-LA9 / Training and qualification programs are offered if and as needed. (→ *Employees* • p. 066 // Fluctuations from year to year are normal. We apply a narrow definition of expenditure, only including direct costs (e.g. documented in the form of invoices). Costs for training courses offered e.g. by equipment suppliers as part of an entire package are not included, but the time for such training is contained in the number of hours indicated. At present, only some training measures are documented separately for men and women.

Data for the group is not yet sufficiently reliable. In the U.S., training is not documented for each employee (hence there is also no male/female breakdown). This means that the data for the number of employees who took part in training activities do not contain any data from the U.S., and that the U.S. sites are not included in the calculation of the percentage of employees receiving training. Expenditures for training in the U.S. do not include training costs which the departments fund themselves, as these are not identified in the database. On the other hand, expenditures for training temporary workers are included. Data for the U.S. does not include time spent on external training, as this is not documented.

In 2012 and 2013, less was spent on training and professional development in almost every company due to the economic position. More emphasis is placed on inexpensive, internal learning, e.g. support for self-learners, on-the-job training and learning from colleagues. In the short term, this is a measure to stabilize the company. Long-term, such a development should be monitored to ensure that the innovative power of the company is maintained. Expenditures for training and professional development per employee were therefore lower in almost every company. However, less-expensive, internal learning is not captured in these numbers. For this reason, the figure must be analyzed to determine its suitability for controlling.

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## 39 INITIAL AND FURTHER TRAINING FOR EMPLOYEES

Group	2013	2012	2011	2010
Total training expenditure (in €)	414,946	732,179	1,065,040	741,822
Training expenditure per employee (in €)	200.17	310.90	394.17	312.21
Number of hours spent for training (total)	481,805	31,518	373,804	417,836
Number of hours spent for training (men in management positions)	213,167	4,308	11,320	–
Number of hours spent for training (women in management positions)	281	384	1,505	23,010
Number of hours spent for training (men, non-executive staff, excl. trainees)	913,607	15,637	42,624	–
Number of hours spent for training (women, non-executive staff, excl. trainees)	93,849	4,124	11,844	15,209
Number of training programs	769	1,010	1,228	1,149
Number of employees having completed training programs	1,482	2,358	1,397	2,074
Number of employees having completed training programs (men in management positions)	220	166	150	–
Number of employees having completed training programs (women in management positions)	19	24	25	–
Number of employees having completed training programs (men, non-executive staff)	1,469	996	953	–
Number of employees having completed training programs (women, non-executive staff)	313	294	268	–
Percentage of staff undergoing training per year	57.7 %	77.2 %	82.1 %	90.6 %
Average number of hours spent for training (women in management positions)	–	–	–	–
Average number of hours spent for training (men in management positions)	–	–	–	–
Average number of hours spent for training (women, non-executive staff)	–	–	–	–
Average number of hours spent for training (men, non-executive staff)	–	–	–	–

Previous years's data has been slightly adjusted because of an improved database.

## DIVERSITY AND EQUAL OPPORTUNITIES

/ G4-LA12 / Diversity is important to us at SOLARWORLD. We promote equal opportunities throughout our group and take account of this aspect in recruitment and employment (Principle 6, Global Compact). The sole criteria are qualification, work experience and personal aptitude. Key indicators of diversity and equal opportunities at SOLARWORLD are set out in our Code of Conduct. ☉ G4-56 • p. S029//  
 ➔ Employees • p. 066// @ [www.solarworld.de/sustainability](http://www.solarworld.de/sustainability)// However, diversity in our group has remained moderate.

Our reporting is based on the categories of gender, disability and age distribution. We disclose this data not only for governance bodies but also for the entire workforce. In Germany, it is illegal to ask for information about minority group membership (General Equal Treatment Act (AGG)). In the U.S., data is only recorded for employees who have actively registered themselves as members of a minority group. We do not document this anymore because the numbers are insignificant.

SOLARWORLD is absolutely prepared and eager to employ people with disabilities. However, our influence on this aspect is limited, since it depends strongly on the applications we receive. For this reason, the share of employees with disabilities in the group is still very low. So that we nevertheless make our contribution, at our locations in Bonn, Freiberg and the United States, we cooperate with organizations that promote the integration of people with disabilities into the workforce. At our production site in Freiberg, we launched a partnership with Diakonie Stadtmission Chemnitz e.V. in April 2011 involving the laser cutting of solar cells and assembly of „Tedlarpads“ (order volume approximately € 92,000 in 2013). In Bonn, our Marketing department is working together with Lebenshilfe Bonn Gemeinnützige GmbH/WfB – workshop for the disabled (approximate order volume € 60,000 in 2013) to assemble shipments by hand, roll posters, etc. Additionally, we have a standing order at the Bonn location with the same workshop for assembling the SUNPASS system documentation. In the USA, we have a similar cooperation agreement with Edwards Enterprises, whose employees perform such duties as internal mail delivery and light cleaning.

The Group Management Board consists of four members (two males aged between 40 and 50 years, and one female and one male aged over 50), who do not belong to any minority group. The Supervisory Board comprises three members (male, aged over 50) who do not belong to any minority group. The table shows the number of Management Board members and management directors without double-counting, if individuals fulfill more than one function.

In the Freiberg Production, jobs were eliminated primarily at the employee level in 2013. In Bonn, the share of managers was reduced, which sometimes entailed new groupings. Both measures were aimed at creating a leaner organizational structure and the use of synergies.

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Individual changes are due to the reclassification of management levels, in particular between first and second-level management. Primarily due to the physical labor, the proportion of women in Freiberg is lower: 12 (2012: 17) percent. By contrast, in Bonn, the share is quite high: 41 (2012: 43) percent. For a technical company, that is a very high proportion and speaks for equality in hiring. However, at the Bonn site at the end of 2013, only 25 (2012: 31.5) percent of management positions were filled by women. That shows that the company should pay more attention to recruiting and developing women for management positions. The proportion of women in the Management Board is 25 percent.

A normal distribution of age groups is considered advantageous. Age distribution within SOLARWORLD is very well-balanced overall. This is also reflected in the average age of 41 years. At the Bonn site, the share of very young employees has decreased. The majority is made up of the age group 31-40 years. As part of selection based on social criteria in DEUTSCHE SOLAR GMBH, the share of older employees over 50 years has increased slightly.

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## ④0 DIVERSITY AND EQUAL OPPORTUNITIES

Germany		2012	2011	2010
<b>Number of Management Board members/managing directors</b>	<b>13</b>	<b>14</b>	<b>16</b>	<b>14</b>
Women on the Management Board/in management	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>
Proportion of women on the Management Board/in management	<b>8 %</b>	<b>7 %</b>	<b>13 %</b>	<b>0 %</b>
<b>1<sup>st</sup> tier of management</b>	<b>12</b>	<b>48</b>	<b>46</b>	<b>44</b>
Number of women in the 1 <sup>st</sup> tier of management	<b>1</b>	<b>7</b>	<b>9</b>	<b>8</b>
Proportion of women in the 1 <sup>st</sup> tier of management	<b>8 %</b>	<b>15 %</b>	<b>20 %</b>	<b>18 %</b>
Number of men in the 1 <sup>st</sup> tier of management	<b>11</b>	<b>41</b>	<b>37</b>	<b>36</b>
Proportion of men in the 1 <sup>st</sup> tier of management	<b>92 %</b>	<b>85 %</b>	<b>80 %</b>	<b>82 %</b>
<b>Other tiers of management</b>	<b>156</b>	<b>103</b>	<b>139</b>	<b>138</b>
Number of women in other tiers of management	<b>22</b>	<b>14</b>	<b>13</b>	<b>11</b>
Proportion of women in other tiers of management	<b>14 %</b>	<b>14 %</b>	<b>9 %</b>	<b>8 %</b>
Number of men in other tiers of management	<b>134</b>	<b>89</b>	<b>126</b>	<b>127</b>
Proportion of men in other tiers of management	<b>86 %</b>	<b>86 %</b>	<b>91 %</b>	<b>92 %</b>
<b>Non-executive staff</b>	<b>1,229</b>	<b>1,335</b>	<b>1,489</b>	<b>1,226</b>
Number of women in non-executive positions	<b>280</b>	<b>302</b>	<b>322</b>	<b>257</b>
Proportion of women in non-executive positions	<b>23 %</b>	<b>23 %</b>	<b>22 %</b>	<b>21 %</b>
Number of men in non-executive positions	<b>949</b>	<b>1,033</b>	<b>1,167</b>	<b>969</b>
Proportion of men in non-executive positions	<b>77 %</b>	<b>78 %</b>	<b>78 %</b>	<b>79 %</b>
<b>Trainees</b>	<b>50</b>	<b>73</b>	<b>82</b>	<b>87</b>
of which women	<b>5</b>	<b>15</b>	<b>16</b>	<b>15</b>
of which women (percentage)	<b>10 %</b>	<b>21 %</b>	<b>20 %</b>	<b>17 %</b>
of which men	<b>45</b>	<b>58</b>	<b>66</b>	<b>72</b>
of which men (percentage)	<b>90 %</b>	<b>80 %</b>	<b>81 %</b>	<b>83 %</b>
<b>Total workforce (incl. trainees)</b>	<b>1,447</b>	<b>1,559</b>	<b>1,756</b>	<b>1,495</b>
Total number of women	<b>308</b>	<b>338</b>	<b>360</b>	<b>291</b>
Overall proportion of women	<b>21 %</b>	<b>22 %</b>	<b>21 %</b>	<b>20 %</b>
Total number of men	<b>1,139</b>	<b>1,221</b>	<b>1,396</b>	<b>1,204</b>
Overall proportion of men	<b>79 %</b>	<b>78 %</b>	<b>80 %</b>	<b>81 %</b>
<b>Employees with disabilities</b>	<b>33</b>	<b>33</b>	<b>34</b>	<b>29</b>
Share of employees with disabilities	<b>2.3 %</b>	<b>2.1 %</b>	<b>2.0 %</b>	<b>2.0 %</b>

U.S.	2013	2012	2011	2010
<b>Number of Management Board members/managing directors</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>8</b>
Women on the Management Board/in management	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Proportion of women on the Management Board/in management	<b>0%</b>	<b>0 %</b>	<b>0 %</b>	<b>0 %</b>
<b>1<sup>st</sup> tier of management</b>	<b>5</b>	<b>20</b>	<b>15</b>	<b>12</b>
Number of women in the 1 <sup>st</sup> tier of management	<b>0</b>	<b>4</b>	<b>3</b>	<b>1</b>
Proportion of women in the 1 <sup>st</sup> tier of management	<b>0%</b>	<b>20 %</b>	<b>20 %</b>	<b>8 %</b>
Number of men in the 1 <sup>st</sup> tier of management	<b>5</b>	<b>16</b>	<b>12</b>	<b>11</b>
Proportion of men in the 1 <sup>st</sup> tier of management	<b>100 %</b>	<b>80 %</b>	<b>80 %</b>	<b>92 %</b>
<b>Other tiers of management</b>	<b>76</b>	<b>65</b>	<b>71</b>	<b>74</b>
Number of women in other tiers of management	<b>24</b>	<b>15</b>	<b>16</b>	<b>21</b>
Proportion of women in other tiers of management	<b>32 %</b>	<b>23 %</b>	<b>23 %</b>	<b>28 %</b>
Number of men in other tiers of management	<b>52</b>	<b>50</b>	<b>55</b>	<b>53</b>
Proportion of men in other tiers of management	<b>68 %</b>	<b>77 %</b>	<b>78 %</b>	<b>72 %</b>
<b>Non-executive staff</b>	<b>526</b>	<b>684</b>	<b>833</b>	<b>775</b>
Number of women in non-executive positions	<b>141</b>	<b>186</b>	<b>217</b>	<b>219</b>
Proportion of women in non-executive positions	<b>27 %</b>	<b>27 %</b>	<b>26 %</b>	<b>28 %</b>
Number of men in non-executive positions	<b>385</b>	<b>498</b>	<b>616</b>	<b>556</b>
Proportion of men in non-executive positions	<b>73 %</b>	<b>73 %</b>	<b>74 %</b>	<b>72 %</b>
<b>Trainees</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
of which women	<b>0</b>	<b>0</b>	<b>0</b>	<b>–</b>
of which women (percentage)	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
of which men	<b>0</b>	<b>0</b>	<b>0</b>	<b>–</b>
of which men (percentage)	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>Total workforce (incl. trainees)</b>	<b>607</b>	<b>769</b>	<b>919</b>	<b>861</b>
Total number of women	<b>165</b>	<b>205</b>	<b>236</b>	<b>241</b>
Overall proportion of women	<b>27 %</b>	<b>27 %</b>	<b>26 %</b>	<b>28 %</b>
Total number of men	<b>442</b>	<b>564</b>	<b>683</b>	<b>620</b>
Overall proportion of men	<b>73 %</b>	<b>73 %</b>	<b>74 %</b>	<b>72 %</b>
<b>Employees with disabilities</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>8</b>
Share of employees with disabilities	<b>0.7 %</b>	<b>0.0 %</b>	<b>0.4 %</b>	<b>0.9 %</b>

S094

Rest of the world	2013	2012	2011	2010
<b>Number of Management Board members/managing directors</b>	<b>5</b>	–	–	–
Women on the Management Board/in management	<b>1</b>	–	–	–
Proportion of women on the Management Board/in management	<b>20 %</b>	–	–	–
<b>1<sup>st</sup> tier of management</b>	<b>0</b>	5	5	3
Number of women in the 1 <sup>st</sup> tier of management	<b>0</b>	1	2	0
Proportion of women in the 1 <sup>st</sup> tier of management	–	20 %	40 %	0 %
Number of men in the 1 <sup>st</sup> tier of management	<b>0</b>	4	3	3
Proportion of men in the 1 <sup>st</sup> tier of management	–	80 %	60 %	100 %
<b>Other tiers of management</b>	<b>4</b>	0	0	3
Number of women in other tiers of management	<b>2</b>	0	0	2
Proportion of women in other tiers of management	<b>50 %</b>	–	–	67 %
Number of men in other tiers of management	<b>2</b>	0	0	1
Proportion of men in other tiers of management	<b>50 %</b>	–	–	33 %
<b>Non-executive staff</b>	<b>15</b>	22	22	14
Number of women in non-executive positions	<b>8</b>	10	9	5
Proportion of women in non-executive positions	<b>53 %</b>	46 %	41 %	36 %
Number of men in non-executive positions	<b>7</b>	12	13	9
Proportion of men in non-executive positions	<b>47 %</b>	55 %	59 %	64 %
<b>Trainees</b>	<b>0</b>	0	0	0
of which women	<b>0</b>	0	0	0
of which women (percentage)	–	–	–	–
of which men	<b>0</b>	0	0	0
of which men (percentage)	–	–	–	–
<b>Total workforce (incl. trainees)</b>	<b>19</b>	27	27	20
Total number of women	<b>10</b>	11	11	7
Overall proportion of women	<b>53 %</b>	41 %	41 %	35 %
Total number of men	<b>9</b>	16	16	13
Overall proportion of men	<b>47 %</b>	59 %	59 %	65 %
<b>Employees with disabilities</b>	<b>0</b>	0	0	0
Share of employees with disabilities	<b>0.0 %</b>	0.0 %	0.0 %	0.0 %

Group	2013	2012	2011	2010
<b>Number of Management Board members/managing directors</b>	<b>20</b>	23	25	28
Women on the Management Board/in management	2	2	3	1
Proportion of women on the Management Board/in management	10 %	9 %	12 %	4 %
<b>1<sup>st</sup> tier of management</b>	<b>17</b>	73	66	59
Number of women in the 1 <sup>st</sup> tier of management	1	12	14	9
Proportion of women in the 1 <sup>st</sup> tier of management	6 %	16 %	21 %	15 %
Number of men in the 1 <sup>st</sup> tier of management	16	61	52	50
Proportion of men in the 1 <sup>st</sup> tier of management	94 %	84 %	79 %	85 %
<b>Other tiers of management</b>	<b>236</b>	168	210	215
Number of women in other tiers of management	48	29	29	34
Proportion of women in other tiers of management	20 %	17 %	14 %	16 %
Number of men in other tiers of management	188	139	181	181
Proportion of men in other tiers of management	80 %	83 %	86 %	84 %
<b>Non-executive staff</b>	<b>1,770</b>	2,041	2,344	2,015
Number of women in non-executive positions	429	498	548	481
Proportion of women in non-executive positions	24 %	24 %	23 %	24 %
Number of men in non-executive positions	1,341	1,543	1,796	1,534
Proportion of men in non-executive positions	76 %	76 %	77 %	76 %
<b>Trainees</b>	<b>50</b>	73	82	87
of which women	5	15	16	15
of which women (percentage)	10 %	21 %	20 %	17 %
of which men	45	58	66	72
of which men (percentage)	90 %	80 %	81 %	83 %
<b>Total workforce (incl. trainees)</b>	<b>2,073</b>	2,355	2,702	2,376
Total number of women	483	554	607	539
Overall proportion of women	23 %	24 %	23 %	23 %
Total number of men	1,590	1,801	2,095	1,837
Overall proportion of men	77 %	77 %	78 %	77 %
<b>Employees with disabilities</b>	<b>37</b>	33	38	37
Share of employees with disabilities	1.8 %	1.4 %	1.4 %	1.6 %

S096

Germany, age distribution	2013	2012	2011	2010
Percentage of <b>employees</b> aged 30 or below	18 %	22 %	28 %	31 %
Percentage of employees aged 31-40	34 %	34 %	32 %	31 %
Percentage of employees aged 41-50	30 %	29 %	28 %	27 %
Percentage of employees aged over 50	18 %	15 %	12 %	11 %
Percentage of <b>executives</b> aged 30 or below	6 %	5 %	9 %	–
Percentage of executives aged 31-40	40 %	41 %	42 %	–
Percentage of executives aged 41-50	45 %	44 %	37 %	–
Percentage of executives aged over 50	9 %	10 %	11 %	–
Percentage of <b>non-executive staff</b> aged 30 or below	20 %	23 %	30 %	–
Percentage of non-executive staff aged 31-40	34 %	34 %	31 %	–
Percentage of non-executive staff aged 41-50	28 %	28 %	27 %	–
Percentage of non-executive staff aged over 50	19 %	16 %	13 %	–
<b>Average age</b>	40	33	–	–

U.S., age distribution	2013	2012	2011	2010
Percentage of <b>employees</b> aged 30 or below	19 %	25 %	28 %	22 %
Percentage of employees aged 31-40	26 %	29 %	30 %	26 %
Percentage of employees aged 41-50	27 %	25 %	21 %	28 %
Percentage of employees aged over 50	29 %	22 %	22 %	24 %
Percentage of <b>executives</b> aged 30 or below	1 %	0 %	4 %	–
Percentage of executives aged 31-40	23 %	0 %	32 %	–
Percentage of executives aged 41-50	43 %	50 %	31 %	–
Percentage of executives aged over 50	32 %	50 %	34 %	–
Percentage of <b>non-executive staff</b> aged 30 or below	21 %	25 %	30 %	–
Percentage of non-executive staff aged 31-40	27 %	29 %	29 %	–
Percentage of non-executive staff aged 41-50	24 %	25 %	20 %	–
Percentage of non-executive staff aged over 50	28 %	22 %	21 %	–
<b>Average age</b>	42	41	–	–

Rest of the world, age distribution	2013	2012	2011	2010
Percentage of <b>employees</b> aged 30 or below	<b>38 %</b>	35 %	40 %	21 %
Percentage of employees aged 31-40	<b>29 %</b>	39 %	32 %	42 %
Percentage of employees aged 41-50	<b>29 %</b>	23 %	24 %	29 %
Percentage of employees aged over 50	<b>5 %</b>	4 %	4 %	8 %
Percentage of <b>executives</b> aged 30 or below	<b>0 %</b>	17 %	40 %	–
Percentage of executives aged 31-40	<b>33 %</b>	33 %	0 %	–
Percentage of executives aged 41-50	<b>67 %</b>	50 %	60 %	–
Percentage of executives aged over 50	<b>0 %</b>	0 %	0 %	–
Percentage of <b>non-executive staff</b> aged 30 or below	<b>53 %</b>	40 %	40 %	21 %
Percentage of non-executive staff aged 31-40	<b>27 %</b>	40 %	40 %	42 %
Percentage of non-executive staff aged 41-50	<b>13 %</b>	15 %	15 %	29 %
Percentage of non-executive staff aged over 50	<b>7 %</b>	5 %	5 %	8 %
<b>Average age</b>	<b>33</b>	35	–	–

Group, age distribution	2013	2012	2011	2010
Percentage of <b>employees</b> aged 30 or below	<b>19 %</b>	23 %	28 %	28 %
Percentage of employees aged 31-40	<b>32 %</b>	33 %	31 %	29 %
Percentage of employees aged 41-50	<b>29 %</b>	28 %	25 %	28 %
Percentage of employees aged over 50	<b>21 %</b>	17 %	16 %	15 %
Percentage of <b>executives</b> aged 30 or below	<b>4 %</b>	5 %	8 %	–
Percentage of executives aged 31-40	<b>35 %</b>	39 %	38 %	–
Percentage of executives aged 41-50	<b>45 %</b>	45 %	36 %	–
Percentage of executives aged over 50	<b>16 %</b>	11 %	18 %	–
Percentage of <b>non-executive staff</b> aged 30 or below	<b>21 %</b>	24 %	30 %	–
Percentage of non-executive staff aged 31-40	<b>31 %</b>	32 %	30 %	–
Percentage of non-executive staff aged 41-50	<b>26 %</b>	26 %	24 %	–
Percentage of non-executive staff aged over 50	<b>21 %</b>	18 %	15 %	–
<b>Average age</b>	<b>41</b>	36	–	–

## S098

## RATIO OF WOMEN'S BASIC SALARY TO MEN'S

/ G4-LA13 / As a result of the groupwide compensation model, which includes collective agreements, it is ensured that no significant salary differences exist between men and women. Differences are much more prevalent in the type of positions filled by women and men. We disclose salary ranges and average salaries by executive and non-executive staff and by gender. The comparison is based on annual gross basic salary including vacation and Christmas pay (for staff paid on an hourly basis, we use the annual (basic) pay, i.e. excluding any shift allowances or bonuses) and all additional bonus payments. Company cars were not included as it was not possible to calculate the monetary benefit. For data privacy reasons, we cannot publish this information for executives in ROW (Rest of World) since this group only includes very few employees with the result that the disclosures would be too transparent.

The compensation structures differ substantially between the individual locations. The major differences between Germany and the U.S. may be explained by the strong differences in social security systems. In Germany (General Equal Treatment Act) and the U.S. (Lilly Ledbetter Fair Pay Act), equal rights for men and women are stipulated by law. In terms of salary ranges at U.S. sites, non-executive staff may receive a higher maximum compensation than executive staff: In the U.S., employees with special skills and qualifications and/or a long-standing career with the company receive relatively high salaries, irrespective of whether they hold an executive position or not. It is entirely possible for employees without managing responsibilities to earn a higher maximum compensation in comparison to employees with managing responsibilities.

In 2012 and 2013, the variable portion of salary decreased as a result of group and subsidiary earnings.

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## ④1 RATIO OF WOMEN'S BASIC SALARY TO MEN'S // IN €

	2013			2012			2011		
	Lower limit	Upper limit	Average	Lower limit	Upper limit	Average	Lower limit	Upper limit	Average
<b>Germany</b>									
<b>Executives (excl. managing directors and Management Board members)</b>									
Basic salary: range and average (men, in €)	26,369	259,745	72,729	26,369	215,066	64,866	26,369	164,000	46,624
Basic salary: range and average (women, in €)	30,594	120,000	111,251	29,253	125,000	112,105	29,253	120,000	56,363
Bonuses: range and average (men, in €)	0	34,093	10,356	234	35,780	16,655	0	53,963	25,364
Bonuses: range and average (women, in €)	0	18,098	7,096	0	31,771	12,399	0	45,413	15,580
Basic salary: ratio women to men	1.2	0.5	1.5	1.1	0.6	1.7	1.1	0.7	1.2
Bonuses: ratio women to men	1	0.5	0.7	0.0	0.9	0.7	–	0.8	0.6
<b>Non-executive staff</b>									
Basic salary: range and average (men, in €)	13,158	95,000	35,603	25,500	100,000	35,846	22,354	88,348	31,162
Basic salary: range and average (women, in €)	24,000	67,728	48,504	23,750	70,000	48,367	18,811	71,001	32,575
Bonuses: range and average (men, in €)	0	239,677	7,454	480	51,174	12,758	0	48,814	15,711
Bonuses: range and average (women, in €)	0	13,499	4,984	1,000	29,757	8,293	0	41,038	11,467
Basic salary: ratio women to men	1.8	0.7	1.4	0.9	0.7	1.3	0.8	0.8	1.0
Bonuses: ratio women to men	–	0.1	0.7	2.1	0.6	0.7	–	0.8	0.7



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U.S.	2013			2012			2011		
	Lower limit	Upper limit	Average	Lower limit	Upper limit	Average	Lower limit	Upper limit	Average
<b>Executives (excl. managing directors and Management Board members)</b>									
Basic salary: range and average (men, in €)	37,813	139,908	82,074	34,020	116,802	72,854	29,845	116,279	88,252
Basic salary: range and average (women, in €)	31,763	98,314	74,378	33,075	132,300	75,972	43,702	135,659	77,092
Bonuses: range and average (men, in €)	140	25,946	6,380	676	26,912	4,583	602	14,117	8,769
Bonuses: range and average (women, in €)	671	13,542	5,407	0	14,955	3,117	2,611	13,165	8,290
Basic salary: ratio women to men	0.8	0.7	0.9	1.0	1.1	1.0	1.5	1.2	0.9
Bonuses: ratio women to men	4.8	0.5	0.8	0.0	0.6	0.7	4.3	0.9	0.9
<b>Non-executive staff</b>									
Basic salary: range and average (men, in €)	18,192	98,314	61,702	18,313	98,280	36,487	16,930	116,279	33,886
Basic salary: range and average (women, in €)	18,256	98,314	54,296	18,059	98,280	31,394	16,930	100,775	26,303
Bonuses: range and average (men, in €)	76	16,750	2,296	0	12,475	708	844	12,710	7,150
Bonuses: range and average (women, in €)	76	7,239	3,717	0	6,771	387	365	9,534	7,090
Basic salary: ratio women to men	1.0	1.0	0.9	1.0	1.0	0.9	1.0	0.9	0.8
Bonuses: ratio women to men	1.0	0.4	1.6	–	0.5	0.5	0.4	0.8	1.0

Rest of the world	2013			2012			2011		
	Lower limit	Upper limit	Average	Lower limit	Upper limit	Average	Lower limit	Upper limit	Average
<b>Executives (excl. managing directors and Management Board members)</b>									
Basic salary: range and average (men, in €)*	–	–	–	–	–	–	60,000	100,200	86,225
Basic salary: range and average (women, in €)*	–	–	–	–	–	–	45,000	90,000	67,500
Bonuses: range and average (men, in €)*	–	–	–	–	–	–	0	14,700	5,587
Bonuses: range and average (women, in €)*	–	–	–	–	–	–	0	10,000	5,000
Basic salary: ratio women to men	–	–	–	–	–	–	0.8	0.9	0.8
Bonuses: ratio women to men	–	–	–	–	–	–	0	0.7	0.9
<b>Non-executive staff</b>									
Basic salary: range and average (men, in €)	10,380	47,500	26,802	14,500	57,854	38,798	13,740	60,000	41,825
Basic salary: range and average (women, in €)	11,277	41,046	0	11,277	41,047	2,440	10,305	35,674	0
Bonuses: range and average (men, in €)	961	12,500	5,165	0	24,877	9,898	0	20,810	7,225
Bonuses: range and average (women, in €)	961	3,462	1,846	0	13,993	2,561	677	10,108	2,799
Basic salary: ratio women to men	1.1	0.9	0.0	0.8	0.7	0.1	0.8	0.6	0.0
Bonuses: ratio women to men	1.0	0.3	0.4	0	0.6	0.3	–	0.5	0.4

\* For data protection reasons, we are not allowed to disclose the salaries for women and men separately.

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## EMPLOYEE AND HUMAN RIGHTS

/ G4-HR4 / According to the assessment of the HR departments of the individual sites, no business operations have been identified where freedom of association or the right to engage in collective bargaining could be significantly jeopardized. However, so far no formal procedure to identify such business operations has been established. We cultivate open and direct relations with employees, which means that any such risk should be notified to us. The legislation in Germany and the U.S. protects employees against any restrictions of their rights. At the site in South Africa, we currently have only seven employees, and at the site in Singapore only thirteen employees, which favors strong participation of the individual employees in the decisions of management.

/ G4-HR5 + HR6 / Our business activities do not involve a significant risk of incidents of child labor or work by young people under dangerous conditions. There is also no significant risk of forced or compulsory labor. We do not use prison labor. Our processes are very transparent and are supervised via documentation in the work schedules. We always consider these aspects in our regular supplier audits. The topic is nonetheless important to us because, as a result of our procurement strategy, our value chain will be increasingly very internationally oriented, increasing this risk. We will take this into account in the planned risk analysis of our supply chain. We also emphatically oppose child, forced and compulsory labor in our Code of Conduct and in our Supplier Code of Conduct.

/ G4-HR10 / There was no systematic screening of our suppliers and contractors on human rights aspects in the past, nor is this set out in agreements. So far, this has not been a high priority because a large proportion of our suppliers and contractors were based in industrialized countries where strict national standards apply. Our Supplier Code of Conduct aims to systematically and explicitly anchor sustainability and ethical standards in our cooperation agreements. It was developed in 2009, published in 2011, and revised in 2012, orienting it more closely on the Standard of Social Accountability (SA8000).  
 G4-56 • p. S029 //

/ G4-HR12 / No complaints were received relating to human rights impact at SOLARWORLD in the years 2012 and 2013. Changes relating to the protection of employee and human rights were not registered internally by SOLARWORLD.

## LOCAL COMMUNITIES

/ G4-S01 + S02 / The activities of SOLARWORLD SOLICIUM GMBH are accompanied by stakeholder processes. The city council discussed with SOLARWORLD to determine the most environmentally friendly means of transport. The permit applications will contain plans for renaturation. No details are yet available. Critical voices have not yet reached us. On the contrary: Residents are very happy about the creation of jobs in

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their region. Besides this, no measures have been implemented for the inclusion of local communities, impact estimates or support programs. Furthermore, no business activities with significant actual or potential negative impact on local communities were identified.

**ANTI-CORRUPTION EFFORTS, POLITICS AND SOCIAL IMPACT**

/ 64-S03 / Responsibility for corruption risks rests in the hands of members of the Management Board and managing directors. We have also developed a compliance organization. This includes a global Compliance Officer supported by decentral, local Compliance Officers and a Compliance Committee. The Compliance Committee meets at least quarterly and discusses preventative measures, among other things. All risk areas received compliance trainings. The Corporate Audit conducted a total of 13 audits in 2012. Five of these audits concerned the Bonn site, three Freiberg, and one Hillsboro. In addition, SOLARWORLD sales subsidiaries in Singapore, South Africa and the U.S. were audited. We define the business unit as an auditable unit: a department, a legal person or a process. We audited 13 units in respect to various risks, including compliance risks. In 2012, we identified a total of 65 auditable units, of which 20 percent were audited. In 2013, Internal Auditing performed 2 audits, both at the Freiberg site. Beyond this, the Corporate Audit was largely concerned with consultation as part of the restructuring process in 2013.

We also record the proportion of our shipments volume in countries that have a corruption index < 60 determined by Transparency International. For further information, please consult the Management Report.

⊗ KPIs and KPNs for ESG (key performance indicators and narratives of EFFAS/DVFA) • p. S107//  
G4-56 • p. S029// ➞ Individual risks • p. 090//

**④2 CORRUPTION RISKS // CORRUPTION INDEX < 60**

	2013	2012	2011	2010
Trade corruption index	23.4 %	20.8 %	15.1 %	20.3 %
Wafer corruption index	86.6 %	90.5 %	71.3 %	47.5 %
<b>Total corruption index</b>	<b>44.5 %</b>	<b>25.6 %</b>	<b>54.3 %</b>	<b>31.3 %</b>

/ 64-S04 / The Compliance Committee performed a risk assessment for the group in both 2012 and 2013. As a result of the business operations of SOLARWORLD, the main risk areas are: 1. Capital market compliance, 2. Corruption / anti-trust laws, 3. Export controls, 4. Data privacy & IT security. All statements made for compliance therefore also apply to the topic of corruption prevention.

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/ G4- S05 / In 2012 and 2013, no cases of corruption were found, and there are no ongoing or completed processes. There were also no complaints lodged.

/ G4-S06 / No political donations are made.

/ G4-S08 / No major cases of non-compliance with laws and regulations were determined in the reporting period or the previous years, nor were any out-of-court arbitration proceedings held. In early 2014, we received two fines from the German Federal Financial Supervisory Authority (BaFin) due to alleged infringement of capital market law disclosure obligations, both in the amount of 25,000 euros.

/ G4-S011 / No complaints were lodged, processed or solved through formal complaint procedures regarding social impact.

## CUSTOMER HEALTH AND SAFETY

/ G4-PR1 + PR2 / The impacts on health and safety are assessed in advance through certification for 100 percent of the products we manufacture in order to identify potential for improvement.

In 2012 and 2013, as well as in previous years, there were no cases of non-compliance with regulations and voluntary rules regarding the impact of products and services on health and safety.

## PRODUCT AND SERVICE INFORMATION AND CUSTOMER SATISFACTION

/ G4-PR3 / We source components from reputable manufacturers. The safety of the products we deliver is ensured by our quality management. Extensive product information is provided in the form of data sheets and assembly instructions. Naturally, all SOLARWORLD solar power modules comply with the international requirements for product safety and user friendliness. Be it a listing along the North American standard UL1703 or a certification in accordance with the relevant standards IEC 61215 and IEC 61730. As one of the few products in the German market, the SOLARWORLD solar power module together with the in house rack system bears the GS sign ("proved safe") of the VDE (Association for Electrical Technology). Since 2011, the power of SOLARWORLD's SUNMODULE PLUS® solar power modules have been tested by TÜV Rheinland. SOLARWORLD is the first German manufacturer certified on the basis of such inspections. The "Power controlled" inspection mark documents that the rated power

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is adhered to and monitored by solar experts from this independent inspection service provider on a voluntary basis. Our batteries are accompanied by a document of the manufacturer, which contains information about the hazardous substances as well as the handling of the battery.



The following information is included in our product labeling (i.e. for all products by us (100 percent)):

**49 PRODUCT INFORMATION**

Criteria	Procedure	Labeling of final products (module/system)
Origin of product components	In assessing the environmental impact, we also include the upstream process. We also assess our suppliers as required under ISO 9001. The same criteria are applied in selecting suppliers of consumables and raw materials. There is also a product information sheet for our cells.	The country of manufacture is indicated, but not the origin of individual components.
Composition	Not compulsory	Not indicated
Safe use of product	Our outgoing goods controls provide an additional check to ensure that no defective products are shipped, only products meeting customer requirements. In most cases, quality assurance agreements are additionally concluded with customers.	A warning about electrical danger is included. A user information sheet (assembly instructions) is included in deliveries.
Product disposal	Recycling of input products and final products is covered in accordance with local rules. It is always our goal to avoid producing defective goods.	Our products are fully recyclable and can be returned to SOLARWORLD for this purpose. This is now also indicated on the product.

/ G4-PR4 / In 2012 and 2013, there were no cases of non-observation of regulations or voluntary rules of conduct in regard to the information on and the labeling of products and services.

/ G4-PR5 / We conduct annual surveys of customer satisfaction with wholesalers and installers. 93.1 (2012: 93.8) percent of our customers are satisfied or very satisfied. This confirms the high satisfaction levels of the previous year in the global characteristic “overall satisfaction” and “service assessment” or “product evaluation”. We received the lowest satisfaction values (dissatisfied share of 11 percent) in “price-performance ratio”. G4-DMA • p. S010//

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/ G4-PR6 / In 2012 and 2013, there were no cases of non-observation of laws or regulations, and therefore no  
 + PR9 / fines. We do not distribute any products that are prohibited to be sold in certain markets or are called  
 into question by stakeholders or public debate.

## STANDARDS RELATING TO ADVERTISING

/ G4-PR7 / All communication activities of SOLARWORLD are medium or long-term initiatives that are designed to manifest solar power technology as an integral part of a sustainable and equitable energy production worldwide and to raise consumer awareness of a thoughtful, resource-friendly approach for the good of the climate and the environment. In this regard, in 2012, particular focus was placed on electromobility, as represented by the round-the-world journey completed in the solar vehicle SOLARWORLD GT, which raised public awareness for clean energy supply and the possibilities of solar mobility. In 2013, we introduced the first close-to-production solar-electric airplane, the SOLARWORLD e-One.

Off-grid power applications were also a central theme in 2012. The “Einstein Award” honored the aid organization Water Missions International, which provides water treatment systems in developing countries and disaster areas. In 2013, we focused on the topic on how to optimize the growth of self-consumption, also known as “Smart Living”, delivering solutions with our products SUNTROL eManager (mini-computer for home automation) and SUNPac 2.0 (battery storage system).

There are no written advertising-related rules of conduct or ESG standards specified for the entire organization. The SOLARWORLD group adheres to the law in its advertising and is guided by the SOLARWORLD values, @ [www.solarworld.de/sustainability](http://www.solarworld.de/sustainability)// e.g. fair competition, no discrimination. Compliance is continuously monitored through approval of advertising campaigns by the Management Board. All of our communication activities have to pass a compliance check previous to their realization. Our sponsoring activities are always transparent.

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## KPIS &amp; KPNS FOR ESG

## (KEY PERFORMANCE INDICATORS AND NARRATIVES OF EFFAS/DVFA)

The European Federation of Financial Analysts Societies (EFFAS) Commission on ESG and the German Society of Investment Professionals (DVFA) Commission on Non-Financials (CNF) publish a joint draft on “KPIs and KPNs for ESG 3.0”. This draft contains Key Performance Indicators and narratives on the integration of extra- and non-financial performance indicators pertaining to ESG (Environmental, Social, Governance), sustainability, corporate governance and risk management for integration into classical company rating and investment decisions. We have been reporting on the basis of these criteria since 2008 and further develop the data collection from year to year.

**(44) PERFORMANCE INDICATORS AND NARRATIVES (SECTOR: RENEWABLE ENERGY EQUIPMENT)**

for Environmental, Social, Governance (ESG) of EFFAS/DVFA

Indicator	Name	Description	2014	2013	2012	2011	2010	Comment
ESG: E01-01 (Scope I)	Energy efficiency	Total energy consumption: (in primary GJ)	↑	2,595,288 cp	3,944,161 cp	5,082,495 cp	4,944,072 cf	We expect growth (under-proportionate to production increase) in 2014. © G4-EN4 • p. S057//
ESG: E02-01 (Scope I)	GHG emissions	Total GHG emissions (in tCO <sub>2eq</sub> )	↑	95,700 cp	139,372 cp	188,639 cf	178,886 cf	Estimate © G4-EN16 • p. S059//
ESG: S01-01 (Scope I)	Attrition rate	Share of employees leaving the company per year	↓	15 %	16.4 %	15.5 %	8.7 %	So far no distinction is made between fulltime and part time work. © G4-LA12 • p. S090//
ESG: S02-02 (Scope I)	Training and professional development/ qualification	Average training expenditure/ employee (in €)	↑	200.17	310.90	394.17	312.21	© G4-LA9 • p. S088//
ESG: S03-01 (Scope I)	Age structure of the workforce	In 10-year steps	↔	<30: 19 % 30–40: 32 % 40–50: 29 % >50: 21 %	<30: 23 % 30–40: 33 % 40–50: 28 % >50: 17 %	<30: 28 % 30–40: 31 % 40–50: 25 % >50: 16 %	<30: 28 % 30–40: 29 % 40–50: 28 % >50: 15 %	© G4-LA12 • p. S090//
ESG: S08-01 (Scope I)	Pay	Total amount of all bonus payments (in m€)	↑	12	19	5.4	17.4	We do not grant stock options. Data until 2012 only profit-oriented salary model (GOMAB). © G4-LA13 • p. SS98//
ESG: S08-02 (Scope I)	Pay	Number of FTE who receive 90 % of the bonus payments	On this topic we do not have any data yet, as our database does not allow for such analysis..					



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Indicator	Name	Description	2014	2013	2012	2011	2010	Comment
ESG: S08-03 (Scope I)	Pay	Consideration of the ESG performance in the target agreements	The ESG performance is not explicitly considered in the target agreements but is included via the basic attitude towards sustainable corporate governance. Sustainability is one of the pillars of our competence model.					
ESG: V01-01 (Scope I)	Litigation risks	Expenditures and fines for lawsuits and court cases regarding anti-competitive behavior, Anti-Trust, monopoly behavior (in €)	↓	0,4	3	1	0	In the context of the trade case and complaints, 2011 SOLARWORLD invested the indicated sum in the U.S. and 2012 and 2013 SOLARWORLD invested the indicated sum in the EU and the U.S..
ESG: V02-01 (Scope I)	Corruption	Share of business activity in regions with a corruption index of less than 60	↑	45 %	26 %	54 %	31 %	Since 2009 expenditures for wafers and Trade, previously only for Trade © G4-S02 • p. S102 //
ESG: V03-02 (Scope I)	Earnings from new products	Earnings share from products with life cycles of less than 12 months	↔	60 %	55 %	40 %	30 %	Specifications relate to modules, system and rack technologies, and kits. Estimates are based on data provided by SOLARWORLD AG and do not include products to which only minor modifications have been made.
ESG: V04-01 (Scope I)	Innovation	Total R&D expenditures (in m€)	↔	26.5 %	49.1	27.2	19.2	☞ <u>Innovation report</u> • p. 058 //
ESG: V04-12 (Scope I)	Innovation	Total investment in research on ESG relevant aspects	100 %	100 %	100 %	100 %	100 %	Our entire business (solar energy) is ESG relevant.
ESG: E23-02 (Scope II)	Production loss	Monetary effects of production loss due to material bottlenecks (in €)	↔	0	0	0	0	© G4-DMA • p. S010 //
ESG: E28-01 (Scope II)	Water consumption	Total water take-out (in m³)	↑	1,168,417 ep	1,260,735 ep	1,466,030 ep	1,431,642 ef	© G4-EN8 • p. S057 //

Indicator	Name	Description	2014	2013	2012	2011	2010	Comment
ESG: E33-01 (Scope II)	Environmental compatibility	Share of ISO 14001 certified locations (weighted by average capacity)	↔	100 %	100 %	100 %	100 %	The indicator can decrease temporarily if new capacities are ramped up, which have not yet been certified at the cut-off date.
ESG: G01-01 (Scope II)	Donations to political parties	Donations to political parties (in k€)	0	0	0	0	0	Since 2010, we have not made any political donations.
ESG: S11-01 (Scope II)	Relocation of work places due to restructuring	Total costs of relocation (in k€) including compensation payments, severance pay, outplacement, recruitments, training, consulting	↓	112	125	766	507	The data before 2011 refers only to the U.S. sites.
ESG: V06-01 (Scope II)	Customer satisfaction with SOLAR-WORLD	Share of satisfied customers among all respondents	↔	93.1 %	93.8 %	93.6 %	85.8 %	Aggregate figure (Trade) ➔ <i>Forecast Report</i> • p. 110 //
ESG: V10-03 (Scope II)	Effects of subsidies	Share of business activity in markets with feed-in tariff or regulated pricing	↔	100 %	100 %	100 %	100 %	The shipment share in markets without feed-in tariff or regulated pricing is still below 1 %.
ESG: V13-01 (Scope II)	Utilization	Capacity utilization in relation to the nominal capacity (in %)	The information is not disclosed. But we do disclose our capacities. ➔ <i>Groupwide, nominal capacities 2013</i> • p. 055 //					
ESG: V28-01 (Scope II)	Supply chain	Total number of suppliers	↔	ca. 180	ca. 195	ca. 200	–	Bill of Material © <i>G4-DMA</i> • p. S010 //
ESG: V28-02 (Scope II)	Supply chain	Share (volume) of the 3 largest external suppliers	↔	13 %	13 %	> 15 %	–	© <i>G4-DMA</i> • p. S010 //
ESG: V28-03 (Scope II)	Supply chain	Sales share of suppliers (in %)	↔	ca. 60 %	ca. 60 %	ca. 60 %	–	Direct material © <i>G4-DMA</i> • p. S010 //
ESG: E17-35 (Scope III)	Supply bottlenecks	Sales share of products containing Indium	Not used					
ESG: E17-36 (Scope III)	Supply bottlenecks	Total procurement volume Indium	Not used					

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Indicator	Name	Description	2014	2013	2012	2011	2010	Comment
ESG: E22-01 (Scope III)	Raw material	Covered demand (in days) of A (B, C, D) materials	Through long-time contracts, we secure approx. 80 % of the required capacities. ☉ <u>G4-DMA</u> • p. S010 //					
ESG: E23-01 (Scope III)	Production loss	Production loss, i.e. difference between planned and actual production, due to material bottlenecks (in %)	↔	0 %	0 %	0 %	0 %	☉ <u>G4-DMA</u> • p. S010 //
ESG: E28-02 (Scope III)	Water consumption	Water (in m³/MWp)	↓	2,958	2,253	–	–	See total water consumption: ☉ <u>G4-EN8</u> • p. S057 //
ESG: E28-03 (Scope III)	Water consumption	Ground water consumption (in m³)	↑	0 ep	0 ep	500 ep	–	In the year 2011, there is data available for the first time.
ESG: E28-04 (Scope III)	Water consumption	Waste water discharge (in m³)	↑	1,012,111 ep	997,022 ep	1,404,641 ep	1,339,407 mf	☉ <u>G4-EN21</u> • p. S061 //
ESG: V05-01 (Scope III)	Customer loyalty	Share of new customers (Authorized Installers)	↔	39 % (direct customers) 35 % (Authorized Installers)	64 %	20 %	7 %	The indicator across the group refers to module and system customers. Up until 2011 the information is estimated based on the data of SOLARWORLD AG. As of 2013, we differentiate between direct customers and Authorized Installers.
ESG: V05-03 (Scope III)	Customer loyalty	Market share (total)	↑	2 %	2 %	4 %	5 %	
ESG: V28-04 (Scope III)	Supply chain	Maintenance of ESG standards by suppliers	All main suppliers are audited along QHSE criteria every two years. The Supplier's Code of Conduct was published in early 2011 and updated in 2012. ☉ <u>G4-DMA</u> • p. S010 //					
ESG: V28-05 (Scope III)	Supply chain	Incentives for procurement to select suppliers who are well prepared in terms of ESG even though they may charge higher prices	SOLARWORLD's minimum standards have to be followed. Our suppliers' sustainability performance is systematically incorporated into their assessment. ☞ <u>Global Supply Chain – Procurement</u> • p. 056 // ☉ <u>G4-DMA</u> • p. S010 //					

GLOBAL COMPACT (COMMUNICATION ON PROGRESS) – GC ADVANCED LEVEL

This Communication on Progress includes the statement of Commitment to the Global Compact:  
➔ *Sustainability Reporting* • p. 004//, the description of practical steps to implement the ten Principles of the Global Compact in fiscal year 2012 and 2013 as well as the measurement of outcomes based on application of the Global Reporting Initiative’s Key Indicators.

45 OVERVIEW OF THE COMMUNICATION ON PROGRESS (GLOBAL COMPACT)

Issues	Principles of the Global Compact
Human Rights	<b>Principle 1:</b> Businesses should support and respect the protection of internationally proclaimed human rights. <b>Principle 2:</b> Businesses should make sure that they are not complicit in human rights abuses.
Labor	<b>Principle 3:</b> Businesses should uphold the freedom of association and the effective recognition of the right to free collective bargaining. <b>Principle 4:</b> Businesses should uphold the elimination of all forms of forced and compulsory labor. <b>Principle 5:</b> Businesses should uphold the effective abolition of child labor. <b>Principle 6:</b> Businesses should uphold the elimination of discrimination in respect of employment and occupation.
Environment	<b>Principle 7:</b> Businesses should support a precautionary approach to environmental challenges. <b>Principle 8:</b> Businesses should undertake initiatives to promote greater environmental responsibility. <b>Principle 9:</b> Businesses should encourage the development and diffusion of environmentally friendly technologies.
Anti-Corruption	<b>Principle 10:</b> Businesses should work against corruption in all its forms, including extortion and bribery.

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Principles	Commitments: Quotations
Principles 1, 2, 6	<b>Guideline 1:</b> “We stand for respect and equal opportunities.”
Principle 7	<b>Guideline 2:</b> “Our production is compatible with the protection of the environment using the best possible processes and product standards.”
Principle 7	<b>Guideline 3:</b> “We use existing resources responsibly and sparingly.”
Principles 1 and 2	<b>Guideline 4:</b> “We use state-of-the-art methods to avoid any health hazards and risks that may be caused by the SOLARWORLD group processes and products.”
Principle 10	<b>Guideline 5:</b> “Fair competition is the very basis of our business activities. Bribery and corruption are unlawful and not tolerated.”
Principles 1–10, especially Principles 4 and 5	<b>Guideline 10:</b> “We support the ten principles of the Global Compact of the United Nations and also demand compliance with it from our suppliers and business partners.”
Principles 1 and 2	<b>Code of Conduct:</b> “We respect the rights and dignity of all employees.”
Principle 3	<b>Code of Conduct:</b> “SOLARWORLD upholds the freedom of association and respects the right to free collective bargaining.”
Principles 4 and 5	<b>Code of Conduct:</b> “Forced and child labor are strictly forbidden by law in most countries and worldwide at SOLARWORLD.”
Principle 6	<b>Code of Conduct:</b> “Nobody, independent of his cultural, religious or personal background, shall be subjected to discrimination in the SOLARWORLD group.”
Principles 7–9	<b>Code of Conduct:</b> “The SOLARWORLD group devotes particular attention to protecting the environment. It is our declared aim to promote the protection of climate and resources in active ways. We therefore fully pledge to respect all applicable rules and international standards.”
Principle 10	<b>Code of Conduct:</b> “The SOLARWORLD group recognizes both the International Chamber of Commerce Rules of Conduct to Combat Extortion and Bribery in International Business Transactions published in 1999 and the OECD (Organisation for Economic Co-operation and Development) Anti-Bribery Convention of 1997. Please note that in connection with business activities, no unfair advantages, irrespective of whether in the form of cash or non-cash rewards, shall be offered or granted directly or indirectly either at home or abroad. Our operations are also subject to regulation by the antibribery laws of each country in which we operate, including the U.S Foreign Corrupt Practices Act and the UK Bribery Act. Vigilance is critical as we conduct increasingly more business globally. Increasing competitive pressures, both domestic and abroad, will not be permitted to undermine our commitment to ethical conduct and compliance with laws.”

Principles	Systems	Notes/Cross References
<b>Principles 1–10</b>	Values and guidelines	@ <a href="http://www.solarworld.de/values-and-guidelines//">www.solarworld.de/values-and-guidelines//</a>
<b>Principles 1–10</b>	Supplier Code of Conduct	⊗ <a href="#">G4-56</a> • p. S029// <a href="#">G4-DMA</a> • p. S010// @ <a href="http://www.solarworld.de/supplierscodeofconduct//">www.solarworld.de/supplierscodeofconduct//</a>
<b>Principles 1 and 2</b>	Health & safety management	⊗ <a href="#">GRI Index</a> • p. S118// <a href="#">G4-LA5 – LA8</a> • p. S082//
<b>Principles 1 and 2</b>	No use of private security forces by the SOLARWORLD group	
<b>Principle 3</b>	Guidelines and procedures do not favor individual associations or trade unions	⊗ <a href="#">G4-11</a> • p. S080// <a href="#">G4-HR4</a> • p. S102//
<b>Principle 3</b>	Conditions permitting employees to exercise functions in associations or trade unions	⊗ <a href="#">G4-11</a> • p. S080// <a href="#">G4-HR4</a> • p. S102//
<b>Principle 4</b>	Pay always exceeds the local minimum wage	Standard applies groupwide
<b>Principle 4</b>	Maximum regular working week is 40 hours, with incremental pay for overtime	Standard applies groupwide (in the U.S., no formal fringe benefits)
<b>Principle 5</b>	Minimum working age is respected, including when selecting suppliers	Minimum age 15 years (cf. ILO Convention 138(7)) or higher local minimum age // groupwide standard
<b>Principle 6</b>	Standards enshrined in the German Equality Act (AGG) are applied	Standard applies groupwide (on a voluntary basis)
<b>Principles 1–7, 10</b>	Environmental management	⊗ <a href="#">G4-DMA</a> • p. S010// <a href="#">G4-EN1– 34</a> • p. S053//
<b>Principles 7–9</b>	High legal standards in Germany and the United States	⊗ <a href="#">G4-EN21</a> • p. S061// <a href="#">G4-EN28</a> • p. S067// <a href="#">G4-LA6</a> • p. S082// <a href="#">G4-HR4</a> • p. S102// <a href="#">G4-PR3</a> • p. S104// <a href="#">G4-PR6</a> • p. S105// <a href="#">G4-PR9</a> • p. S106//
<b>Principle 10</b>	Compliance Management System	⊗ <a href="#">G4-56</a> • p. S029//

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Principles	Measures in 2012 and 2013	Notes/Cross References
<b>Principles 1–10</b>	Reorganization of the Compliance Management System	⊗ <u>G4-56</u> • p. S029//
<b>Principles 1–10</b>	Whistleblower system SOLARWORLD SpeakUp implemented in 2013	⊗ <u>G4-56</u> • p. S029//
<b>Principles 1–10</b>	Sustainable group governance	⊗ <u>G4-56</u> • p. S029//
<b>Principle 3</b>	Agreements with trade unions	⊗ <u>G4-11</u> • p. S080// <u>G4-HR5</u> • p. S102//
<b>Principles 7–9</b>	Life Cycle Analysis	➔ <u>Environment</u> • p. 062// ⊗ <u>G4-EN27</u> • p. S064//
<b>Principle 7</b>	Precautionary principle	⊗ <u>G4-14</u> • p. S017//
<b>Principle 8</b>	PR activities to raise awareness	➔ <u>Global Supply Chain – Procurement</u> • p. 056// ⊗ <u>G4-PR6</u> • p. S105//
<b>Principle 9</b>	Continuous, because our business is exclusively solar energy	➔ <u>To begin with: Forthright Words</u> • p. 003//
<b>Principle 9</b>	Technical innovations in research and development (purely solar group)	➔ <u>Strategy and action</u> • p. 028//
<b>Principle 9</b>	Solar2World projects	⊗ <u>Solar2World</u> • p. S022//

Principles	Performance (see GRI Performance Indicators)	Notes/Cross References
<b>Principle 1</b>	Subcategory: Human rights (all aspects) Subcategory: Society – local communities	⊗ <u>G4-DMA</u> • p. S010// <u>G4-HR1 + HR3</u> • p. S118// <u>G4-HR2 + HR4 – 12</u> • p. S102// <u>S01 – 2</u> • p. S102//
<b>Principle 2</b>	Subcategory: Human rights (all aspects)	⊗ <u>G4-DMA</u> • p. S010// <u>G4-HR1 + HR3</u> • p. S118// <u>G4-HR2 + HR4 – 12</u> • p. S102//
<b>Principle 3</b>	G4-11 Category: Labor practices and decent work conditions – labor/management relations Subcategory: Human rights – freedom of association and collective bargaining	⊗ <u>G4-DMA</u> • p. S010// <u>G4-11</u> • p. S080// <u>G4-LA5</u> • p. S082//
<b>Principle 4</b>	Subcategory: Human rights – forced or compulsory labor	⊗ <u>G4-DMA</u> • p. S010// <u>G4-HR6</u> • p. S102//
<b>Principle 5</b>	Subcategory: Human rights – child labor	⊗ <u>G4-DMA</u> • p. S010// <u>G4-HR5</u> • p. S102//
<b>Principle 6</b>	G4-10 Subcategory: Labor practices and decent work conditions (all aspects) Subcategory: Human rights – non-discrimination	⊗ <u>G4-DMA</u> • p. S010// <u>G4-10</u> • p. S069// <u>LA1 – 16</u> • p. S074// <u>G4-HR3</u> • p. S118//
<b>Principle 7</b>	Category: Environment (all aspects)	⊗ <u>G4-DMA</u> • p. S010// <u>G4-EN1 – 28</u> • p. S053//
<b>Principle 8</b>	Category: Environment (all aspects)	⊗ <u>G4-DMA</u> • p. S010// <u>G4-EN1 – 28</u> • p. S053//
<b>Principle 9</b>	Category: Environment (all aspects)	⊗ <u>G4-DMA</u> • p. S010// <u>G4-EN1 – 28</u> • p. S053//
<b>Principle 10</b>	Subcategory: Society – anti-corruption Subcategory: Society – public policy	⊗ <u>G4-DMA</u> • p. S010// <u>G4-S03 – 5</u> • p. S103// <u>G4-S06</u> • p. S104//

	Criterion	Notes/Cross-references
1	Mainstreaming into corporate functions and business units	SOLARWORLD's management determines the strategy and is responsible for its implementation in keeping with the principles of the Global Compact. The Management Board supervises its implementation. ⊗ <u>G4-DMA</u> • p. S010// ⇒ <u>Corporate Management and Control</u> • p. 033//
2	Value chain implementation	SOLARWORLD has a Supplier Code of Conduct. The Supplier Code of Conduct requires our business partners to comply with all applicable environmental and social legislation, rules and standards and to operate an efficient system to identify and eliminate potential hazards. In addition, our suppliers are encouraged to make their contractors and other business partners comply with these standards, too. ⊗ <u>G4-56</u> • p. S029// Supplier audits are carried out at regular intervals. We assess the suppliers along our five dimensions (commercial criteria, quality, technology, logistics and sustainability).
3	Robust commitments, strategies or policies in the area of human rights	In its Code of Conduct, SOLARWORLD explicitly refers to Principles of the Global Compact. The Supplier Code of Conduct also deals with the protection of human rights. ⊗ <u>G4-56</u> • p. S029// In particular, the members of the Management Board, managing directors and other executives are responsible for compliance with the requirements.



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	Criterion	Notes/Cross-references
4	Effective management systems to integrate the human rights principles	SOLARWORLD operates a compliance management system. As compliance training in 2012 and 2013 focused on the main risks in the group, it was not possible to cover this subject. However, it is due for inclusion in future basic training courses. This topic is particularly significant in supplier management. Information and complaints relating to integrity can be submitted via the relevant channels within SOLARWORLD (e. g. Compliance Officers) or anonymously via SOLARWORLD SpeakUp.
5	Effective monitoring and evaluation mechanisms of human rights integration	Monitoring and evaluation are carried out via the internal points of contact (e. g. Compliance Officers) and via SOLARWORLD SpeakUp.
6	Robust commitments, strategies or policies in the area of labor	In its Code of Conduct, SOLARWORLD explicitly refers to Principles of the Global Compact. Labor is also dealt with in the Supplier Code of Conduct. © G4-56 • p. S029// In particular, the members of the Management Board, managing directors and other executives are responsible for compliance with the requirements.
7	Effective management systems to integrate the labor principles	The human resources department ensures compliance with labor standards in the group. This is also a particularly significant consideration in supplier management. Information and complaints relating to integrity can be submitted via the relevant channels within SOLARWORLD (e. g. Compliance Officers) or anonymously via SOLARWORLD SpeakUp.
8	Effective monitoring and evaluation mechanisms of labor principles integration	Monitoring and evaluation are carried out via the internal points of contact (e. g. Compliance Officers) and via SOLARWORLD SpeakUp.
9	Robust commitments, strategies or policies in the area of environmental stewardship.	In its Code of Conduct, SOLARWORLD explicitly refers to Principles of the Global Compact. Environmental protection is also dealt with in the Supplier Code of Conduct. © G4-56 • p. S029// A groupwide QHSE (Quality, Health, Safety & Environment) corporate policy also exists. In particular, the members of the Management Board, managing directors and other executives are responsible for compliance with the requirements.
10	Effective management systems to integrate the environmental principles.	SOLARWORLD is ISO 14001 certified. In addition to the environmental management system, local “Green Teams” exist in which employees take action for sustainability. Information and complaints relating to the theme of integrity can be directed to internal points of contact within SOLARWORLD (e. g. Compliance Officers) as well as anonymously via SOLARWORLD SpeakUp.
11	Effective monitoring and evaluation mechanisms for environmental stewardship	Monitoring and evaluation are carried out via the internal points of contact (e. g. Compliance Officers) and via SOLARWORLD SpeakUp.
12	Robust commitments, strategies or policies in the area of anti-corruption	In its Code of Conduct, SOLARWORLD explicitly refers to the Principles of the Global Compact. Anti-corruption is also dealt with in the Supplier Code of Conduct. © G4-56 • p. S029// In particular, the members of the Management Board, managing directors and other executives are responsible for compliance with the requirements.
13	Effective management systems to integrate the anti-corruption principle	SOLARWORLD has implemented a Compliance Management System. In 2012 and 2013 compliance trainings for our managers and Compliance Officers took place, during which the topic anti-trust was one major topic. Information and complaints relating to the theme of integrity can be directed to internal points of contacts (e. g. Compliance Officers) within SOLARWORLD as well as to SOLARWORLD SpeakUp.

Criterion	Notes/Cross-references
14 Effective monitoring and evaluation mechanisms for the integration of anti-corruption	Monitoring and evaluation are carried out via the internal points of contact (e. g. Compliance Officers) and via SOLARWORLD SpeakUp.
15 Actions taken in support of broader UN goals and issues	SOLARWORLD has designed its corporate strategy and operational processes to step up its contribution to the Global Compact principles. ☉ <i>G4-56 • p. S029//</i> SOLARWORLD also implements projects that support the UN goals and issues, in collaboration with NGOs and charitable institutions. ☉ <i>Solar2World • p. S022//</i>
16 Strategic social investments and philanthropy	Under the umbrella Solar2World, SOLARWORLD implements solar electrification projects in developing countries. ☉ <i>Solar2World • p. S022//</i>
17 Advocacy and public policy engagement	SOLARWORLD conducts lobbying work in order to help solar energy become competitive, and is an advocate of political funding programs. ☉ <i>G4-S06 • p. S104//</i>
18 Partnerships and collective action	SOLARWORLD also implements projects that support the UN goals and issues, in collaboration with NGOs and charitable institutions. ☉ <i>Solar2World • p. S022//</i>
19 CEO commitment and leadership	➔ <i>Sustainability Reporting • p. 003//</i>
20 Discussion of strategic aspects of the Global Compact at the Management Board level	The Board oversees the sustainability performance of the group. ☉ <i>G4-56 • p. S029//</i> The main opportunities and risks in the short and medium term are disclosed. ➔ <i>Group management report forecast • p. 086//</i>
21 Engagement with all important stakeholders	SOLARWORLD explains the stakeholder analysis, including the stakeholder summary and process of stakeholder identification and integration. ☉ <i>G4-24 – 27 • p. S034//</i>

## GLOBAL REPORTING INITIATIVE (CATEGORIZATION AND INDEX)

## (46) GRI INDEX „IN ACCORDANCE“ WITH GRI G4 GUIDELINES: COMPREHENSIVE

Audit review by the BDO AG, Wirtschaftsprüfungsgesellschaft

## G4 GRI Content Index

## General Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
<b>Strategy and Analysis</b>				
G4-1	Statement from the most senior decision-maker	➔ <i>Letter by the Chairman</i> • p. 006//	Not applicable	No
G4-2	Key impacts, risks and opportunities	⊗ <i>G4-2</i> • p. S004//	Not applicable	No
<b>Organizational Profile</b>				
G4-3	Name of the organization	SOLARWORLD AG	Not applicable	No
G4-4	Primary brands, products, services	➔ <i>Glossary</i> • p. 222// We are a vertically integrated company and occasionally fall back on tolling. Our logistics from factory gate to the customer are taken care of by service companies.	Not applicable	No
G4-5	Location of the organization's headquarters	Bonn, Germany	Not applicable	No
G4-6	Countries where the organization operates	➔ <i>SOLARWORLD group structure as of December 31, 2013</i> • p. 156//	Not applicable	No
G4-7	Nature of ownership and legal form	➔ <i>Shareholder structure</i> • p. 039//	Not applicable	No
G4-8	Markets	➔ <i>The market</i> • p. 044// <i>Strategy and action</i> • p. 028//	Not applicable	No
G4-9	Scale of organization	➔ <i>Financial position</i> • p. 075// <i>Employees</i> • p. 066//	Not applicable	No
G4-10	Total workforce by employment type, employment contract and region	⊗ <i>G4-10</i> • p. S069//	Not applicable	Yes
G4-11	Employees covered by collective bargaining agreements	⊗ <i>G4-11</i> • p. S080//	Not applicable	Yes
G4-12	Description of supply chain	⊗ <i>G4-12</i> • p. S013//	Not applicable	No
G4-13	Significant changes in size, structure, supply chain or ownership	➔ <i>Group structure and segments</i> • p. 025// <i>SOLAR-WORLD group structure as of December 31, 2013</i> • p. 156//	Not applicable	No
G4-14	Precautionary principle	⊗ <i>G4-14</i> • p. S017//	Not applicable	No
G4-15	External agreements, principles or initiatives	⊗ <i>G4-15</i> • p. S031//	Not applicable	No
G4-16	Association Memberships	⊗ <i>G4-16</i> • p. S032//	Not applicable	No

## G4 GRI Content Index

## General Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
<b>Identified Material Aspects and Boundaries</b>				
G4-17	Organizational structure	➞ <i>Group structure and segments • p. 025//</i>	Not applicable	No
G4-18	Process for defining report content	⊗ <i>G4-18 • p. S005//</i>	Not applicable	No
G4-19	Material Aspects which were identified in the process for defining report content	⊗ <i>G4-19 • p. S006//</i>	Not applicable	No
G4-20	Boundary within the organization	⊗ <i>G4-20 • p. S006//</i>	Not applicable	No
G4-21	Boundary outside the organization	⊗ <i>G4-21 • p. S006//</i>	Not applicable	No
G4-22	Restatement of information from earlier reports	⊗ <i>G4-22 • p. S009//</i>	Not applicable	No
G4-23	Changes in reporting scope, boundary or measuring methods	⊗ <i>G4-23 • p. S009//</i>	Not applicable	No
<b>Stakeholder Engagement</b>				
G4-24	Stakeholder groups	⊗ <i>G4-24 • p. S034//</i>	Not applicable	No
G4-25	Identification and selection of stakeholders	⊗ <i>G4-25 • p. S034//</i>	Not applicable	No
G4-26	Engagement of stakeholders	⊗ <i>G4-26 • p. S036//</i>	Not applicable	No
G4-27	Key topics and concerns raised by stakeholders and reaction of the company	⊗ <i>G4-27 • p. S038//</i>	Not applicable	No
<b>Report Profile</b>				
G4-28	Reporting period	Calendar year 2013 (01/01/2013 – 12/31/2013) = business year 2013	Not applicable	No
G4-29	Date of last report, if applicable	Calendar year 2012 (01/01/2012 – 12/31/2012) = business year 2012	Not applicable	No
G4-30	Reporting cycle (annual, biennial, etc.)	Annual	Not applicable	No
G4-31	Contact for questions on report or its contents	Dr. Felicia Müller-Pelzer ⓧ <i>sustainability@solarworld.de//</i>	Not applicable	No
G4-32	GRI index	The present table ⓧ <i>GRI Index • p. S118//</i>	Not applicable	No
G4-33	External assurance	⊗ <i>G4-33 • p. S025//</i> <i>Confirmation • p. S129//</i>	Not applicable	No

## G4 GRI Content Index

## General Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
<b>Governance</b>				
<b>G4-34</b>	Governance structure of the organization	➞ <i>The Management Board • p. 007 // Supplementary report • p. 080 //</i>	Not applicable	No
<b>G4-35</b>	Delegating authority	⊗ <i>G4-35 • p. S027 //</i>		No
<b>G4-36</b>	Sustainability organization	⊗ <i>G4-36 • p. S026 //</i>		No
<b>G4-37</b>	Processes for consultation between stakeholders and the highest governance bodies	⊗ <i>G4-37 • p. S027 //</i>		No
<b>G4-38</b>	Details of unitary organization	Not applicable		No
<b>G4-39</b>	Declaration stating whether the Chairs of the highest governance bodies are also an Executive Officer	By definition, the Chief Executive Officer is part of the top management.		No
<b>G4-40</b>	Process for determining the composition, qualifications and expertise of the members of the highest governance bodies and its committees under consideration of diversity (gender and other indicators)	⊗ <i>G4-40 • p. S025 //</i>		No
<b>G4-41</b>	Mechanisms for avoidance of conflicts of interest within the highest governance bodies	⊗ <i>G4-41 • p. S025 //</i>		No
<b>G4-42</b>	Roles of the highest governance bodies and senior executives in developing organization's purpose	⊗ <i>G4-42 • p. S027 //</i>		No
<b>G4-43</b>	Measures taken to enhance knowledge of the highest governance bodies on sustainability topic	⊗ <i>G4-43 • p. S026 //</i>		No
<b>G4-44</b>	Procedures for evaluating the highest governance bodies' own sustainability performance	⊗ <i>G4-44 • p. S028 //</i>		No
<b>G4-45</b>	Procedures of the highest governance bodies for overseeing sustainability performance	⊗ <i>G4-45 • p. S027 //</i>		No
<b>G4-46</b>	Roles of the highest governance bodies in risk management	⊗ <i>G4-46 • p. S028 //</i>		No
<b>G4-47</b>	Review of impacts, risks and opportunities	⊗ <i>G4-47 • p. S028 //</i>		No
<b>G4-48</b>	Formal review and approval of the sustainability reporting	⊗ <i>G4-48 • p. S006 //</i>		No
<b>G4-49</b>	Process for communicating critical concerns	⊗ <i>G4-49 • p. S027 //</i>		No
<b>G4-50</b>	Nature and total number of critical concerns	⊗ <i>G4-50 • p. S027 //</i>		No
<b>G4-51</b>	Remuneration Policy for top management and relationship to sustainability performance	⊗ <i>G4-51 • p. S028 //</i>		No
<b>G4-52</b>	Determining compensation	⊗ <i>G4-52 • p. S028 //</i>		No
<b>G4-53</b>	Compensation policies	⊗ <i>G4-53 • p. S029 //</i>		No
<b>G4-54</b>	Comparison of salaries	⊗ <i>G4-54 • p. S029 //</i>		No

## G4 GRI Content Index

## General Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
G4-55	Percentage comparison of salaries	☉ <u>G4-55</u> • p. S029//		No

## Ethics and Integrity

G4-56	Statements of mission, values, codes of conduct, principles as well as status of implementation	☉ <u>G4-56</u> • p. S029//	Not applicable	No
G4-57	Internal and external mechanisms for seeking advice on ethical and integrity matters	☉ <u>G4-57</u> • p. S030//		No
G4-58	Internal and external mechanism for reporting concerns on ethical and integrity matters	☉ <u>G4-58</u> • p. S030//		No

## G4 GRI Content Index

## Disclosures on Management Approach (DMA)

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
G4-DMA	Management approach regarding the materiality aspects and themes	☉ <u>G4-DMA</u> • p. S010//		No

## G4 GRI Content Index

## Specific Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
<b>Economic</b>				
G4-EC1	Direct economic value generated and distributed	☉ <u>G4-EC1</u> • p. S046//		Yes
G4-EC2	Financial implications due to climate change	☉ <u>G4-EC2</u> • p. S047//		Yes
G4-EC3	Coverage of organization's defined benefit plan obligations	☉ <u>G4-EC3</u> • p. S050//		Yes
G4-EC4	Financial assistance received from government	☉ <u>G4-EC4</u> • p. S051//		Yes
G4-EC5	Entry level wage compared to local minimum wage	Compensation always above minimum wage ☉ <u>G4-EC5</u> • p. S051//		Yes
G4-EC6	Locally based hiring of employees	☉ <u>G4-EC6</u> • p. S051//		Yes
G4-EC7	Infrastructure investments and services provided mainly for public benefit	☉ <u>G4-EC7</u> • p. S052//		Yes
G4-EC8	Indirect economic impacts	Kind and amount of		No
G4-EC9	Selection of locally based suppliers	☉ <u>G4-EC9</u> • p. S052//		Yes

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## G4 GRI Content Index

## Specific Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
<b>Environmental</b>				
G4-EN1	Materials used	☉ <u>G4-EN1</u> • p. S053//		Yes
G4-EN2	Recycling input materials	☉ <u>G4-EN2</u> • p. S054//		Yes
G4-EN3	Energy consumption within the organization	☉ <u>G4-EN3</u> • p. S054//		Yes
G4-EN4	Energy consumption outside of the organization	☉ <u>G4-EN4</u> • p. S057//		Yes
G4-EN5	Energy intensity	☉ <u>G4-EN5</u> • p. S057//		Yes
G4-EN6	Reduction of energy consumption	☉ <u>G4-EN6</u> • p. S057//		Yes
G4-EN7	Initiatives for energy efficiency and renewable energy	☞ <u>Global Supply Chain – Procurement</u> • p. 056// ☉ <u>G4-EN7</u> • p. S057//		Yes
G4-EN8	Total water withdrawal	☉ <u>G4-EN8</u> • p. S057//		Yes
G4-EN9	Impact of water consumption	Majority is in circular flow ☉ <u>G4-EN9</u> • p. S058//		Yes
G4-EN10	Water recycled and reused	☉ <u>G4-EN10</u> • p. S058//		Yes
G4-EN11	Land in or adjacent to protected areas or areas of high biodiversity value	Not reported, not material		No
G4-EN12	Impact on biodiversity	☉ <u>G4-EN12</u> • p. S059//		Yes
G4-EN13	Habitats protected or restored	Not reported, not material		No
G4-EN14	Threatened species	Not reported, not material		No
G4-EN15	Direct greenhouse gas emissions	☉ <u>G4-EN15</u> • p. S059//		Yes
G4-EN16	Indirect greenhouse gas emissions	☉ <u>G4-EN16</u> • p. S059//		Yes
G4-EN17	Other relevant greenhouse gas emissions	☉ <u>G4-EN17</u> • p. S060//		Yes
G4-EN18	Greenhouse gas emissions intensity	☉ <u>G4-EN18</u> • p. S060//		Yes
G4-EN19	Initiatives to reduce greenhouse gas emissions	☉ <u>G4-EN19</u> • p. S060//		Yes
G4-EN20	Emissions of ozone-depleting substances	Not reported, not material		No
G4-EN21	NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions	☉ <u>G4-EN21</u> • p. S061//		Yes
G4-EN22	Total water discharge	☉ <u>G4-EN22</u> • p. S061//		Yes
G4-EN23	Waste by type and disposal method	☉ <u>G4-EN23</u> • p. S062//		Yes
G4-EN24	Significant spills	☉ <u>G4-EN24</u> • p. S063//		Yes
G4-EN25	Hazardous waste under Basel Convention	Not reported, not material		No
G4-EN26	Impact of water discharges on biodiversity	Not reported, not material		No

## G4 GRI Content Index

## Specific Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
G4-EN27	Initiatives to mitigate environmental impacts	☞ <u>G4-EN28</u> • p. S064//	No conclusive list of individual initiatives; reason for improvement are diverse efficiency measures	Yes
G4-EN28	Packaging materials	☞ <u>G4-EN28</u> • p. S067//		Yes
G4-EN29	Sanctions for noncompliance with environmental laws and regulations	Not reported, not material		No
G4-EN30	Environmental impacts of transporting products	Not reported, not material		No
G4-EN31	Environmental protection expenditures	Not reported, not material		No
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	Not reported, not material		No
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	Not reported, not material		No
G4-EN34	Grievances about environmental impacts	☞ <u>G4-EN34</u> • P. S068//		Yes
<b>Social</b>				
G4-LA1	Attrition rate	☞ <u>G4-LA1</u> • p. S074//		Yes
G4-LA2	Benefits to full-time employees	☞ <u>G4-LA2</u> • p. S076//		Yes
G4-LA3	Return rate and retention rate after parental leave	☞ <u>G4-LA3</u> • p. S077//		Yes
G4-LA4	Minimum notice periods regarding significant operational changes	Not reported, not material		No
G4-LA5	Employees represented in worker health and safety committees	☞ <u>G4-LA5</u> • p. S082//		Yes
G4-LA6	Injuries, occupational diseases, lost days, absenteeism and work-related fatalities	☞ <u>G4-LA6</u> • p. S082//	Data protection: Occupational diseases can not be documented. In the U.S., sick leaves can not be documented.	Yes



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## G4 GRI Content Index

## Specific Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
G4-LA7	Counseling and training on serious diseases	☉ <a href="#">G4-LA7</a> • p. S083 //		Yes
G4-LA8	Health & safety topics covered in agreements with trade unions	Not material Topics of health and safety at the workplace are subject to co-determination (Works Council in Freiberg and Bonn). All of these agreements are signed by the company. ☉ <a href="#">G4-LA8</a> • p. S083 //		No
G4-LA9	Initial and further training for employees	☉ <a href="#">G4-LA9</a> • p. S088 //	Trainings per employee in the U.S.	Yes
G4-LA10	Programs for skills management and life-long learning	Not reported, not material		No
G4-LA11	Performance and career development reviews for employees	Not reported, not material		No
G4-LA12	Diversity and equal opportunities	☉ <a href="#">G4-LA12</a> • p. S090 //		Yes
G4-LA13	Ratio of women's basic salary to men's	☉ <a href="#">G4-LA13</a> • p. S098 //		Yes
G4-LA14	Percentage of new suppliers that were screened using criteria for labor practices	Not reported, not material		No
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	Not reported, not material		No
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	Not reported, not material		No
G4-HR1	Investment agreements	In the reporting period, there were no significant investment agreements which were decisive in terms of volume or strategic importance for the company. As a result, there were no human rights clauses associated with such agreements.		No
G4-HR2	Training on aspects of human rights	To date, there have been no trainings conducted on this topic.		No
G4-HR3	Incidents of discrimination	In the reporting periods 2012 and 2013, no incidents of discrimination have been detected in the U.S.		No
G4-HR4	Freedom of association and collective bargaining	☉ <a href="#">G4-HR4</a> • p. S102 //		Yes
G4-HR5	Child labor	☉ <a href="#">G4-HR5</a> • p. S102 //		Yes
G4-HR6	Forced or compulsory labor	☉ <a href="#">G4-HR6</a> • p. S102 //		No
G4-HR7	Training of security personnel	Not reported, not material		No
G4-HR8	Violations of rights of indigenous people	We do not violate rights of indigenous people, as we have no influence on them with our business activity.		No

## G4 GRI Content Index

## Specific Standard Disclosures

Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
<b>G4-HR9</b>	Processes that have been subject to studies and impact analysis regarding the respect for human rights	So far, no specific examinations have been conducted on this topic.		No
<b>G4-HR10</b>	Percentage of new suppliers that were screened using human rights criteria	☉ <u>G4-HR10</u> • p. S102//		Yes
<b>G4-HR11</b>	Significant actual and potential negative human rights impacts in the supply chain and actions taken	Not reported, not material		No
<b>G4-HR12</b>	Grievances about human rights impacts filed	To date, no human rights violations have been filed.		Yes
<b>G4-S01</b>	Impact on communities	☉ <u>G4-S01</u> • p. S102//		Yes
<b>G4-S02</b>	Negative impacts on local communities	☉ <u>G4-S02</u> • p. S102//		Yes
<b>G4-S03</b>	Corruption risks	☉ <u>G4-S03</u> • p. S103//		Yes
<b>G4-S04</b>	Training in anti-corruption policies	☉ <u>G4-S04</u> • p. S103//		Yes
<b>G4-S05</b>	Corruption incidents and action taken	☉ <u>G4-S05</u> • p. S104//		Yes
<b>G4-S06</b>	Contributions to political parties, politicians and related institutions	☉ <u>G4-S06</u> • p. S106//		Yes
<b>G4-S07</b>	Legal actions for anti-competitive behavior	Not reported, not material		No
<b>G4-S08</b>	Sanctions for non-compliance with laws and regulations	☉ <u>G4-S08</u> • p. S104//		Yes
<b>G4-S09</b>	Percentage of new suppliers that were screened using criteria for impacts on society	Not reported, not material		No
<b>G4-S010</b>	Significant actual and potential negative impacts on society in the supply chain and actions taken	Not reported, not material		No
<b>G4-S011</b>	Grievances about impacts on society	☉ <u>G4-S011</u> • p. S104//		Yes
<b>G4-PR1</b>	Impacts on customer health and safety	☉ <u>G4-PR1</u> • p. S104//	The evaluations of our service providers and customers (wholesalers, installers) are not available.	Yes
<b>G4-PR2</b>	Non-compliance with health and safety regulations	☉ <u>G4-PR2</u> • p. S104//		Yes
<b>G4-PR3</b>	Product information	☉ <u>G4-PR3</u> • p. S104//		Yes
<b>G4-PR4</b>	Non-compliance with standards concerning product labeling	☉ <u>G4-PR4</u> • p. S105//		Yes
<b>G4-PR5</b>	Customer satisfaction	☉ <u>G4-PR5</u> • p. S105//		Yes
<b>G4-PR6</b>	Standards related to advertising	☉ <u>G4-PR6</u> • p. S106//		Yes
<b>G4-PR7</b>	Non-compliance with marketing standards	☉ <u>G4-PR7</u> • p. S106//		Yes
<b>G4-PR8</b>	Breaches of customer data privacy	Not reported, not material		No

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G4 GRI Content Index				
Specific Standard Disclosures				
Standard	Description	Cross-reference/Direct answer	Omissions	External Assurance
G4-PR9	Sanctions for noncompliance with product and service regulations	☞ <u>G4-PR9</u> • p. S106 //		Yes
+	Confirmation	☞ <u>Confirmation</u> • p. S129 //		Yes
+	Sector Supplements	No appropriate sector supplements exist.		No

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## APPENDIX: MATERIALITY ANALYSIS – ASSESSMENT OF ALL ASPECTS AND THEMES

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## ④7 ASSESSMENT OF ALL ASPECTS AND THEMES

Aspects/Themes	Total Stakeholder	Total SOLARWORLD
Economic Performance	8.7	10
Market Presence	6.2	8
Indirect Economic Impacts	4.5	2
Procurement	6.3	9
Materials	5.4	10
Energy	5.1	8
Water	4.0	8
Biodiversity	4.1	3
Emissions	4.4	5
Effluents and Waste	4.5	7
Products and Services	5.6	4
Environmental Compliance	5.7	5
Transport	4.7	7
Overall	3.8	4
Supplier Environmental Assessment	4.2	5
Environmental Grievance Mechanisms	4.7	10
Employment	6.8	10
Labor/Management Relations	5.4	7
Occupational Health and Safety	5.3	10
Training and Education	4.9	7
Diversity and Equal Opportunity	4.6	6
Equal Compensation for Women and Men	4.5	6
Supplier Assessment for Labor Practices	4.6	5
Labor Practices Grievance Mechanisms	5.3	6
Investments	4.2	7
Non-discrimination	4.5	7
Freedom of Association and Collective Bargaining	4.4	4
Child Labor	5.4	9
Forced or Compulsory Labor	5.5	9
Security Practices	3.6	3
Indigenous Rights	3.2	1
Human Rights Assessment	3.6	2
Supplier Human Rights Assessment	4.2	4
Human Rights Grievance Mechanisms	4.6	8
Local Communities	4.8	9
Anti-corruption	5.8	10

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Aspects/Themes	Total Stakeholder	Total SOLARWORLD
Public Policy	5.6	10
Anti-competitive Behavior	5.9	5
Compliance	6.4	7
Supplier Assessment for Impacts on Society	4.7	5
Grievance Mechanisms for Impacts on Society	5.0	10
Customer Health and Safety	6.0	10
Product and Service Labeling	5.1	8
Marketing Communications	4.5	7
Customer Privacy	4.9	7
Compliance	5.9	8
<b>Topics GC</b>		
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.	5.2	5
Principle 2: Businesses should make sure that they are not complicit in human rights abuses.	5.2	7
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to free collective bargaining.	5.0	4
Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labor.	5.6	9
Principle 5: Businesses should uphold the effective abolition of child labor.	5.6	9
Principle 6: Businesses should uphold the elimination of discrimination in respect to employment and occupation.	5.1	7
Principle 7: Businesses should support a precautionary approach to environmental challenges.	4.8	10
Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.	4.9	5
Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.	6.2	8
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	5.8	10
<b>Topics EFFAS/DVFA (which are not already part of GRI or GC)</b>		
Age Structure	3.3	5
Revenue from new products	5.0	7
R&D expenses; R&D expenses on sustainability	5.4	9
Share of new customers	4.4	9
Production down-time due to materiality shortage	4.5	8
Cost of relocation	4.4	4
Dependence on subsidies	6.0	7
Dependence on suppliers	5.7	7
<b>Other topics</b>		
Lead in modules	4.4	5
Conflict minerals	4.1	3
Recycling	5.1	2
Expectations towards the CEO as the founder of the company	6,1	7

## CONFIRMATION FOR THE SECTION „PERFORMANCE INDICATORS“ OF THE REPORT SEGMENT „SUSTAINABILITY IN DETAIL 2013“ OF SOLARWORLD AG, BONN, FOR THE CALENDAR YEAR 2013

To SOLARWORLD AG, Bonn

We have reviewed the section „Performance Indicators“ of the report segment “Sustainability in Detail 2013” of SOLARWORLD AG, Bonn. The preparation of the report segment “Sustainability in Detail 2013” is carried out in accordance with the following criteria set out and specified in the GRI Guidelines Version 4 of the Global Reporting Initiative (pages 16–18)

- |                             |                 |
|-----------------------------|-----------------|
| • materiality               | • comparability |
| • stakeholder inclusiveness | • accuracy      |
| • sustainability context    | • timeliness    |
| • completeness              | • clarity and   |
| • balance                   | • reliability.  |

It is the responsibility of the Management Board of SOLARWORLD AG to prepare the segments. Our task is to provide a confirmation for the section „Performance Indicators“ of the report segment “Sustainability in Detail 2013” on the basis of our audit review.

We conducted the audit review on the section „Performance Indicators“ of the report segment “Sustainability in Detail 2013” in accordance with the German standards for the audit of sustainability reports established by the Institute of German Auditors (IDW). Accordingly, the audit review requires us to comply with professional requirements and to plan and perform the engagement in such manner that we can rule out, through critical appraisal of the facts, that the report segments have not in all material aspects been drawn up in accordance with the above-mentioned criteria of the GRI Guidelines Version 4 of the Global Reporting Initiative (pages 16–18). An audit review is limited primarily to making inquiries of company personnel and applying analytical procedures and thus does not provide the assurance that we would obtain from an audit of financial statements.

In the course of our audit review, we acquired the evidence, based on assessments of risks and materiality, to obtain limited assurance that the section „Performance Indicators“ of the report segment “Sustainability in Detail 2013” comply with the specified criteria of the GRI Guidelines Version 4 of the Global Reporting Initiative (pages 16–18). The nature and extent of our procedures were determined, with the additional assistance of appropriate samples, by our professional judgment as to the requirements for obtaining limited assurance. The performance of our engagement included among other things the following procedures:

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- Inspection of the relevant documentation, including documentation of group principles and management and reporting structures, as well as inspection and random testing of existing documents and systems for compiling, analyzing and aggregating sustainability data
- Discussions with the team entrusted with compiling the reporting on sustainable corporate management
- Discussions with employees of other group divisions
- Acquiring an understanding of the process used to identify themes for the reporting on sustainable corporate management in 2013
- Discussions and inspection of documents at the Bonn and Freiberg sites in relation to the sustainability data of operations at those sites.

The work we performed did not make us aware of any facts which would lead us to assume that the section „Performance Indicators“ of the report segment “Sustainability in Detail 2013” were not drawn up in material respects in accordance with the underlying criteria specified in the GRI Guidelines Version 4 of the Global Reporting Initiative (pages 16–18).

Bonn, 18 March 2014

**BDO AG**

Wirtschaftsprüfungsgesellschaft



**Lubitz**  
*Auditor*



**ppa. Ahrend**  
*Auditor*

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# ABBREVIATIONS

<b>C</b> C <sub>2</sub> H <sub>4</sub> ..... Ethylene	<b>K</b> KPIS ..... Key Performance Indicators
CDP ..... Carbon Disclosure Project	KPNS ..... Key Performance Narratives
CFC <sub>11eq</sub> ..... Trichlorofluoromethane equivalent	KWH ..... Kilowatt hours
CNF ..... Commission on Non-Financials	
CO <sub>2eq</sub> ..... Carbon dioxide equivalent	<b>L</b> LA ..... Labor
<b>D</b> DVFA ..... Deutsche Vereinigung für Finanzanalyse und Asset Management	<b>M</b> MJ ..... Megajoule
DB <sub>eq</sub> ..... Dichlorbenzene equivalent	MJ <sub>eq</sub> ..... Megajoule equivalent
	MWH ..... Megawatt hours
<b>E</b> EC ..... Economy	<b>N</b> NGOS ..... Non-Governmental Organizations
EFFAS ..... European Federation of Financial Analysts Societies	NO <sub>x</sub> ..... Nitrogen oxide
EN ..... Environment	<b>P</b> PR ..... Product Responsibility
EPIA ..... European Photovoltaic Industry Association	PO <sub>4-eq</sub> ..... Phosphate ion equivalent
ESG ..... Environmental, Social, Governance	
<b>G</b> GHG ..... Greenhouse Gas	<b>Q</b> QHSE ..... Quality, Health, Safety and Environment
GRI ..... Global Reporting Initiative	QST ..... Qatar Solar Technologies
<b>H</b> HR ..... Human Resources	<b>R</b> R&D ..... Research & Development
<b>I</b> IDW ..... Institut der Wirtschaftsprüfer	<b>S</b> SB <sub>eq</sub> ..... Antimony equivalent
IEA ..... International Energy Agency	SEIA ..... Solar Energy Industries Association
ILO ..... International Labour Organization	SO <sub>2eq</sub> ..... Sulphur dioxide equivalent
ISAE ..... International Standards on Assurance Engagement	SO <sub>x</sub> ..... Sulphur oxides
IPCC ..... Intergovernmental Panel on Climate Change	SVTC ..... Solar Valley Toxics Coalition
ISO ..... International Organization for Standardization	<b>T</b> TCO <sub>2eq</sub> ..... Tons of carbon dioxide equivalent
<b>J</b> JSSI ..... Joint Solar Silicon	<b>W</b> WEEE ..... Waste Electrical and Electronic Equipment
	WP ..... Wattpeak



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# IMPRINT

„SUSTAINABILITY IN DETAIL 2013“ IS ALSO AVAILABLE IN GERMAN.  
ONLINE VERSIONS IN GERMAN AND ENGLISH CAN BE FOUND ON OUR HOMEPAGE  
AT [WWW.SOLARWORLD.DE/FINANCIAL-REPORTS](http://WWW.SOLARWORLD.DE/FINANCIAL-REPORTS) AS WELL AS [WWW.SOLARWORLD.DE/SUSTAINABILITY](http://WWW.SOLARWORLD.DE/SUSTAINABILITY)

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