ANNUAL GROUP REPORT 2010 SOLARWORLD AG



# SOLAR CERTAINTY SOLAR SUCCESS

FASCINATED BY THE SUN. ENERGY FOR EVERYONE. CLEAN AND SAFE.





# **SOLAR SUCCESS**

#### We are building a solar world.

With the passion and the innovative strength of the solar pioneer. With our presence in the future markets of all continents. With our positioning in the entire solar value chain. With our high quality products – from the solar wafer to the complete system. With the power of a global brand.

With energy. With sustainability. With success.

Worldwide.

\_\_\_\_\_

#### WE ARE COMMITTED TO SUSTAINABILITY AND TRANSPARENCY

#### The principle of sustainability

The present integrated report combines financial and sustainability reporting. Following the claim of sustainability, we have streamlined the consolidated annual report: Especially relevant ecological and societal topics are extensively portrayed in the annual report. A "sustainability" factsheet contains an overview of the quantitative data. (a) <u>Factsheet Sustainability</u> \* p. 220// At the end of each chapter of the group management report, information boxes refer to the details on our sustainability performance that are available online.

All further details of our sustainability performance are interactively prepared in the online report. In this way, we facilitate the demand-oriented search in the online report thus additionally reducing the printing effort in the spirit of sustainability. As a supplement to the ready-to-print PDF version on the Internet, we offer you the possibility of having a print-out made by us and sent to you (print-on-demand). (a) Order card \* p.218//

#### Comprehensive performance audit

We have had the entire reporting audited by BDO AG Wirtschaftsprüfungsgesellschaft. The information on the asset, finance and earnings situation is based on the requirements of the International Financial Reporting Standards (IFRS) and, where applicable, on German commercial law and the German accounting principles (German GAAP). Sustainability reporting follows the international guidelines (G3) of the Global Reporting Initiative (GRI) and has consistently reached the highest level of A+ since 2007. At the same time, it serves as a Communication on Progress (COP) for the implementation of the ten principles of the UN Global Compact.

The audit of the sustainability data has been conducted in line with the German principles of the proper audit review of reports in the area of sustainability identified by the German Institute of Certified Public Accountants (IDW). These principles include the requirements of the "International Standard on Assurance Engagements (ISAE) 3000" and do in fact go beyond them.

\_\_\_\_\_

Rounding differences may occur.

#### FOR YOUR GUIDANCE

- ⊖ Cross reference to text passages in the Annual Group Report 2010 p. 000//
- @ Cross reference to charts in the Annual Group Report 2010 p. 000//
- @<u>www.internetlink.com</u>//
- O Cross reference to Details on Sustainability Performance 2010 p. S00//
- ◎ Cross reference to financial reports of prior years p. 000//

# SOLARWORLD AG ANNUAL GROUP REPORT 2010

- SELECTED INDICATORS 2010 Page 004 // — OUR VISION Page 008 // - LETTER BY THE CHAIRMAN Page 009 // ---- REPORT BY THE SUPERVISORY BOARD Page 013 // - GROUP MANAGEMENT REPORT\* Page 019 // ---- CONSOLIDATED FINANCIAL STATEMENTS\* Page 143 // - SUSTAINABILITY Page 217 // — INDEX OF CHARTS AND TABLES Page 225 // - GLOSSARY Page 228 // — SUBJECT AND ACRONYMS INDEX Page 234 // - CHRONICLE Page 236 // - FINANCIAL AND EVENTS CALENDAR Page 238 //

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

\_\_\_\_\_

# **SOLARWORLD 2010**

Г

#### ⓓ SELECTED INDICATORS // IN K€

Financial indicators	2010	2009	Change (%)
Revenue	1,304,674	1,012,575	28.8
Foreign quota in % of revenue	47.0	29.3	17.7 %-points
EBITDA	281,255	216,484	29.9
EBIT	192,752	152,825	26.1
EBIT in % of revenue	14.8	15.1	-0.3 %-points
Capital employed (key date)*	1,311,332	1,112,025	17.9
ROCE ** (in %)	14.7	13.7	1.0 %-points
Consolidated net income	87,312	58,973	48.1
Consolidated net income in % of revenue	6.7	5.8	0.9 %-points
Total assets	2,635,332	2,217,050	18.9
Equity	922,879	865,462	6.6
Equity ratio (in %)	35.0	39.0	-4.0 %-points
Return on equity (in %)	9.5	6.8	2.6 %-points
Cash flow from operating activities	254,175	-32,997	n.a.
Net liquidity***	-429,022	-279,807	53.3
Investments in intangible assets and property, plant and equipment	216,064	293,182	-26.3
Employee indicators	2010	2009	Change (%)
Employee (key date)	2,376	2,000	18.8
of which trainees (key date)	87	86	1.2
Personnel costs ratio (in %)	9.6	9.4	0.2 %-points
Revenue per employee (in k€)	549	506	8.5
EBIT per employee (in k€)	81	76	6.2
Environment and safety	2010	2009	Change (%)
Total energy consumption (primary and secondory sources, in MWh)	467,429e	368,167 e	27.0
Total GHG emissions (in tCO <sub>2eq</sub> )	179,137	139,285	28.6
Customers	2010	2009	Change (%)
Customer satisfaction with SOLARWORLD: Share of satisfied customers among respondents (in %)	85.8	85.4	0.4%-points

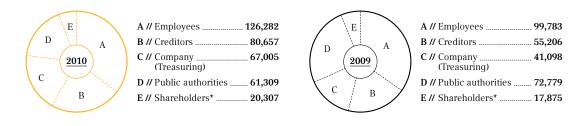
Intangible assets and property, plant and equipment less deferred investments subsidies plus net current assets except for current net liquidity
 EBIT/Capital employed
 Liquid funds and other financial asstes less financial liabilities

٦

#### WALUE ADDED CREATION // IN K€

	2010		2009	
Value added origin	k€	%	k€	%
Revenues	1,304,674	89.9	1,012,575	86.6
Other revenues	146,776	10.1	156,014	13.4
Result of operations	1,451,450	100.0	1,168,589	100.0
Cost of material	834,780	57.5	691,062	59.1
Depreciation and amortization	88,503	6.1	63,659	5.4
Other expenses	172,607	11.9	127,127	10.9
Value added	355,560	24.5	286,741	24.5
Distribution of value added	k€	%	k€	%
Employees	126,282	35.5	99,783	34.8
Creditors	80,657	22.7	55,206	19.3
Company (Treasuring)	67,005	18.8	41,098	14.3
Public authorities	61,309	17.2	72,779	25.4
Shareholders*	20,307	5.7	17,875	6.2
Value added	355,560	100.0	286,741	100.0

#### 03 distribution of value added // IN K $\overleftarrow{\bullet}$



\* 2010 based on dividend proposal by Board of Management and Supervisory Board of 19 cent per share

Г

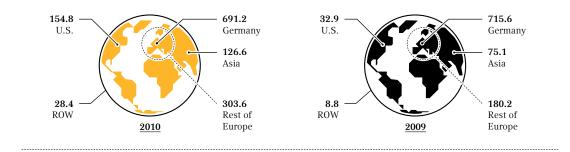
# SOLARWORLD 2010

Г

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

	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q4 2009	Change (%)
Revenue	225,579	382,810	337,393	358,892	375,830	-4.5
Inventory change in products	28,778	-34,633	14,157	132	-70,428	n.a.
Own work capitalized	294	196	330	205	2,453	-91.6
Other operating income	22,071	23,490	19,686	35,543	20,917	69.9
Cost of materials	-173,374	-217,975	-220,607	-222,825	-214,053	4.1
Personnel expenses	-27,438	-31,034	-30,778	-37,032	-25,530	45.1
Amortization and depreciation	-19,163	-21,421	-22,660	-25,259	-16,978	48.8
Other operating charges	-30,874	-43,568	-47,685	-50,479	-35,630	41.7
Result of operations	25,873	57,865	49,836	59,177	36,581	61.8
Financial result	-14,080	-9,370	-18,032	-2,648	-2,903	-8.8
Pre-income tax result	11,793	48,495	31,804	56,529	33,678	67.9
Taxes on income	-6,515	-18,963	-13,750	-22,081	-42,404	-47.9
Group profit/loss	5,278	29,532	18,054	34,448	-8,726	n.a.

#### **0**5 REVENUE BY REGION // IN M€



L

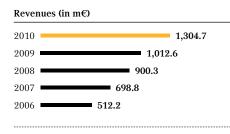
٦

### 007

#### 

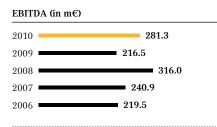
#### **© DEVELOPMENT OF KEY DATA IN FIVE-YEAR-COMPARISON**

Disclosures for 2007 and earlier including discontinued operations



#### Group profit/loss (in m€)

2010	87.3
2009 59	9.0
2008	148.7
2007	113.3
2006	130.6



#### EBIT (in m€)

2010	192.8
2009	152.8
2008	260.8
2007	198.9
2006	177.6

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

2010	216.1
2009	293.2
2008	271.6
2007 1	15.2
2006 10	6.0

\_\_\_\_\_

#### Equity (in m€)

2010	922.9
2009	865.5
2008	841.1
2007	691.5
2006	597.3

#### Employees

2010	2,376
2009	2,000
2008	1,825
2007	1,486
2006	1,348

#### Balance sheet total (in m€)

2010	2,635.3
2009	2,217.1
2008	2,120.6
2007	1,704.5
2006	1,004.4

Γ

# <u>BUILD A</u> Solarworld

— The vision of the **Solarworld** group is to build a reliable, environmentally friendly and safe energy supply worldwide.

— Solar energy is the key to protecting our resources and our climate and by way of an increasing independence from fossil resources it makes a contribution to avoiding military conflicts.

— We are working on making solar power generation competitive in all markets as quickly as possible and on enabling all people to make decentralized use of solar energy and thus to get the opportunity **for sustainable development**.





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

#### Letter by the Chairman

#### Dear Customers, Shareholders, Employees and Friends of SolarWorld AG,

The recent catastrophe in Japan is one that affects the entire world. Its horrific events show that cheap, clean and safe nuclear power is an illusion. The damage to humanity is immeasurable, while the ultimate financial cost will be considerably higher than any investment required for a conversion to renewable energies. The risks of nuclear power cannot be justified. This is not simply an emotional knee-jerk reaction, but common sense. The only people-friendly form of nuclear energy is that generated by the sun.

These insights are nothing new, which makes it all the more regrettable that such a disaster is necessary in order to trigger a serious reconsideration of nuclear energy among its supporters. Reconsideration must and will be followed by action – around the world!

What we lose in unsafe technologies in the years to come will be more than made up for by what we gain from renewable energies. Fossil fuels are not the answer; not only because their supplies are dwindling and they harm the environment, but because fossil fuels carry enormous risks. The oil spill disaster in the Gulf of Mexico – almost forgotten by the public already – is just one cautionary example. We must leave behind these risky technologies and take rational steps towards a renewable energy supply – an energy supply that is truly clean and safe as well as fair and affordable.

We at SOLARWORLD have been advocating a decentralized energy supply from 100 percent renewable energies for more than 10 years. And we have developed a solution that is available now, not sometime in the distant future – a technology with which anyone, almost anywhere in the world, can use the infinite power of the sun to generate electricity. A SOLARWORLD system should enable every home to produce and use its own solar energy, bringing independence from the old supply oligopoly and its rapidly rising prices. It is, of course, also an investment in environmentally and climate-friendly energy. In addition, a decentralized energy source from solar power also ensures a secure power supply in case of an earthquake, as the catastrophe in Haiti showed in January 2010.

It is also clear that we have to work hard to build worldwide acceptance for solar energy. Together with our partners, we are developing new solutions that make it possible to store electricity more effectively and make it available at any time. The faster we progress, the closer we come to achieving full competitiveness for solar power, even without government subsidies. Solar power will soon be cheaper than electricity from a standard wall socket. And tomorrow's electric cars will run on power generated by their own SOLARWORLD SUNCARPORT<sup>®</sup>.

We will also do everything we can to lower the cost of solar power technology: We want to cut the costs for a solar system in half by 2020, and we have everything we need to accomplish this. SOLARWORLD is one of just a select few companies that is strong throughout the entire solar value chain. This is essential for survival amongst the ever-increasing international competition. In addition, our plants and equipment are new, and the best part is that we have developed much of this technology ourselves. All of this enables competitive production while maintaining the highest quality, and environmental and social standards – further plus points in favor of our brand!

Even before the disaster in Japan, all signs pointed to growth in the international solar markets. Now, it appears that the ultimate acceptance of solar energy throughout the world will come even faster than expected. We at SOLARWORLD are more than ready.

In Germany, the world's largest market, we will continue to score well with our established quality brand. Other international markets are developing, too. Foreign sales already make up 60 percent of our total shipments and, in the years to come, we hope to produce and sell three-quarters of our goods outside of Germany. Particularly pleasing was the positive trend in the United States in 2010. Now, we want to push on and really make lasting progress there. New plants, dedicated workers, great products, 35 years of experience – we have everything we need for the big success in America that I have always believed in. The United States will overtake Germany in just a few years, of that I am certain!

Our ability to contribute to a better world is what drives me and our employees. I am grateful for their passionate dedication, knowing that I can rely on them now and always. I thank you all for your confidence and trust.

Sunny regards,

Dr.-Ing. E.h. Frank Asbeck CEO of SolarWorld AG

# THE MANAGEMENT BOARD



WE ARE BUILDING A SOLAR WORLD

## TOGETHER FOR OUR SOLAR VISION TOGETHER WITH 3,352 COLLEAGUES WORLDWIDE

More than ten years ago, we started with a clear vision: energy from the sun – safe, clean and fair.

Five years ago, when this photograph was taken, our revenue already amounted to € 360 million. Since then, we have together turned our SolarWorld into one of the largest providers in the world market – with € 1.3 billion worth of revenue in 2010 – with consistency in strategy and management.

> Dipl.-Wirtschaftsing. Frank Henn // Chief Sales Officer // CSO Dipl.-Ing. Boris Klebensberger // Chief Operations Officer // COO Dr.-Ing. E.h. Frank Asbeck // Chief Excecutive Officer // CEO Dipl.-Kfm. tech. Philipp Koecke // Chief Financial Officer // CFO

Γ

011

# THE SUPERVISORY BOARD

Г





## **DR. ALEXANDER VON BOSSEL**

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

Initial appointment: 18.12.1998 End of current appointment period:

Dr. von Bossel additionally holds the following appointments on legally required Supervisory Boards and similar supervisory bodies:

• Supervisory Board of Solarparc AG, Bonn (Member since incor٦

## Report by the Supervisory Board of SolarWorld AG on fiscal year 2010

#### Dear Shareholders, dear Employees and dear Friends of the SolarWorld Group,

In fiscal year 2010, the SOLARWORLD locations moved even closer together. The Supervisory Board of SOLARWORLD AG accompanied and supported this development with local visits to Hillsboro and Camarillo. With the present report, the Supervisory Board of SOLARWORLD AG provides information about its activities in fiscal year 2010. In doing so, it again subjects itself to an enhanced reporting duty, which in turn means that it disclosed the complete minutes of all Supervisory Board meetings in the year 2010 including attachments to the auditors of the company. They had neither questions nor did they raise any objections.

The Supervisory Board, which has existed since the inception of the company on December 18, 1998 in its present composition and was reappointed by the Annual General Meeting on May 21, 2008 for another period of office of five years, performed the tasks that are its obligations according to the law, the articles of association and the rules of procedure and did so in a continuous dialogue with the Management Board of the company, which it both advised and supervised in the management of the company pursuant to \$ 111 AktG (German Stock Corporation Act). 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 fiscal year 2010.

In the reporting period, the Supervisory Board held eight formal meetings (four of which were ordinary quarterly meetings) that took place on January 12, February 24, March 15, April 23, June 28, August 9, October 21 and December 16, 2010. On December 17, 2010, a technical information meeting at SOLARWORLD INNOVATIONS GMBH in Freiberg/Saxony was added in which ongoing research projects, scientific fundamentals and product-specific special features were communicated. The October meeting was part of the site visit to Hillsboro and Camarillo, where additional conferences took place, a discussion with a senator in Portland/Oregon could be arranged, and an event in Los Angeles/California with the President of the United States of America was attended. On a regular basis, at least one member of the Management Board participated in the Supervisory Board meetings, which took place only once without Management Board attendance. The Management Board for its part kept the Supervisory Board informed about all Management Board meetings by way of a written agenda and subsequently minutes of the meetings. The same applies to the Group Committee Meetings that are organized to stimulate a comprehensive exchange of views among the executive staff of the SOLARWORLD Group.

The Supervisory Board was very directly and on a timely basis involved in all decisions that were of fundamental importance to the company. The Management Board informs the Supervisory Board regularly both orally and in writing, promptly and comprehensively about all relevant issues of corporate planning and strategic development, about the earnings, asset and finance situation as well as about current business policy and the risk management that is in place. In the process, the reporting duties pursuant to § 90 AktG were as much adhered to as the recommendations of the German Corporate Governance Code (GCGC).

In the year 2010, the work of the Supervisory Board of SOLARWORLD AG dealt with the following priority issues: audit and final conference as well as balance sheet meeting with the auditors covering all consolidated companies; supervision of the accounting process, the effectiveness of the internal control system and the internal audit system as well as the audit itself, the independence of the auditors and the additional services rendered by the auditors; the preliminary discussion of the quarterly figures with the Chief Financial Officer; the international product and marketing strategy including sponsoring; the inclusion of the business fields of SOLARPARC AG due to the take-over and share swap offer to its shareholders; the placement of the € 400 million bond in January of 2010; the preparation and organization of the Annual General Meeting in May 2010; the GCGC implementation; approval of the consulting and representation services rendered to the group by the law firm of Schmitz Knoth Rechtsanwälte, Bonn, which is close to the Chairman of the Supervisory Board as contemplated by IAS 24; inclusion into the running random sample review pursuant to § 342 b Sec. 2 Sentence 3 No. 3 HGB (German Commercial Code) of the Deutsche Prüfstelle für Rechnungslegung; Management Board matters, order prolongation and compensation as well as diversity; approval of the shareholding of SOLARWORLD AG in Asbeck & Solarholding GmbH in GbR Auermühle/move of Sales department and appropriate rental agreement; stronger integration of DEUTSCHE SOLAR AG and SUNICON AG by conversion into GmbH; Code of Conduct.

In all its activities, the Supervisory Board of SOLARWORLD AG has been guided by the recommendations of the GCGC, which both the Supervisory Board and the Management Board on the whole complied with in the year 2010. In the same way, in which the Supervisory Board in its meeting on November 24, 2009 approved the previous GCGC version of June 18, 2009 both for the year just ended and for the new fiscal year it now passed a repeat resolution to approve the current version of the GCGC of May 26, 2010 as published on July 2, 2010, which was taken on August 9, 2010 and made permanently available to all shareholders pursuant to § 161 AktG on the website of the company with the following wording: "The recommendations by the 'Government Commission on the German Corporate Governance Code' as published by the Federal Ministry of Justice in the official section of the Electronic Federal Gazette were and are being complied with by the Supervisory Board to the extent that they are applicable to it."

In this context, the Management Board of SOLARWORLD AG approved and also published pursuant to § 161 AktG an appropriate GCGC compliance declaration on August 9, 2010 which the Supervisory Board verified. At the same time, the section "Corporate Governance Report" in the Annual Management Report 2010 also contains all the relevant details on Management Board remunerations, Supervisory Board compensation and GCGC implementation unless the report by the Supervisory Board also contained in the Annual Management Report 2010 already includes the information as required by section 3.10 GCGC.

Pursuant to section 5.1.2 GCGC the Supervisory Board, which appoints and dismisses the members of the Management Board, has to make sure that there is diversity in the composition of the Management Board with particular emphasis on an adequate representation of women. The Supervisory Board does this by monitoring that pursuant to section 4.1.5 GCGC the Management Board, when filling management positions already strives for an adequate share of women in order to be able to recruit potential female candidates for the Management Board from this pool. A concrete project is being planned and should lead to at least one woman being on the Management Board by 2012. As far as the composition of the Supervisory Board itself is concerned, it is one of our targets to ensure adequate female representation here as well. This goal and the degree of implementation are to be published in the Corporate Governance Report according to section 5.4.1 GCGC. Already at this point, it is made clear on behalf of the Supervisory Board that the implementation has been initiated and is to be completed in such a way that an exchange or an addition of one Supervisory Board member by at least one female board member will be proposed to the Annual General Meeting.

The last paragraph of section 5.1.4 GCGC provides for members of the Supervisory Board to attend upskilling and professional development measures under their own responsibility that are necessary for them to perform their tasks. This, too, has been done. In addition, events were attended like the Round Tables for Supervisory Board members run by Pricewaterhouse Coopers in Düsseldorf on June 8, 2010, by Kienbaum in Bensberg on September 21, 2010 or by CMS Hasche Sigle in Berlin on November 11, 2010, as speaker and listener of the Corporate Finance Summit 2010 in Frankfurt on May 6, 2010 on matters like management board compensation, convertible bonds pp., the GCGC conference in Berlin on June 16/17, 2010 or in the new year the IFRS Update for Supervisory Board members by KPMG in Düsseldorf on January 24, 2011.

As far as compliance with the GCGC recommendations by the Supervisory Board of SOLARWORLD is concerned, the coordination of the strategic alignment of the company and the regular discussion of the current state of strategy implementation were dealt with within the framework of the consistently practiced exchange of information with the Management Board (sec. 3.2 GCGC). In this process, the

provision of information to the Supervisory Board was and is seen as a joint task of the Management Board and the Supervisory Board (sec. 3.4 GCGC). Especially, the Chairman of the Management Board was regularly informed by the Supervisory Board of the company about his own activities and integrated into these as much as possible. Clashes of interest as defined in section 5.5 GCGC were not observed in the process. Also, the Supervisory Board considers itself to be independent as defined in section 5.4.2 GCGC. To the extent that mandatory approvals were required as per section 5.5.4 GCGC these were invariably obtained.

The tasks described by the new balance sheet modernization law with regard to accounting and auditing are performed by the three-member Supervisory Board as a group. To the extent that the law demands in this context that at least one independent member of the Supervisory Board has expertise in the area of accounting or auditing each member of the Supervisory Board possesses this expertise individually. The amendment of § 100 Sec. 5 AktG does not demand that one member of the Supervisory Board must be professionally involved in this area but only that there should be any involvement and expertise at all, which applies in equal measure to all three members of the Supervisory Board of SOLARWORLD AG. As fully qualified lawyers trained in tax law and with a training in banking in the case of the chairman, long years of work in industry in the case of the deputy chairman and an additional international qualification in the case of the third member of the Supervisory Board who all work primarily in business law there is no need for any further explanations on any of the Supervisory Board members. If we leave the Chairman of the Supervisory Board out of account because of the legal activities of his law firm for and on behalf of the group the explicit nomination as independent Financial Experts of Dr. Georg Gansen and Dr. Alexander von Bossel, LL.M. is still possible.

The audit company BDO Deutsche Warentreuhand Aktiengesellschaft, Bonn (now BDO AG Wirtschaftsprüfungsgesellschaft), which was appointed by the Supervisory Board on the instructions of the Annual General Meeting on May 20, 2010 to audit the financial statements and the consolidated financial statements of SOLARWORLD AG again for fiscal year 2010 first renewed its declaration of independence as defined in section 7.2.1 GCGC. Thus, it is confirmed that no business, financial, personal or other relationships existed between the auditor and his organization and chief auditors on the one hand, and the company and its organization members 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.

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 the 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 tended to be largely superfluous again in fiscal year 2010. 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 fiscal year ending December 31, 2010 drawn up by the Management Board according to the HGB accounting rules and the management report of SOLARWORLD AG were awarded the unqualified auditor's certificate on March 11, 2011. At the same time the auditor awarded an unqualified auditor's certificate to the group management report and to the consolidated financial statements of SOLARWORLD AG, which pursuant to § 315 a HGB were again drawn up on the basis of the international accounting rules IFRS.

After its own examination of the annual financial statements, the consolidated financial statements, the management report and the consolidated management report, the Supervisory Board approved the audit result presented by the auditors. It did not see any reasons for objections. Previously, it had discussed the audit priorities with the auditors in a meeting on December 16, 2010 and had met with the auditors for a final conference on February 23, 2011, which in each case took place in the presence of the Chief Financial Officer of SOLARWORLD AG. In the balance sheet meeting on March 14, details following from the unqualified auditor's certificates of March 11, 2010 were finally discussed. Here again no doubts concerning the correctness of the results produced by the auditors were raised, which is why any further investigation was not required. In the balance sheet meeting, the Supervisory Board then approved the financial statements and the consolidated financial statements, as a result of which the financial statements are now adopted. The Supervisory Board also adopted the proposal of the Management Board for the appropriation of the balance sheet profit.

The Management Board, the executives and all the employees of the SOLARWORLD Group again produced outstanding work in fiscal year 2010 and did so worldwide. The Supervisory Board offers its heartfelt thanks together with respect and appreciation for this outstanding achievement.

This report was unanimously approved by the Supervisory Board immediately following the balance sheet meeting on March 14, 2011 and individually signed by all members.

Bonn, March 14, 2011

For the Supervisory Board Dr. Claus Recktenwald Chairman





# GROUP MANAGEMENT REPORT



#### TOGETHER WITH MILLIONS OF PEOPLE AROUND THE WORLD

In 2010, we increased our investments in brand awareness. Larry Hagman, the international star of the TV series "Dallas," has provided testimonials for SolarWorld. Hagman owns the largest residential U.S. solar system. The campaign was launched in 2010 in the U.S. and Germany. @wwww.solarworld-usa.com/shine/videos.aspx //

#### 020

#### — STRATEGY AND ACTION

- 27 SolarWorld Corporate Strategy 2010/2011+
- Corporate Structure/Corporate Technology/ 28 Corporate Brand
- 29 Strategic financing 2010/2011+
- CORPORATE MANAGEMENT AND CONTROL 30

#### - BUSINESS AND GENERAL CONDITIONS

- 34 **GROUP STRUCTURE AND SEGMENTS**
- 35 **IMPORTANT PRODUCTS, SERVICES AND BUSINESS PROCESSES**
- 37 WORLDWIDE LOCATIONS OF THE GROUP

#### MARKET POSITION // INFLUENCING FACTORS 37

- 37 Competitive position and main sales markets
- Legal and economic influencing factors 38
- **CORPORATE GOVERNANCE DECLARATION** 40
- 40 Corporate governance at SolarWorld
- 40 Corporate governance report 2010 2010
- Remuneration report 44

#### ----- BUSINESS DEVELOPMENT IN THE YEAR 2010

#### SOLARWORLD STOCK 2010 55

- Capital market development 2010 55
- Development of the SolarWorld stock 2010 57
- 57 Shareholders and communication
- 59 Take-over directive law

#### 60 MARKET 2010

- 60 *Economic environment*
- 61 The world energy market
- The solar power market 61
- Repercussions of backgound conditions 65 on business development

#### 66 SOLAR VALUE CREATION 2010: FROM SILICON TO MODULE

- 66 Procurement
- 68 "Production Germany" and "Production U.S." seaments

#### 70 SALES MARKETS, BRAND AND PRODUCT 2010

- "Trade" segment 70
- Brand proposition and investments 72
- Products "Made by SolarWorld" 77

#### 80 **ENERGY AND CLIMATE PROTECTION**

- 80 *Energy amortization time*
- *Positive CO2eq. balance* 81
- 82 **INNOVATION REPORT 2010**
- Strategic and organizational development approach 82

#### 89 EARNINGS, FINANCE AND ASSETS SITUATION

- Income situation 89
- 93 Financial position
- 97 Financial standing
- 100 HUMAN RESOURCES 2010

#### ------ SUPPLEMENTARY REPORT

- **106 DISCLOSURE OF EVENTS OF PARTICULAR IMPORTANCE**
- **106 IMPACT OF EVENTS OF PARTICULAR IMPORTANCE**
- 107 OVERALL STATEMENT BY THE MANAGEMENT BOARD ON THE ECONOMIC SITUATION AT THE TIME OF THE REPORT

#### - REPORT ON EXPECTED DEVELOPMENT WITH **ITS MAJOR OPPORTUNITIES AND RISKS**

#### - RISK REPORT

- 108 Opportunity and risk management system
- Internal control and risk management system 108 regarding the group accounting process
- Risk management system regarding financing 111 instruments
- Corporate rating 111
- 111 Individual risks
- 122 Overall statement by the management board on the risk situation of the group

#### —— FORECAST REPORT 2011+

#### 127 **OPPORTUNITIES**

- 127 Opportunities from the development of general conditions
- 129 Strategic Opportunities 129
- Economic performance opportunities

#### 131 MARKET 2011+

- 131 Future economic environment
- The future global electricity market 132
- The future solar power market 132

#### 136 DEVELOPMENT OF BUSINESS 2011+

- Future orientation of the group 136
- Future legal goup stucture 136
- Future development of "Production Germany" and "Production U.S." segments 136
- 137 Future sales markets 2011+ // "Trade" segment
- 138 Future research and development activities //
- "Other" segment
- 139 *Future products and services*
- 140 *Future procurement*
- 140 *Human Resources Future development*
- 141 Expected earnings and financial situation
- 142 **GENERAL STATEMENT OF THE MANAGEMENT BOARD ON FUTURE GROUP DEVELOPMENT**



# *"We work every day on further improving the efficiency and the customer benefit of our products. Innovation is the driving force of our Corporate Technology."*

Ulfi'dmun

----- DR. RALF LÜDEMANN // MANAGING DIRECTOR OF SOLARWORLD INNOVATIONS GMBH, FREIBERG/GERMANY

PAGE / 022

#### (P) TARGET ACHIEVEMENT 2009 AND 2010 AND TARGETS FOR 2011+

Г

#### FINANCE

TARGETS 2009+	ACTUAL 2009	TARGETS 2010+	ACTUAL 2010	TARGETS 2011+
<b>Revenue target:</b> Above previous year's level at € 1 billion as the next stage	✓ <b>Revenue:</b> € 1.01 billion	<b>Revenue target:</b> Sustainable exceeding of the previous year's revenue level of $\in 1$ billion	✓ <b>Revenue:</b> € 1.30 billion (+29%)	<b>Revenue target:</b> Sustainable exceeding of the previous year's revenue level of $\in$ 1.3 billion
(Premise: Stabilizing macro- economic development)		(premise: further recovery of the overall economic development combined with growth of the solar market, which will be materially influenced by the pending general legal conditions on the core market Germany)		
<b>Operating income:</b> Depending on the price reduction that must and can be compensated for on the cost side	✓ EBIT: € 152.8 million market-induced price reduction caused increased pressure on margins in 2009	<b>Operating income:</b> Depending on the level of price degression on the cost side that has to – and can be – absorbed	✓ EBIT: € 192.8 million (+26%)	<b>Operating income:</b> Depending on to what extent increasing price pressure can be compensated for on the cost side
Shareholder participation in corporate success	✓ <b>Dividend:</b> € 0.16/share (dividend proposal to the AGM in 2010)	Shareholder participation in corporate success	✓ <b>Dividend:</b> € 0.19/share (dividend proposal to the AGM in 2011)	Shareholder participation in corporate success

/ PAGE 023

٦

#### CUSTOMERS

TARGETS 2009+	ACTUAL 2009	TARGETS 2010+	ACTUAL 2010	TARGETS 2011+
Further development of the SOLARWORLD brand	<ul> <li>Brand awareness in Germany was increased:</li> <li>Unaided: 2009: 5.8 %; 2009/2010: 7.1 %</li> <li>Aided: 2009: 17 %; 2009/2010: 24.9 %</li> </ul>	Further development of the SOLARWORLD brand	<ul> <li>Brand awareness in Germany was increased:</li> <li>Unaided: 2010/2011: 7.8 % (2009/2010: 7.1%)</li> <li>Aided: 2010/2011: 35.1 % (2009/2010: 24.9 %)</li> </ul>	Further development of the SOLARWORLD brand
Renewed increase in customer satisfaction	Source: EuPD Research/Brandmonitor In 2009 the following factors were identified for the first time in our annual customer survey: Satisfaction with service: 87.6 % "very good" and "good" Satisfaction with product quality: 99.8 % "very good" and "good" Satisfaction with soLARWORLD in general: 85.4 % "very satisfied" and "satisfied"	Renewed increase in customer satisfaction	<ul> <li>Source: EuPD Research/Brandmonitor</li> <li>✓ In 2010 customer satisfaction developed as follows:</li> <li>Satisfaction with service: 89.1 % (2009: 87.6 %) "very good" and "good"</li> <li>Satisfaction with product quality: 99.2 % (2009: 99.8 %) "very good" and "good"</li> <li>Satisfaction with soLARWORLD in general: 85.8 % (2009: 85.4 %) "very satisfied" and "satisfied"</li> </ul>	Renewed increase in customer satisfaction
Expansion of international sales also in new markets and business fields with emphasis on the U.S. market and rural electrification	✓ Market-induced focus on Germany; expansion of German sales teams: +62 %	Expansion of international sales also in new markets and business fields with focus on the U.S. market and rural electrification	<ul> <li>✓ Expansion of European export sales team: +46 %</li> <li>✓ Creation of a sales subsidiary in France</li> <li>✓ Expansion of sales team in the U.S.: +115 %</li> </ul>	Expansion of international sales also in new markets and business fields with focus on the U.S. market and Europe
Foreign quota: Stabilization at previous year's level	Below prior year at 29% (2008: 54%); reason: market-induced, doubled demand in Germany with slight stagnation on inter- national markets	Foreign quota: Above the previous year's level	<ul> <li>✓ Foreign revenue quota: 47 % (2009: 29 %)</li> <li>✓ Foreign shipments quota: 59 % (2009: 46 %)</li> </ul>	Foreign quota: Increase to 75 % over the next two years

✓ Target achievement 100 percent

<u>page</u> / 024

#### FACTSHEET /

/

#### @ TARGET ACHIEVEMENT 2009 AND 2010 AND TARGETS FOR 2011+ (CONTINUATION)

Г

#### PROCESSES

TARGETS 2009+	ACTUAL 2009	TARGETS 2010+	ACTUAL 2010	TARGETS 2011+
Minimum target: Compensating for the EEG reduction on an annual average through internal cost reductions (in €/Wp)	✓ Production costs cut through technical progress and economies of scale in line with EEG reduction as at January 1, 2009.	<b>Minimum target:</b> Compen- sating for EEG degression as at January 1, 2010 (9 % roof systems; 11 % free field systems) via internal cost reduction (in $\mathcal{C}$ /Wp); further 16 % planned as at July 1, 2010 not immedia- tely and completely to be equated on the cost side in 2010	✓ Internal cost reduction (in €/Wp) by about 10 % during 2010	Minimum target: Internal cost reduction of between 8% and 9%
ISO 14001 certification of the U.S. production sites (2010 at the earliest)	✓ On schedule	ISO 14001 certification of all remaining locations, including South Korea ISO 9001 certification in South Korea	<ul> <li>✓ Achieved in March 2010</li> <li>✓ Achieved in March 2010</li> </ul>	ISO 14001 certification for solarparc ag ISO 9001 certification for solarparc ag
Capacity expansion to meet rising world market demand (year-end capacity): Wafers: 1,000 MW Cells: 450 MW Modules: 450 MW	Market-induced adjustment of targets during the year (rise in module demand) away from wafers towards expansion of the production capacities for modules <b>Wafers:</b> 900 MW <b>Cells:</b> 450 MW <b>Modules:</b> 500 MW	Capacity expansion 2010/2011 to meet rising world demand: Wafers: 1,250 MW Cells: 750 MW Modules: 1,250 MW	✓ On schedule	Capacity expansion 2011 (year-end capacity): Wafers: 1,250 MW Cells: 800 MW Modules: 1,400 MW

٦

#### EMPLOYEES

TARGETS 2009+	ACTUAL 2009	TARGETS 2010+	ACTUAL 2010	TARGETS 2011+
Gain and retain qualified, skilled employees and management staff: Employment expansion by around 25 %	175 new jobs created/ +10%, growth was supported by up-staffing, parallel investments in process optimization	Employment increase by around 10 %	✓ Employment increase: 19 %	<b>Employment increase:</b> Groupwide employment increase by around 25 % by the end of 2012
Strengthen employer attraction by way of Employer Branding	✓ Germany: Study "Great Place to Work 2010" – 55 <sup>th</sup> place (2008: 57 <sup>th</sup> place) trendence graduate barometer 2009: 15 <sup>th</sup> place	Continuation	<ul> <li>trendence graduate barometer 14<sup>th</sup> place (2009: 15<sup>th</sup> place);</li> <li>Universum Study Survey 2010: 10<sup>th</sup> place (natural science students), 13<sup>th</sup> place (engineers students)</li> </ul>	Strengthen employer attractiveness
Groupwide executive and talent development	✓ Groupwide executive and talent development	Emphasis on groupwide executive development	✓ Groupwide management and executive workshops	Emphasis on groupwide executive development
Completion of Code of Conduct and communication to employees	Postponed to 2010; internal coordination process not yet completed	After approval by the works council the code will be officially launched and communicated and included in internal training and continuing professional development programs	Approval by work council obtained; official signature by Board of Management and Supervisory Board: Communication re-scheduled for 2011	Groupwide communication of the Code of Conduct

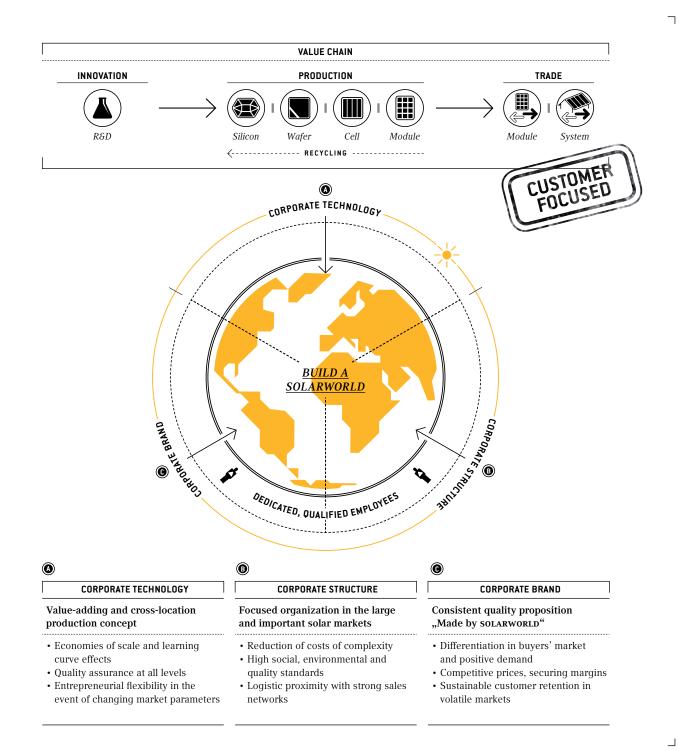
#### SOCIETY

TARGETS 2009+	ACTUAL 2009	TARGETS 2010+	ACTUAL 2010	TARGETS 2011+
Consider the interests of stakeholder groups: voluntary disclosure through sustainability reporting pursuant to Global Report- ing Initiative (GRI), Carbon Disclosure Project	<ul> <li>✓ Signing of the Global Compact</li> <li>✓ Review of sustainability report by auditor</li> </ul>	Consider the interests of stakeholder groups: volun- tary disclosure through sustainability reporting pursuant to GRI, Carbon Disclosure Project as well as Global Compact	✓ Achieved	Consider the interests of stakeholder groups: volun- tary disclosure through sustainability reporting pursuant to GRI, Carbon Disclosure Project as well as Global Compact
Implementation of aware- ness-building measures with regard to climate and resource protection	<ul> <li>Information through throw-ins, target group mailings, school projects, cultural promotion regard- ing the protection of species, etc.</li> </ul>	Implementation of aware- ness-building measures with regard to climate and resource protection	<ul> <li>Information through TV spots, throw-ins, target group mailings, school projects, etc.</li> </ul>	Implementation of aware- ness-building measures with regard to climate and resource protection
<b>Research promotion:</b> expand the cooperation with universities and research institutes	✓ Research promotion 2009: 25 (2008: 21)	Research promotion: expansion of cooperation with universities and research institutes	<ul> <li>Cooperation with TUBA in the area of vocational training increased; research promotion 2010: 24 (2009: 25)</li> </ul>	<b>Research promotion:</b> expanding the coopera- tion with universities and research institutes
Contribution to regional development via Solar2World projects (not-for-profit)	✓ <b>Project scope:</b> 114kWp (2008: 53kWp)	Contribution to regional development via Solar2World projects (not-for-profit)	✓ Project scope: 161 kWp (2009: 114 kWp)	Contribution to regional development via Solar2World projects (not-for-profit)

✓ Target achievement 100 percent







# STRATEGY AND ACTION

The global market for solar power products changed from a sellers' to a buyers' market in 2010. On the highly competitive supply side, production capacities continued to increase – in the year under review by around 50 percent. A simultaneous price decline exerted pressure on the margins.  $\bigcirc$  *Regulatory background conditions create demand peaks* \* *p. 063*// The demand side was impacted by the general political conditions and the discussion about solar subsidies in the lead market Germany. This resulted in powerful peaks in demand, temporary shifts among worldwide markets and pressure on sales prices and margins.

Nevertheless, in 2010 we again succeeded in bringing the product and the brand a good deal closer to the customer in the high-selling core markets: In parallel to expansion of our production volumes, we achieved growth in our groupwide shipments. The company's worldwide revenues went up accordingly by 29 percent and we observed a pronounced upward trend in the brand's awareness level.  $\bigcirc$  *Efficiency control confirms stable brand value development* \* *p.* 074// In addition, we successfully dealt with the challenge of compensating for intense shifts in demand among the markets in our strong sales networks.

#### SOLARWORLD CORPORATE STRATEGY 2010/2011+

The year 2010 has shown that we are on the right track: clear concentration on the crystalline solar core business, well-considered global site selection with synergies and economies of scale, especially in production, combined with the SOLARWORLD brand's quality strategy of integrating the customer as a partner internationally.

Our general principle is to internally own and control the technological know-how about our solar power products from A to Z. This is why Research & Development successes within SOLARWORLD take effect from the raw material all the way to the final "module" and "system" product. In extended business units, such as storage technology, for example, we make use of the specialist competency of our experienced partners. B *Efficiency control confirms Stable brand value development* \* *p. 082//* By this means, we can guarantee the high quality of our products to our customers. In keeping with our vision to "BUILD A SOLARWORLD", our strategy is focused on manufacturing products for supplying electricity decentrally. The future belongs to the application of solar power technology on the roof as this is possible almost without limitation all over the world.

\_\_\_\_\_



What makes us as SOLARWORLD strong and ensures our competitive edge in the market is a standardized, high quality, global module concept. We then supplement this in a target-oriented way with diversified, market- and customer-specific systems and application components.

#### CORPORATE STRUCTURE/CORPORATE TECHNOLOGY/CORPORATE BRAND

The still young solar markets are currently being subjected to major changes that we as SOLARWORLD have to adjust to as quickly and with as little effort as possible. In order to keep the leeway for action flexible and thus to be in a position to expand our market position consistently, production is concentrated at two locations in Germany and in the United States – a management view that is also reflected in the group's segmental structure. (in) Segment Structure and value chain Stages • p. 036// In addition, the company secures logistical proximity to the Asian market by way of another module production facility that takes the form of a joint venture in South Korea. By concentrating on these three locations we can tap groupwide synergies such as the expansion of available capital and know-how, for example. We also record major learning curve effects and economies of scale through "specialization" along the stages of the value chain and through processes and technologies tested over many years and developed largely with cooperation partners. We have standardized our processes to a large extent and have thus significantly reduced structure-related complexity drivers. On balance, these are the factors that prepare the way for continuously required cost reduction, a mature quality strategy, and also a high return on investment. At the same time, we used the year 2010 to create global organization units in areas such as procurement, production planning, investments, and information technology. This enables the company to implement even bigger international projects: Thus, today we can plan and build a production facility with ten times the capacity of five years ago in the same amount of time.

The average world market prices declined by around 15 percent in the period under review. To some extent we were able to reflect this cost development in our internal operations throughout the group. At the same time, we managed to further improve the performance and quality of our products in the process. However, it was not possible to completely compensate for the 25 percent cut in feed-in tariffs implemented in the current lead market Germany in 2010 through cost reductions. This cut was also borne to some extent by the wholesale and specialist retail trade as well as by the end customers.

To expand our market share in the end customer market for modules and systems under a strong SOLARWORLD brand – that is our focus for the future. It is also the reason why we increasingly integrate our in-house wafers internally into cells and modules, and why we will substantially expand module capacity during the period 2011+.  $\bigcirc$  *Future development of "production Germany" and "production U.S." Segments* \* *p.* 136//

Quality "Made by SOLARWORLD" – that is the value proposition we feel committed to now and in the future in the sense of sustainable growth for our employees and customers. Our brand is therefore one

of our most valuable corporate assets: It enables us to obtain a competitive price for our quality products so that, in turn, we can again invest and grow sustainably. Any company which, as a manufacturer, does not want to sell exclusively via the price and at the expense of margins and quality must not only achieve cost reductions and productivity increases, it must also convince the customer with factors like design, warranty and service. (a) *Products "Made by SolarWorld"* \* *p.* 077//

#### STRATEGIC FINANCING 2010/2011+

We will only be able to expand our market position if we manage to continuously operate efficiently and secure our financial requirements over the long term. The goal of our financing strategy is to have sufficient liquidity reserves available at all times to provide the group with the necessary financial flexibility for any required growth steps and implement our short- to medium-term investment projects. In addition to the funds generated from the operating cash flow, the company also uses various outside financing instruments, depending on the market situation.  $\bigcirc$  *Scheduled financing Measures* \* *p. 142*// In this context, SOLARWORLD AG benefits from its strong position in the capital market and from the high transparency requirements of the Prime Standard of the Frankfurt stock exchange, where the company is listed.

Group financing is handled centrally by SOLARWORLD AG, which acts as a holding company and assumes functions such as liquidity management or raising loans. The financing structure of the joint stock company is reinforced through profit and loss transfer agreements with the German wholly-owned subsidiaries, through which the profits and losses of the subsidiaries go directly to SOLARWORLD AG. This also forms a groupwide basis for our shareholder-oriented policy of distributing dividends from the retained earnings of the joint stock company. We aim to achieve a sound equity ratio ranging from about 35 to 40 percent. *Applied Five-year comparison of the financial Situation* \* *p.* 094//

\_\_\_\_\_



#### 030 CORPORATE MANAGEMENT AND CONTROL

**INDICATOR-BASED STRATEGIC GROUP MANAGEMENT.** Our vision "BUILD A SOLARWORLD" O <u>Vision</u> \* p. 008// provides the framework for our strategy and activities. O <u>Strategy and Action</u> \* p. 027// Corporate objectives are determined annually by the Management Board. More detailed strategic discussions as a supplement to Management Board meetings over the course of the year take place in the "Strategy Council", a group that consists of Management Board members and Managing Directors of the holding company and the subsidiaries. The "Strategy Council" meets every six months. It discusses the results that have been achieved and advises the Management Board on determining additional shortand medium-term objectives and programs. Based on defined divisional targets, implementation takes place in the business units. In the course of the year rolling adjustments will be made to the plan by the "Strategy Council."

The internal control system (ICS) at SOLARWORLD includes various control mechanisms: On the one hand, these are organizational security measures supported by the management systems mentioned in the following. On the other hand, they also include department-related controls as a supplement to the groupwide control exercised by Group Controlling and verification by the Internal Audit staff department.

Group Controlling aggregates the indicators and steers risk management on the basis of the strategic indicators and financial background conditions. A continuous target/actual comparison and monthly reporting to the Management Board – inter alia the primary group control variables, revenue and EBIT, **(19)** <u>Selected indicators</u> \* *p*. 004// including a rolling forecast – serve in continuous monitoring. The trade indicators (revenue and shipments) are additionally reported to the Management Board at weekly intervals. These control variables reflect the price development while EBIT portray the development of profitability. With the objective of long-term EBIT stabilization, the focus in the period under review was on consistently pursuing initiatives to cut costs throughout the entire process chain and on making investments in increasing production capacities as well as on profitable growth in foreign markets. Our investments in building up the brand and its value proposition, secured by the product and service quality promise, formed the basis for fairly stable pricing in the market and for the revenue volume achieved.

The operational units of the SOLARWORLD Group formed for control purposes correspond to the segments created for reporting purposes, i.e. "Production Germany", "Production U.S.", "Trade" and "Other". ③ Segment Structure and value chain Stages \* p. 036// While shipments, revenue, average sales prices, the total contribution margin and the product mix are the major indicators in the "Trade" segment, the production output and step costs constitute the most important control variable in the "Production" segments. Non-financial indicators such as productivity figures, customer satisfaction, gaining and retaining employees as well as resource consumption supplement the financial control indicators. The financial and non-financial control indicators of the various management instruments are pooled by way of the SOLARWORLD Scorecard. (a) *Group control and sustainability management* • *p. 032//* To this end the individual data acquisition systems were placed step by step on the same groupwide basis in 2010. (c) *Target achievement 2009 and 2010 and targets for 2011+* • *p. 022//* With regard to a detailed description of the SOLARWORLD Scorecard, we refer to the additional content concerning the Annual Group Report 2010. (c) *annualgroupreport2010.solarworld.de/further-details* //

The framework for the company's sustainable group management and group control is determined by the SOLARWORLD values as well as by its guidelines. (a) *www.solarworld.de/sustainability* // The group-wide Code of Conduct provides concrete recommendations for action. The code was approved by the works council in 2010 and was subsequently signed by the Supervisory Board and the Management Board.

**OPERATIONAL METRICS ACT AS LEADING INDICATORS.** Leading indicators enable conclusions to be drawn concerning the achievement of high-level targets. In the segments "Production Germany" and "Production U.S.", for example, we use the average production output (MW/day) and the reject rate as leading indicators for productivity. In the "Trade" segment, we work with metrics relating to product quality (e.g. Error Potential and Influence Analysis) to obtain an early assessment of our competitiveness.

To assess customer satisfaction and forecast market trends, we rely on explicit comments and information from our customers, and on the atmosphere during customer contacts. We also perform subjectspecific interviews (e.g. on product innovations) among our specialist partners. For further information about our leading indicators, we refer to the additional content concerning the Annual Group Report 2010. @ *annualgroupreport2010.solarworld.de/further-details //* 

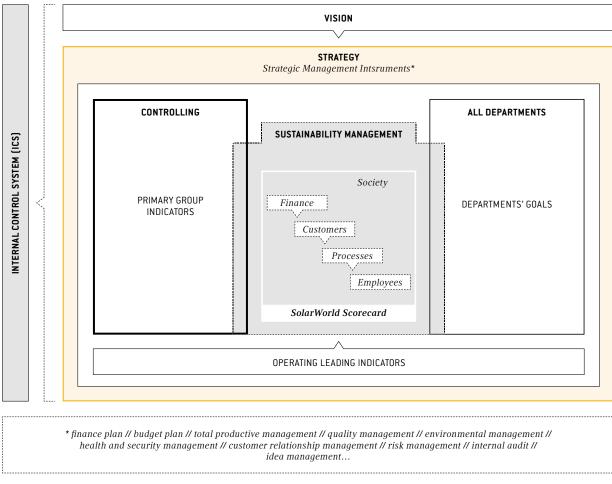
INTERLINKING MANAGEMENT TOOLS FOR SUSTAINABLE DEVELOPMENT. SOLARWORLD employs a whole range of management tools. (annualgroupreport2010.solarworld.de/further-details // Our Total Productive Management (TPM)/Six Sigma again contributed significantly to cost reductions with a single digit million amount in the year 2010. The German Center of Excellence for TPM (CETPM) awarded us for our performance in this field in 2010, SOLARWORLD wafer production at the Freiberg site was the first company in the photovoltaic industry worldwide to receive the CETPM Award in bronze for the operating improvements achieved. More than 50 teams from different production areas and service departments worked together on practical implementation of the TPM process. Not only manufacturing costs could be reduced and plant availability increased, it was also possible to cut waste disposal costs.

We use our **Customer Relationship Management (CRM)** to control the objective of customer satisfaction. Thus, in the year 2010, in view of the changing market conditions (better terms for solar power self-consumption and in-roof systems), we developed the product innovations, SUNPAC (battery system to increase the share of solar power self-consumption), and SUNDECK<sup>®</sup> (in-roof solution where modules are installed at the same level as the roof tiles), that will be available as of the first quarter of 2011.

\_\_\_\_\_



#### OB GROUP CONTROL AND SUSTAINABILITY MANAGEMENT



As of: 2010

#### SUSTAINABLE CORPORATE MANAGEMENT

The chief groupwide control indicators used by Controlling form the basis of management. In the segments, control is also exerted by way of strategic management tools. Some of these tools are primarily employed in certain segments, such as TPM in production, for example. Others such as QM are used on a groupwide basis. Over and above this, the financial and the non-financial indicators – i.e. the control variables and the divisional targets that are largely derived from the other management instruments – are consolidated via the SOLARWORLD Scorecard. Consequently, sustainability management assumes a cross-sectional function between Controlling and the departments.

Г

Via year-end customer surveys and the many talks we have held with our specialist partners (by way of our field force and feedback at our training sessions), we obtained comprehensive information on our systems and frame technology and designed the new SUNFIX PLUS® frame, which is easier to install and offers greater variety. At the request of customers, we also established WholesaleNet: This includes an online shop for brochures, data sheets, and marketing support for our wholesalers. In addition, wholesalers can review their orders, check the order status and export their data.

**Quality Management (QM)** at SOLARWORLD achieved certification of the Hillsboro production site in 2010 pursuant to quality standard ISO 9001. **Environmental Management (EM)** also has some corresponding successes to its name. Thus, certification pursuant to environmental standard ISO 14001 was achieved in the United States. This means that SOLARWORLD has now been certified groupwide pursuant to these two ISO standards. Health and Safety Management, Risk Management and Internal Audit are also further management instruments. (a) *Opportunity and risk management system* \* *p. 108//* ((a) *annualgroupreport2010.solarworld.de/further-details //* 

**For further information** on our management approach regarding economic, ecological and social aspects go to (20) <u>Management</u> <u>approach (EC, EN, LA, HR, SO, PR) + p. S39// as well as to our economic, ecological and social key performance indicators</u> (20) <u>Key performance indicators + p. S64 et seq. // or to (20) annualgroupreport2010.solarworld.de/sustainability/gri-index.</u>

\_\_\_\_\_



# BUSINESS AND GENERAL CONDITIONS

#### **GROUP STRUCTURE AND SEGMENTS**

**BUSINESS FIELDS CONTINUED UNCHANGED.** The SOLARWORLD Group is among the worldwide leaders in the production of crystalline solar power technology. SOLARWORLD AG and its subsidiaries research, develop, produce, and recycle at all stages of the solar value chain. The company's main business activities are the production and international distribution of high-quality solar power systems – from roof-mounted systems to components for free-field solar parks. The products are used both in the ongrid and off-grid mode.

SOLARWORLD AG emerged from the sole proprietorship, Frank H. Asbeck, Engineering Office for Industrial Plants, established in 1988. On March 26, 1999 the stock corporation under German law was entered in the commercial register of the local court of the City of Bonn under number HRB 8319. SOLARWORLD AG is listed in the Prime Standard of the Frankfurt stock exchange (TecDAX) in Germany.

**CENTRAL ORGANIZATION STRUCTURES SECURE EFFICIENCY AND CREATE SYNERGIES.** SOLARWORLD AKTIENGESELL-SCHAFT is the parent company of the SOLARWORLD Group. As the holding company, it performs central group functions in addition to sales. These include the areas: Group Accounting, Controlling, Investor Relations, Corporate Communication, and Corporate Marketing. The coordination of Production Planning and Control as well as Investment Planning is also performed centrally for the subsidiaries by SOLARWORLD AG. In the year under review the functions of Quality and Product Management, Supply Chain, Investment/Technology Transfer, Group Purchase and IT were organizationally embedded into SOLARWORLD AG as global units. The Group Management Board is responsible for group management. Internal Auditing and Sustainability Management report directly to the board as staff departments.

**LEGAL STRUCTURE OF THE GROUP CHANGED IN THE YEAR UNDER REVIEW.** At the cut-off date a total of 28 (2009: 25) companies belonged to the SOLARWORLD Group. The legal structure of the group changed in the year under review.  $\bigcirc$  2. Consolidated entity and legal group structure \* p. 156// The main changes were:

• Since March 1, 2010, SOLARWORLD has held a 29 percent stake in the joint venture, QATAR SOLAR TECHNOLOGIES Q.S.C., headquartered in the Emirate of Qatar. Other partners are the Qatar Foundation (70 percent) and the Qatar Development Bank (1 percent).

- In April 2010 we converted our French liaison office in Grenoble into a wholly-owned subsidiary called SOLARWORLD FRANCE SAS.
- On April 30, 2010, SOLARWORLD AG acquired 49 percent of SOLARWORLD AG & SOLAR HOLDING GMBH in GBR AUERMÜHLE (previously: Asbeck & Solar Holding GmbH in GbR Auermühle). This is a company that essentially owns and rents out office buildings with some attached storage space. The background to this acquisition is the constant growth of SOLARWORLD AG and the attendant growing office and storage space requirements at the Bonn sales location.
- On October 1, 2010, we renamed our U.S. subsidiary SOLARWORLD CALIFORNIA LLC as SOLARWORLD AMERICAS LLC. With this new name we take account of the significant growth of the sales area since the company was founded in 2005.
- On November 8, 2010, our subsidiary, DEUTSCHE SOLAR GMBH (previously: DEUTSCHE SOLAR AG, change of name on January 13, 2011), sold its 35 percent stake in RGS DEVELOPMENT BV to one of the other shareholders. Thus, DEUTSCHE SOLAR GMBH will concentrate on its core business of producing crystalline wafers.

**NEW SEGMENT STRUCTURE HAS PROVED SUCCESSFUL**. In the 2009 reporting period, segmental reporting was adjusted when IFRS 8 "Operating Segments" came into force. In the present report on fiscal year 2010 we report for the second year along this segment structure.

#### IMPORTANT PRODUCTS, SERVICES AND BUSINESS PROCESSES

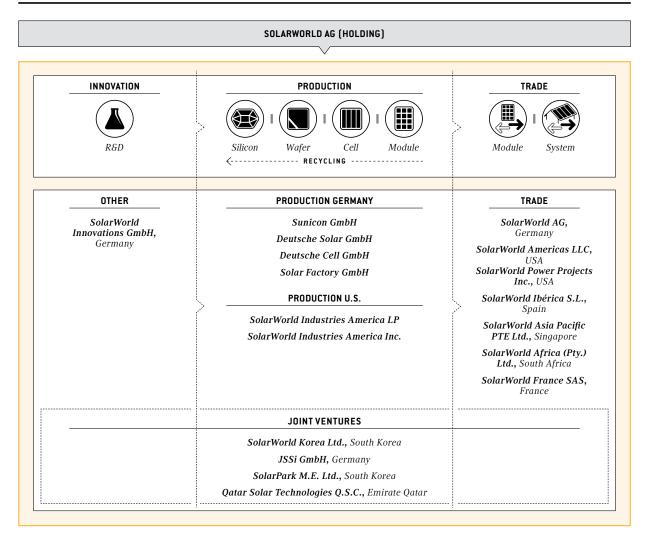
\_\_\_\_\_

**OFFERING COMPLETE SOLAR POWER SOLUTIONS.** SOLARWORLD AG has concentrated its business to 100 percent on crystalline solar power applications. The company sells solar modules as well as complete solutions via the specialist trade to private and commercial customers. In addition, it sells solar wafers and solar cells to the downstream value chain stages of the solar industry. The group offers systems for on-grid and off-grid energy supply. O <u>27. Revenue</u> \* p. 176// The portfolio ranges from roof-mounted systems for private homes to large-scale solar power stations. Products such as SUNCARPORT<sup>®</sup> are very special highlights in our range. O <u>Products "Made by SolarWorld"</u> \* p. 077//





#### (11) SEGMENT STRUCTURE AND STAGES OF THE VALUE CHAIN



#### SEGMENT STRUCTURE AND VALUE CHAIN STAGES

The segment structure is aligned to the strategic management view, in which regionally coherent and fully integrated production and function units are pooled: The operational business is structured in the four segments: "Production Germany", "Production U.S.", "Trade" and "Other". These segments reflect the strategic orientation as well as the internal organizational, reporting and control structures. The "Production Germany" and "Production U.S." segments each comprise the regionally coherent and fully integrated production activities. As a result, we use synergy and efficiency potentials along the entire value chain and are achieving strategic competitive advantages in the process for the solar module as the final product. The operating segment "Trade" covers the international sale of solar modules. Wafer sales are included in the segment "Production Germany". Those group business activities where the financial impact is not or is no longer crucial to the assets, finance and earnings situation of the group are included in the segment "Other".

\_\_\_\_\_

Г

٦

# WORLDWIDE LOCATIONS OF THE GROUP

USING SITE FACTORS SUCCESSFULLY. The group has 11 (2009: 13) locations (including operating site, joint ventures and a holding company) and is thus represented in the most important international solar markets worldwide. The group's own production facilities are located in Freiberg, Germany, as well as at Hillsboro and Camarillo in the United States. This provides us with short transport routes to all European markets and to the U.S. growth market. Experts consider the U.S. market to be one of the most important solar markets of the future. US on Growth path \* p. 135// In the year under review, selling in the currency area where we also have our production sites proved to be an advantage. As a consequence, we are less exposed to currency exchange volatility. Site factors such as good infrastructures, a qualified workforce, political support for renewable energies, a long tradition and experience in silicon processing and/or the semiconductor industry, synergies from cooperation with regional research institutes as well as a broadly based environment of suppliers additionally create the elementary background conditions for our future growth objectives, combined with the high quality, innovation and environmental demands of the soLARWORLD brand.

With the objective of securing logistical proximity to the important future markets of Asia and Oceania, another module production was added to our global production network in the form of a joint venture. Through the cooperation with our South Korean partner we benefit from the respective cultural, regional and technical know-how in the complex Asian market. The SOLARWORLD sales sites are located in the most important solar growth regions. Our international sales are handled by our own sales offices in Germany, the United States, Singapore, South Africa, Spain and France.

# MARKET POSITION // INFLUENCING FACTORS

# COMPETITIVE POSITION AND MAIN SALES MARKETS

\_\_\_\_\_

**WORLDWIDE MARKET SHARE DEFENDED.** In the period under review, international solar markets have grown significantly, yet the competitive pressure has remained high. In the course of the year European manufacturers benefited from the weak euro exchange rate that Asian competitors, in particular, suffered from: They were forced to increase prices during the year. Supply continues to exceed demand \* p. 063 // By means of continuous cost reductions along the entire value chain, SOLARWORLD managed to pass price reductions on to customers in the course of the year and thus compensated for part of the feed-in tariffs decline.



As a brand manufacturer with an appropriate value proposition we succeeded in securing our market share. We increased production volumes in the segments "Production U.S." and "Production Germany" by around 50 percent. The SOLARWORLD Group defended its worldwide market share amounting to five percent in this dynamic market environment in the period under review (2009: 5 percent).

Within the production segments our priority was on internal processing. Some 65 (2009: 50) percent of our SOLSIX<sup>®</sup> brand wafers went into our own production and were upgraded to solar cells and solar modules. The result was that external wafer revenues reported in the segment "Production Germany" remained almost constant.  $\bigcirc$  *Development of sales and profit or loss \* p. 089//* 

Our most important groupwide sales region with a revenue share of 53 (2009: 71) percent was again Germany. In 2010, this market continued to be the most important one worldwide for solar power products, albeit under increasing pressure due to the political debate about feed-in conditions. In other countries, we succeeded in further expanding our market position in line with our internationalization strategy. Accordingly, the share of revenues in Europe (excluding Germany) rose to 23 (2009: 18) percent. In the U.S., we generated 12 (2009: 3) percent of group revenues, in Asia 10 (2009: 7) percent.

### LEGAL AND ECONOMIC INFLUENCING FACTORS

**FUNDING PROGRAMS ARE AN IMPORTANT FINANCIAL DESIGN INSTRUMENT.** The prices for solar power products continued to drop in the period under review. O *Regulatory background conditions create demand peaks* • *p. 064//* This brought the solar industry another step closer to grid parity – i.e. the point in time when solar power is less expensive than the price of domestic electricity. Grid parity may be achieved within the next three years in the most important solar markets. O *Achieving grid parity in the key solar markets* • *p. 128//* Until then, the funding programs are important financial design instruments for a modern, sustainable and climate-friendly energy supply: They create economic incentives not only for large investors but also for private end customers.

Minimum price systems are currently the most widely used funding tool for solar power – and are also the most effective one. They guarantee power producers a minimum purchase price over a fixed period of time for the solar power fed into the grid. This creates investment security and speeds up market growth. If the amount of feed-in compensation is linked to market development at the same time, it is possible to respond quickly and flexibly to current developments. Industry is simultaneously provided with some important innovation incentives: Cost structures and process efficiencies must be continuously optimized so as to be able to pass price reductions on to customers. This in turn will increase demand. For example, in this way it was possible to increase the share of renewable energies in total energy generation in Germany from 11 percent in 2005 to 17.4 percent in the year 2010 with the help of the Renewable Energy Sources Act (EEG).

Other possible incentive systems are tax credits and rebate programs. They reduce the financial burden on the consumer in the capital-intensive initial investment. Innovation pressure that they initiate will, as a matter of principle, be directed against costs and not against the power or the long life of the module. The amount of the grants results exclusively from the nominal output of the solar system. The real efficiency of a plant (i.e. the amount of electricity actually generated) is not relevant. This is why this type of funding is often combined with additional programs. Favorable financing terms as well as simplified lending models have developed into additional important market drivers in the past few years. Some countries like the United States or Germany use special loan programs to simplify the necessary external financing for investors. In the U.S., Renewable Portfolio Standards (RPS) are also a popular instrument; they require the utility to reach a certain proportion of solar power and/or renewable energy in their energy mix.

#### (1) FUNDING PROGRAMS 2010 IN THE FIVE MAIN SALES MARKETS OF SOLARWORLD

\_\_\_\_\_

Minimum price system	Rebate program	Tax credit	Loan program	RPS
Image: A start of the start				
1				
1		1		
1		1		
		1	1	
			in 33 states	in 16 states
	1		1	
	1		1	1
		1		
		1	1	1
	price system	price system program	price system     program     Tax credit       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓	price system     program     Tax credit     Loan program       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓       ✓     ✓     ✓

Source: DSIRE, 2010; DENA, 2010



# 040 CORPORATE GOVERNANCE DECLARATION

## CORPORATE GOVERNANCE AT SOLARWORLD

Our claim is 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. We work continuously on further developing Corporate Governance within the company as well as on adequately integrating all stakeholders. ( $(4.14 \cdot p. S35 \ et \ seq.)$ ) ( $(0.000 \ www.solarworld.de/stakeholders$ ) // 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 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 trustfully to successfully guarantee corporate management and control.  $\bigcirc$  *Report by the Supervisory Board* • *p.* 013//

# **CORPORATE GOVERNANCE REPORT 2010 2010**

AGAIN, UNRESTRICTED DECLARATION OF COMPLIANCE BY MANAGEMENT BOARD AND SUPERVISORY BOARD. The Management Board and the Supervisory Board issued a Declaration of Compliance in the year under review. This is absolutely in line with the recommendations of the GCGC of May 26, 2010 as published on July 2, 2010. Pursuant to \$ 161 German Stock Corporation Act (Aktiengesetz, AktG) this declaration has been made permanently available on our Internet page. (a) <u>www.solarworld.de/investorrelations/</u> <u>declarationofcompliance</u> //

STEERING AND CONTROL UNCHANGED IN 2010. SOLARWORLD AG as a German stock corporation has a dual management and control structure with segregation between management and the monitoring function. Pursuant to 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 will be 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 regarding fundamental decisions. (a) 70. Executive Board and Supervisory Board \* p. 212//

One of the major changes of the GCGC (section 4.1.5) 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 the Supervisory Board, and are to be further realized as from 2011. For more details, please refer to the Supervisory Board Report.

In the year under review, the Management Board still consisted of four members. 
→ <u>The Management</u>
<u>Board</u> • p. 011// Business distribution was adjusted groupwide in line with global requirements.
Responsibilities were distributed as follows:

- Frank Asbeck, Dr.-Ing. E.h. (Chief Executive Officer) Founder of the company, responsible for strategic group development, HR, the brand as well as PR including energy and environmental policy and Corporate Communication Initial appointment: 1999 End of current period of office: January 9, 2014
- Frank Henn, Dipl.-Wirtschaftsing. (Chief Sales Officer) Responsible for the coordination of national and international sales Initial appointment: 2004 End of current period of office: May 31, 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 & Development Initial appointment: 2001
   End of current period of office: September 23, 2011
- Philipp Koecke, Dipl.-Kfm. tech. (Chief Financial Officer) Responsible for the areas of Controlling, Finance, Accounting, and also Investor Relations Initial appointment: 2003 End of current period of office: April 30, 2012

The composition of the Supervisory Board also remained unchanged in the year under review and continues to consist of three members:  $\bigcirc$  *The Supervisory Board* • *p.*012//



#### • Dr. Claus Recktenwald, 52 (Chairman of the Supervisory Board)

- Dr. Georg Gansen, 51 (Deputy Chairman of the Supervisory Board)
- Dr. Alexander von Bossel, 45 (Member of the Supervisory Board)

Taking into consideration the two appointments of the Chairman of the Supervisory Board that count double, Dr. Recktenwald held nine mandates up to January 13, 2011, and has held seven since then – out of a permissible total of ten mandates. Dr. Gansen held four mandates and, since January 13, 2011, has held two, while Dr. von Bossel also holds two mandates. The Supervisory Board reports on its activities in fiscal year 2010 in the O *Report by the Supervisory Board* \* *p.* 013. Further details on GCGC implementation are to be found there. The recommendations under section 5.3 GCGC on the formation of committees are not implemented at SOLARWORLD due to the fact that the Supervisory Board continues to consist of only three members. The Supervisory Board in its entirety deals with Management Board issues and performs the required audit and monitoring functions. In this context, the ruling on the capping of management remuneration pursuant to section 4.2.3 is also observed. The age limit to be stipulated pursuant to section 5.1.2 GCGC does not apply to the Management Board of SOLARWORLD AG.

**TRANSPARENCY VIS-À-VIS OUR SHAREHOLDERS AND THE PUBLIC**. To meet our legal obligations, we publish all relevant information in line with the principle of equal treatment transparently and promptly via the relevant media channels. On our website (a) <u>www.solarworld.de/en/investorrelations</u> this information is provided in German and English pursuant to section 6.8 GCGC in its most current form.

At the AGM, our shareholders can exercise their rights and cast votes. All relevant information concerning the meeting can be downloaded from our Internet page well ahead of time. ((a) www.solarworld.de/annualgeneralmeeting //

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 the law on the Implementation of Shareholders' Rights Directive (Gesetz zur Umsetzung der Aktionärsrechterichtlinie, ARUG), the AGM on May 20, 2010 carried – with a majority of 99.536 percent – Item 9 of the Agenda, which approved the legal deadlines concerning registration for the AGM and for proof of authorization to attend, as well as the rulings on exercising a voting right through a proxy by way of an amendment to the Articles of Association. In this context, the Management Board was authorized to make provisions for shareholders to also cast their votes in writing (postal vote) without attending the AGM, or by way of electronic communication. The Management Board can determine the details of the postal vote procedure. According to the resolution on the amendment to the Articles of Association to the resolution on the card determine the details of the postal vote procedure. According to the resolution on the amendment to the Articles of Association, there is also a possibility to limit the transmission to electronic communication pursuant to § 125 Sec. 1 AktG. According to § 124a AktG, the website was again

significantly expanded as a central medium of information exchange between the shareholders and the company.

**CAPITAL MARKET LAW AND COMPLIANCE**. Observing capital market laws and reporting obligations is an important management 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 dealings pursuant to § 14 German Securities Trading Act (Wertpapierhandelsgesetz, WpHG), and are entered in a special insider list.

The Management Board of SOLARWORLD AG decided on May 12, 2010 to make use of the authorization granted by the AGM on May 20, 2009 to acquire treasury stock pursuant to \$ 71 Sec. 1 No. 8 AktG to a volume of ten percent of the capital stock of the company. The authorization, which included the withdrawal of shares, was limited until close of business on November 20, 2010. Up to that point in time, a total of 4,838,723 shares were bought back, which is equivalent to a proportion of 4.33 percent. In the year under review, three voting right announcements were issued pursuant to \$\$ 21, 26 WpHG, when voting right thresholds defined in the law were exceeded or fallen short of. Announcements were issued immediately within the framework of a Europe-wide publication and subsequently communicated to the Register of Companies and the Federal Financial Supervisory Authority (BaFin). The announcements are published and can be inspected on the website of the company. A Shareholder structure of SolarWorld as at 31 Dezember 2010 • p. 056// Share ownership of the members of the Management Board of SOLARWORLD AG amounted to a total of 25.06 percent as at December 31, 2010. The Chairman of the Supervisory Board, Dr. Claus Recktenwald, also acquired shares in the year under review. 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 SOLAR-WORLD AG or of financial instruments based on them, if the value of the transactions exceeds the sum total of  $\in$  5,000 within one calendar year. The following transactions of this nature were reported to SOLARWORLD AG in the course of the year under review:

- The Chairman of the Supervisory Board, Dr. Claus Recktenwald, acquired 5,000 no-par value shares (total volume: € 40,750) on May 21, 2010
- SolarHolding Beteiligungsgesellschaft mbH acquired 70,000 no-par value shares (total volume: € 591,003) on June 1, 2010

\_\_\_\_\_

On our website (a <u>www.solarworld.de/investorrelations/annualdocument</u>, we provide information about all publications in fiscal year 2010 after publication of the Annual Financial Statements on March 24, 2011 through the Annual Document pursuant to the German Securities Prospectus Act (Wertpapierprospektgesetz, WpPG).



# 044 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) in its most recent version of May 26, 2010. While section 3.10 GCGC makes provision for the Corporate Governance Report, which is contained in this annual report under an appropriate headline, and apart from that is also covered in the Supervisory Board Report, 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 recommends – also as part of the Corporate Governance Report – individualized reporting of Supervisory Board remuneration broken down by components and including compensation paid or benefits granted for personal services rendered, in particular, consulting and brokerage services.

MANAGEMENT BOARD REMUNERATION. The annual management board compensation 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. If the Act on the Appropriateness of Management Board Remuneration (Gesetz zur Angemessenheit der Vorstandsvergütung, VorstAG) also provides for mediumand long-term remuneration components, these will only be agreed upon after the relevant management contracts have run out. The current regulations were drawn up before the VorstAG came into force and therefore enjoy the protection of existing standards. Management Board remuneration now already 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 this context, the financial situation of the group is also considered. This in turn is reflected in the dividend distribution possibilities that form the basis for the variable Management Board compensation.

Ultimately, the management remuneration also complies in all other respects with the requirements of the VorstAG, passed by the Bundestag on June 18, 2009. 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 new 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 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), and sales (CSO), receive grants towards their health insurance. Finally, mention must be made of the remuneration paid to the Chairman of the Management Board (CEO) in his capacity as Chairman of the Supervisory Boards of DEUTSCHE SOLAR AG as well as SUNICON AG. These positions were eliminated on January 13, 2011, which also ended the Supervisory Board activities of Dr. Recktenwald and Dr. Gansen, since on this day the change in the legal form from an AG to a GmbH was entered in the Register of Companies.

Management contracts do not contain any severance provision for the case of premature termination of an employment relationship. The severance cap recommended in the new GCGC version of June 6, 2008 was implemented with regard to the then relevant follow-up contracts for the COO, CEO, CFO and CSO, with effect from September 1, 2008; January 10, 2009; and May 1, 2009; as well as June 1, 2010. It will also be observed in future with regard to new appointments, if any.

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, every Management Board member receives variable, performance-dependent 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. The following individualization of Management Board compensation refers, on the one hand, to the fixed remuneration that has fallen due and was paid in the year 2010. On the other hand, the variable compensation for fiscal year 2010 is also included, but this will not fall due until after the upcoming AGM; apart from that, it will depend on approval of the profit appropriation proposal by management, which provides for the distribution of 19 eurocents per share.

Variable compensation is capped in such a way that, per year, a member of the Management Board must not receive more than a multiple of the fixed compensation that has been agreed with the Supervisory Board. For Finance (CFO) and Sales (CSO) board members, this multiple is three (variable portion may be up to 200 percent of the fixed compensation), and for the Chairman (CEO) and the board member for Operations (COO), the multiple is four (variable portion may not exceed 300 percent of the fixed compensation).

The Law on the Appropriateness of Management Board Compensation (VorstAG) of July 31, 2009 makes it possible for the AGM to decide on approval of the system of remunerating members of the Management Board (§ 120 Sec. 4 AktG). The Management Board and the Supervisory Board of SOLARWORLD AG proposed such an approval at the AGM on May 20, 2009 with item 5 on the agenda "Resolution on approval of the system of remuneration for members of the Management Board". The shareholders and shareholder representatives carried this item of the agenda with a majority of 83.105 percent of the votes. As early as in 2009, the AGM had sent out its own signal regarding the appropriateness of management salaries in Germany by voting for capping management compensation to 20 times the average employee remuneration. (() *Group Annual Report 2009/Compensation Report \* p. 057//* 



## MANAGEMENT BOARD REMUNERATION // IN €

	Non-Performance related		Performance related	Total	
	Fixed salary	Other remuneration	Variable*		
<b>DrIng. E.h.</b> <b>Frank Asbeck</b> Chief Executive Officer	280,843.32		810,000.00	(1,090,843.32) 1,007,621.00 Cap on Management Board remuneration pursuant to AGM reso- lution on May 20, 2009	
		31,000.00 (DEUTSCHE SOLAR AG Supervisory Board compensation, incl. meeting attendance fee of 6,000.00) 18,200.00 (SUNICON AG incl. Supervisory Board compensation, incl. meeting attendance fee of 3,200.00) 2,158.00 (Inventor's fee)		51,358.00	
Prior year	280,843.32		810,000.00	(1,090,843.32) 988,146.00 Cap on Management Board remuneration	
				pursuant to AGM reso- lution on May 20, 2009	
		29,500.00 (DEUTSCHE SOLAR AG Supervisory Board compensation, incl. meeting attendance fee of 4,500.00) 17,400.00 (SUNICON AG Supervisory Board compensa- tion, incl. meeting attendance fee of 2,400.00)		46,900.00	
Philipp Koecke Chief Financial Officer	189,033.99**	3,079.08 (Grants towards health insurance)	304,000.00	496,113.07	
Prior year	162,821.04	3,205.20 (Grants towards health insurance)	256,000.00	422,026.24	
<b>Boris Klebensberger</b> Chief Operating Officer	276,902.43	2,823.68 (Grants towards health insurance) 0.00 (Inventor's fee)	665,000.00	944,726.11	
Prior year	262,407.64	2,692.71 (Grants towards health insurance) 2,994.26 (Inventor's fee)	560,000.00	828,094.61	
Frank Henn Chief Sales Officer	188,750.72	3,588.72 (Grants towards health insurance)	304,000.00	496,339.44	
Prior year	174,337.47	3,583.14 (Grants towards health insurance)	256,000.00	433,920.61	
Total	935,530.46	60,849.48	2,083,000.00	2,996,157.62	
Prior year	880,409.47	59,690.31	1,882,000.00	2,719,087.46	

\_\_\_\_\_

-----

\* Resolution on Profit Appropriation Proposal AGM 2011 \*\* Supplementary taxation on payment in kind (company car) from prior year amounting to  $\in$  6,616.05

# 046

**SUPERVISORY BOARD REMUNERATION**. The AGM of SOLARWORLD AG on May 25, 2005 approved Supervisory Board remuneration that consisted of fixed remuneration, performance-related special remuneration, fringe benefits, and out-of-pocket expenses. This came into force on January 1, 2005 and also applies to the following years, unless a new AGM passes different resolutions for the future.

Pursuant to § 113 Sec. 1 AktG, Supervisory Board remuneration is to be in appropriate relation to the tasks of the Supervisory Board members and the situation of the company. The AGM of SOLARWORLD AG also resolved that the company should assume the premium payments for insurance cover concerning legal liability arising from Supervisory Board activities (D&O insurance). Since the Supervisory Board also complies with the GCGC recommendation of having the deductible that is compulsory for the Management Board pursuant to VorstAG also apply to the Supervisory Board, an appropriate amendment to the conditions of the relevant D&O insurance was effected as per July 1, 2010.

In accordance with the above conditions, members of the Supervisory Board each receive annual remuneration of € 17,500.00, the Vice Chairman of the Supervisory Board receives one and a half times that amount, i.e. € 26,250.00, and the Chairman of the Supervisory Board receives double that amount, i.e.  $\in$  35,000.00, plus turnover tax in each case, if applicable. This remuneration was paid for the year 2010 retroactively in 2011. In addition, every member of the Supervisory Board received a lump sum of  $\notin$  250.00 for costs for every meeting and AGM attended, which in the year 2010 added up to a total of  $\in 2,250.00$  for nine events, again plus turnover tax if applicable, which can, however, be deducted as input tax by the company. Over and above this, each member of the Supervisory Board received and receives performance-related special remuneration, which was originally set at  $\notin$  150.00 per dividend cent for a capital stock divided into 6,350,000 shares, under the proviso that the basis amount goes up along with the increasing number of shares. As a result of an increase in the number of shares from 6,350,000 to 111,720,000, the multiplier of 17.5937 takes effect for this fiscal year, which triggers a basic amount  $\notin$  2,639.055. With a dividend of 19 eurocents per share being approved by the coming AGM, this will result in variable special remuneration per Supervisory Board member of  $\in$  50,141.10 (2009:  $\in$  42,224.80), and for Dr. von Bossel of  $\in$  35,000.00. At the meeting held on August 6, 2007, the Supervisory Board of SOLARWORLD AG did, however, issue a "Self-Limitation Declaration" that involves partial renunciation, is linked to the rules on variable remuneration agreed upon with the Management Board members, and reads as follows: "As long as the AGM resolution of May 25, 2005 concerning Supervisory Board remuneration is valid, members of the Supervisory Board accept a cap on the variable Supervisory Board remuneration they are entitled to that amounts to double the fixed annual remuneration they are entitled to. So, even if due to special annual results and/or further growth of the relevant number of shares, more than twice of the fixed annual salary could be claimed as variable special remuneration, no more than three times the fixed annual remuneration will be paid per fiscal year. The Supervisory Board thus agrees to apply the cap ruling provided for in section 4.2.3, penultimate paragraph, GCGC to themselves".

\_\_\_\_\_



Performance-related special remuneration will also be paid, plus turnover tax if applicable. It will fall due upon conclusion of the AGM at which the underlying dividend distribution was approved. The variable remuneration shown in the following list for the year 2010 will therefore not fall due and be paid out until the AGM has approved the dividend proposed by the Management Board and the Supervisory Board.

With regard to the information 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.

As far as the law firm's own service provision in the year under review is concerned, Schmitz Knoth Rechtsanwälte invoiced a total amount of  $\in$  446,861.80, excluding turnover tax and tax-free out-of-pocket expenses. For the 2010 performance period, further legal costs were incurred by the subsidiaries that amounted to  $\in$  199,350.70 for DEUTSCHE SOLAR AG,  $\in$  19,858.80 for DEUTSCHE CELL GMBH,  $\in$  2,532.40 for SOLAR FACTORY GMBH,  $\in$  5,907.20 for SOLARWORLD INDUSTRIES DEUTSCHLAND GMBH,  $\in$  21,062.60 for SUNICON AG, and  $\in$  28,246.40 for SOLARWORLD INNOVATIONS GMBH. All individual amounts as well as the total sum of  $\in$  723,819.90 (2009:  $\in$  672,638.74) paid by the group were approved by the Supervisory Board of SOLARWORLD AG, commissioning was approved in each individual case, and the necessity for and appropriateness of the measures were confirmed at the balance sheet meeting on February 23, 2011.

In conclusion, it is pointed out that the Supervisory Board members, Dr. Claus Recktenwald and Dr. Georg Gansen, were each Deputy Chairman of the Supervisory Board of DEUTSCHE SOLAR AG until January 13, 2011. The Chairman of the Supervisory Board of SOLARWORLD AG, Dr.-Ing. E.h. Frank Asbeck, was Chairman of that Supervisory Board. Supervisory Board remuneration at DEUTSCHE SOLAR AG was increased to an annual amount of  $\notin$  25,000.00 at the AGM on December 6, 2007. This also applied uniformly in 2010 for each member of the Supervisory Board, plus a meeting attendance fee of  $\notin$  750.00 each as shown in the following list. With eight meetings charged for in the year 2010, this amounted to a total of  $\notin$  6,000.00 net per member of the Supervisory Board, which like all Supervisory Board remuneration, falls due and is paid out after the end of the fiscal year.

Dr. Claus Recktenwald, Dr. Georg Gansen, and Dr.-Ing. E.h. Frank Asbeck were also members of the Supervisory Board of SUNICON AG until January 13, 2011. At the AGM of the company on December 18, 2008, Supervisory Board remuneration of  $\in$  15,000.00 net per member of the Supervisory Board was approved, which applied for the first time in fiscal year 2008 and which, as the meeting attendance fee of  $\in$  400.00 net, did not fall due before January 1, 2009. With eight meetings held in the year, this sums up to an amount of  $\in$  18,200.00 plus turnover tax for each Supervisory Board member.

# 048

With the conversion of DEUTSCHE SOLAR AG and SUNICON AG into a GmbH, the respective Supervisory Boards were legally eliminated. However, as members of the group Supervisory Board, the members of the Supervisory Board of SOLARWORLD AG continue to be factually involved with the same tasks and have to deal with an unallayed workload. They therefore propose that, from now on, the fixed remuneration due to Dr. Recktenwald and Dr. Gansen totalling  $\in$  80,000.00 [(25,000 + 15,000) x 2)] be added to that of the Supervisory Board of SOLARWORLD AG. In technical remuneration terms, this would mean that the fixed remuneration for SOLARWORLD AG will be doubled in each case (instead of  $\in$  17,500.00,  $\in$  26,250.00 and  $\in$  35,000.00 it will be  $\in$  35,000.00,  $\in$  52,500.00 and  $\in$  70,000.00) as of January 1, 2011, and the meeting attendance fee will be increased from  $\notin$  250.00 to  $\notin$  500.00. As a result, the total remuneration in the group would still be lower than before.





#### ③ SUPERVISORY BOARD REMUNERATION // IN €

		Non-Performance related		Performance related	Total	
		Fixed annual re- muneration	Meeting atten- dance fee	Other remuneration	Variable special remuneration*	
Dr. Claus Recktenwald Chairman	For 2010 paid in 2011	35,000.00	2,250.00	31,000.00 (DEUTSCHE SOLAR AG Supervisory Board remuneration incl. meeting attendance fees of 6,000.00) 18,200.00 (SUNICON AG Supervisory Board remuneration incl. meeting atten- dance fees of 3,200.00)	50,141.10	136,591.10
	For 2009 paid in 2010	35,000.00	2,000.00	29,500.00 (DEUTSCHE SOLAR AG Supervisory Board remuneration incl. meeting attendance fees of 4,500.00) 17,400.00 (SUNICON AG Supervisory Board remuneration incl. meeting atten- dance fees of 2,400.00)	42,224.88	126,124.88
Dr. Georg Gansen Deputy Chairman	For 2010 paid in 2011	26,250.00	2,250.00	31,000.00 (DEUTSCHE SOLAR AG Supervisory Board remuneration incl. meeting attendance fees of 6,000.00) 18,200.00 (SUNICON AG Supervisory Board remuneration incl. meeting atten- dance fees of 3,200.00)	50,141.10	127,841.10
	For 2009 paid in 2010	26,250.00	1,750.00	29,500.00 (DEUTSCHE SOLAR AG Supervisory Board remuneration incl. meeting attendance fees of 4,500.00) 17,400.00 (SUNICON AG Supervisory Board remuneration incl. meeting atten- dance fees of 2,400.00)	42,224.88	117,124.88
Dr. Alexander von Bossel Member	For 2010 paid in 2011	17,500.00	2,250.00		35,000.00	54,750.00
	For 2009 paid in 2010	17,500.00	2,000.00		35,000.00	54,500.00
Total	For 2010 paid in 2011	78,750.00	6,750.00	98,400.00	135,282.20	319,182.20
	For 2009 paid in 2010	78,750.00	5,750.00	93,800.00	119,449.76	297,749.76

\* Resolution on Profit Appropriation Proposal AGM 2011

For further information on our corporate governance go to 0 4.5 - 4.17 \* p. S28 et seq.; <u>HR1 - 7</u> \* p. S75 et seq.// <u>S01 - S08</u> \* p. S77 et seq.// as well as to our progress report within the framework of the Global Compact 0 <u>Global Compact (communication on progress)</u> \* p. S11 et seq. // These can be found online at 0 <u>annualgroupreport2010.solarworld.de/sustainability/griindex//</u> and at 0 <u>annualgroupreport2010.solarworld.de/sustainability/global-compact</u>.

\_\_\_\_\_



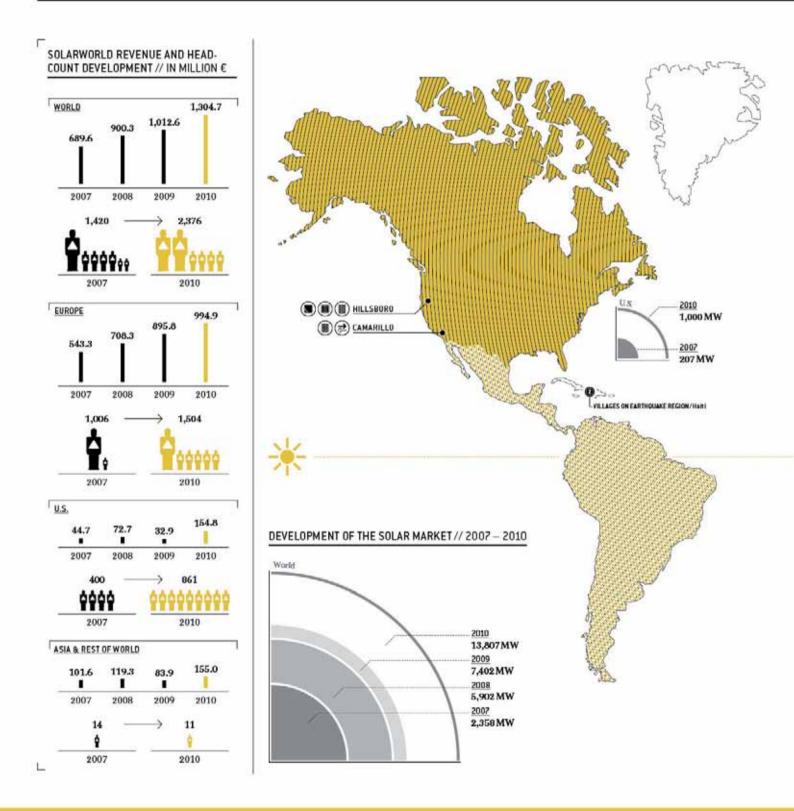
# "The roofs of the world are an inexhaustible resource. In order to tap this we offer systems enabling everyone to generate their own power from the sun."



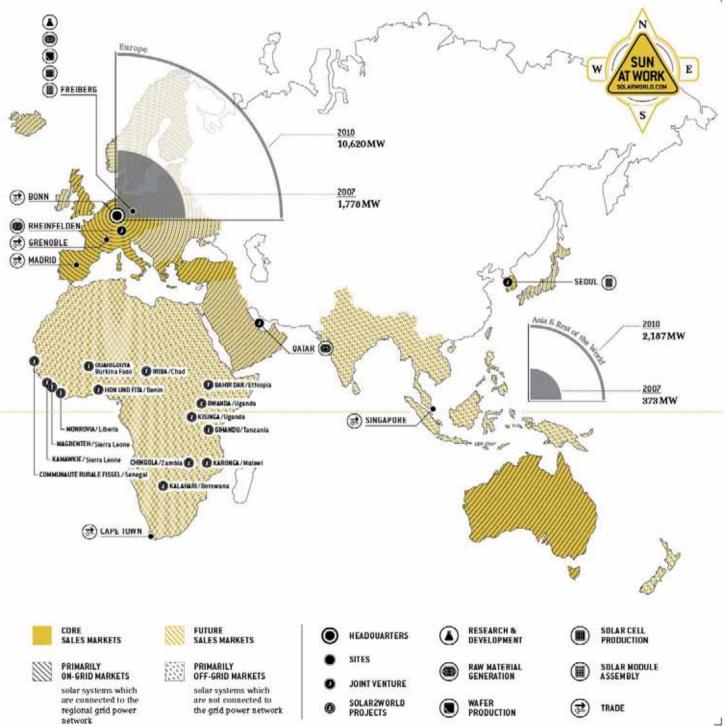
----- HARALD TEBBE // HEAD OF PV SYSTEMS TECHNOLOGY, BONN/GERMANY



SOLARWORLD AND MARKETS 2010

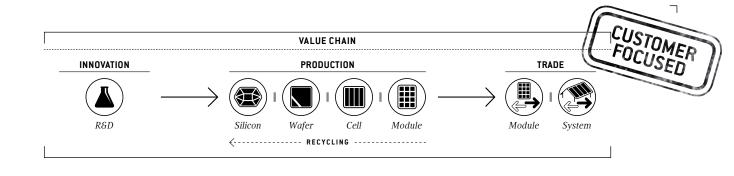








Γ



#### 

Since the opening of the SOLARWORLD INNOVATIONS GMBH Technology Center in Freiberg, we have operated an enhanced Research & Development architecture on a pilot scale from wafer to module close to actual production conditions. Under near-production conditions, process and technology variations are fine-tuned and further developed. We back our competitive strength with this core knowledge. (3) <u>SolarWorld Innovations – Organization</u> "Science2Technology" \* S. 084//

#### ---- FURTHER SOURCES FOR FUTURE SILICON SUPPLY OPENED UP

The establishment of the QATAR SOLAR TECHNOLOGIES Q.S.C. joint venture headquartered in the Emirate of Qatar will secure the company's solar-grade silicon supply as from 2012/2013, in addition to long-term delivery contracts, our own production of silicon, and our own raw materials recycling.  $\textcircled{}{}$  Tapping new raw material source \* p. 129//

#### ---- PRODUCTION CAPACITIES EXPANDED, PROCESSES STANDARDIZED, SYNERGIES TAPPED

Our new production facilities cut our production costs through fine-tuned technologies and automation processes; a central investment management function makes for smooth and low-cost capacity expansion under our own steam at production locations in Germany and the United States. <u>"Production Germany" and "Production U.S."</u> <u>segments</u> \* *p.*068//

#### ---- INTERNATIONAL BUSINESS STRENGTHENED THROUGH ENHANCED DISTRIBUTION STRUCTURES

Beyond our sales market of Germany, we have also demonstrated our strength in other markets by having increased our foreign quota shipments to 59 (2009: 45) percent. We invested further in our distribution networks; among other things we expanded the U.S. specialist chain "Authorized Installer Program", and in France we created the sales subsidiary, SOLARWORLD FRANCE SAS. 3 "Trade" segment \* *p.*070//

#### ---- PRODUCT PORTFOLIO EXPANDED

With a view to future market trends, we expanded our product range by adding some new developments in systems technology. These include the market launch of a product called SunPac, which makes it possible for the end customer and private power generator to increase his self-consumption of solar power with the help of a battery and an electronic control unit.  $\bigcirc$  SunPac makes more power self-consumption possible \* p. 079//

#### ---- TAKE-OVER OFFER SUBMITTED TO SOLARPARC AG

With the objective of establishing the company more strongly in the international project business, SOLARWORLD submitted a take-over offer to the shareholders of SOLARPARC AG – an experienced project developer in the large scale solar plant business. (a) Supplementary Report \* p. 106// (a) Business policy of the SolarWorld Group 2011+ \* p. 126//

# **BUSINESS DEVELOPMENT IN THE YEAR 2010**

# SOLARWORLD STOCK 2010

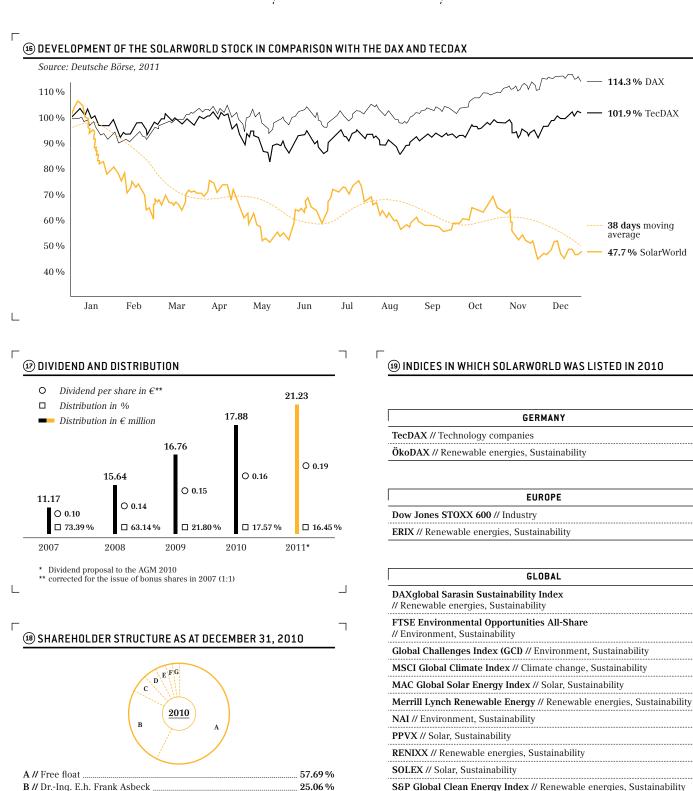
# **CAPITAL MARKET DEVELOPMENT 2010**

INTERNATIONAL CAPITAL MARKETS VOLATILE. International capital markets continued to show a high degree of volatility in the year under review. The debt crisis in the Eurozone, a restrictive financial policy in different states caused by this, and the U.S. economy's failure to stabilize fundamentally caused repeated uncertainties in the markets. On the other hand, strong economic data from China and also from Germany as well as an expansionary policy by the central banks provided new impulses so that, overall, the markets started growing again. Driven by strong economic growth and a high export performance in Germany, the DAX climbed by 16 percent or 939 points in 2010 and closed at 6,914 (December 31, 2009: 5,957) points. The most important international lead index, the Dow Jones Industrial Index, rose by nine percent to 11,578 (December 31, 2009: 10,605) points. On the other hand, TecDAX growth was clearly more moderate: It increased only slightly by 32 points or four percent to 851 (December 31, 2009: 818) points. This development was mainly influenced by the weak performance of solar stocks, which was reflected even more strongly in the sustainable stock indices: the ÖkoDAX dropped by 36 percent to 203 (December 31, 2009: 315) points.

**SOLAR STOCKS UNDER PRESSURE**. The on-going discussion about the amendment to the German law on renewable energy sources (EEG) as well as increasing price pressure exerted a negative influence on the development of solar stocks in the year under review. Loss of trust on the part of investors in the segment was huge, so that solar stocks depreciated considerably even though the solar market itself saw pronounced positive development. O *The world energy market* \* *p. 061//* Thus, the Photon Photovoltaic Share Index (PPVX) declined by ten percent to 2,322 (December 31, 2010: 2,572) points. The World Solar Energy Index (SOLEX) dropped even more strongly: It plummeted by 146 points or 27 percent to 403 (December 31, 2009: 549) points.



1



WilderHill New Energy Global Innovation Index NEX // Renewable energies, Sustainability

L

5.31%

4.33%

 $3.27\,\%$ 

2.23%

2.11%

C // DWS Investment GmbH

F // FMR LLC (Fidelity Group)

E // UBS AG

L

G // BlackRock Inc.

D // SolarWorld AG (treasury stock)

# DEVELOPMENT OF THE SOLARWORLD STOCK 2010

**DEVELOPMENT OF STOCK PRICESS.** The SOLARWORLD stock was also massively influenced by the general downward trend in solar stocks. The stock listed in the Prime Standard of the Frankfurt stock exchange (TecDAX – WKN: 510840) lost some 51 (2009: – 2) percent in value during the course of the year 2010 and traded at a closing price of  $\in$  7.47 (December 31, 2009:  $\in$  15.33) on December 31, 2010. (2) *Development of the SolarWorld Stock in comparison with the DAX and TecDAX* \* *p. 056//* In the course of the year the stock showed a high degree of volatility: The highest price in the period under review was  $\in$  16.61, the lowest was  $\in$  7.00. The price-earnings ratio (PER) at the cut-off date was 9.3 (December 31, 2009: 28.9).

The average daily trading volume in numbers of units of SOLARWORLD stock amounted to 1.3 (2009: 1.5) million units. In 2010, a total trading volume of  $\in$  3.4bn (2009:  $\in$  6.4bn) was reached. Market capitalization on December 31, 2010 amounted to  $\in$  0.8bn (December 31, 2009:  $\in$  1.7bn). Earnings per share increased to  $\in$  0.80 (2009:  $\in$  0.53). In addition to the listing in the TecDAX, our stock is also traded on several international and national indices. (a) *Indices in which SolarWorld was listed in 2010 \* p. 056//* 

# SHAREHOLDERS AND COMMUNICATION

SHAREHOLDER STRUCTURE CHANGED EFFECTIVE DECEMBER 31, 2010. The capital stock of SOLARWORLD AG did not change in 2010. It is divided into 111,720,000 no par bearer shares with an imputed nominal value of  $\in 1$ . In the year under review two voting right notifications were issued pursuant to § 21 Sec. 1 Sentence 1 WpHG (German Securities Trading Act) as well as a voting right notification pursuant to § 26 Sec. 1 Sentence 2 WpHG. These were published on our website. (a) www.solarworld.de/investorrelations/votingrights // UBS AG, Switzerland, increased its share to 3.27 percent compared to December 31, 2009 (1.92 percent). BlackRock Investment Management (UK) Limited, Great Britain, reduced its share to 2.11 (December 31, 2009: 3.44) percent. Furthermore, as of the cut-off date of December 31, 2010, SOLARWORLD AG held 4.33 percent of treasury stock. In the period under review two announcements were made concerning transactions by executive staff pursuant to § 15a Sec. 4 German Securities Trading Act (Wertpapierhandelsgesetz, WpHG). The Chief Executive Officer, Dr.-Ing. E.h. Frank Asbeck, bought 70,000 shares indirectly via Solar Holding Beteiligungsgesellschaft mbH, while the Chairman of the Supervisory Board of SOLARWORLD AG bought 5,000 shares. This was announced at (a) www.solarworld.de/en/investorrelations/directorsdealings.

SHARE BUY-BACK AUTHORIZATION EXERCISED. The Management Board of SOLARWORLD AG decided on May 12, 2010 to make use of the authorization issued by the Annual General Meeting (AGM) to acquire treasury stock pursuant to § 71 Sec. 1 No. 8 AktG (German Stock Corporation Act) to the tune of ten percent of the company's capital stock. This authorization was limited in time to the close of business on November 20, 2010. SOLARWORLD acquired a total of 4,838,723 treasury stocks. This is equivalent to a participation of 4.33 percent. Thus, only 106,881,277 shares were entitled to a vote and to receive dividends pursuant to § 71b AktG, which is equivalent to a participation of 95.67 percent. All information concerning the



058

acquisition of treasury stock was published at @ <u>www.solarworld.de/sharebuyback</u>. Part of the treasury stock was offered to SOLARPARC shareholders in the context of the take-over offer for a 1:1 share swap. The offer became effective on December 31, 2010 upon approval by the Federal Financial Supervisory Authority (BaFin). ③ <u>Supplementary Report</u> \* p. 106//

AGM 2010 APPROVES SYSTEM OF MANAGEMENT BOARD REMUNERATION. The eleventh ordinary AGM was attended by some 1,000 shareholders and shareholder representatives on May 20, 2010. This means that 42.36 percent of the voting capital was represented. The Management Board and the Supervisory Board were discharged with a total vote of 99.9 percent. All other items on the agenda were also approved with a large majority by the meeting, among them the system of Management Board remuneration. With this agenda item, management complied with the provisions of the new Act on the Appropriateness of Management Board Remuneration (Gesetz zur Angemessenheit der Vorstandsvergütung, VorstAG). As far back as in 2009, the shareholders of SOLARWORLD had approved a limitation of Management Board remuneration and, in doing so, signaled the appropriateness of management salaries in Germany. © Group Interim Report 1st Half 2009/Resolution to cap Management Boardsalaries \* p. 009//

A decision was also taken to pay a dividend for fiscal year 2009 – for the tenth time in succession – amounting to  $\in$  0.16 per share (for fiscal year 2008:  $\in$  0.15). (Dividend and distribution \* S. 056// The payout will take place on May 21, 2010. Approximately 18 percent of the balance sheet profit from the individual accounts of SOLARWORLD AG as at December 31, 2009 was thus distributed. The remaining portion of the balance sheet profit of the stock corporation ( $\in$  89.6m) was allocated to revenue reserves of the company, thus forming a basis for the planned worldwide growth. The company plans to continue to allow our shareholders to participate in the profit of the company in the future. (Distribution \* p. 141//

INVESTOR RELATIONS WORK SUCCESSFULLY CONTINUED. In 2010, we maintained intensive contact with our international investors and analysts. On the whole, we presented our company at 30 (2009: 28) road shows, equity forums, conferences, and Investors' Days, among them the European Photovoltaic Solar Energy Conference and Exhibition in Valencia, Spain, and the SolarPower Conference International 2010 in Los Angeles.

**ONLINE COMMUNICATION EXPANDED.** Since our IPO we have consistently relied on transparency in our financial reporting, concentrating especially on ecological and social issues. In the year under review this was again appreciated: Consequently, in the annual "manager magazine" competition for "The Best Annual Reports", SOLARWORLD AG was declared the winner in the TecDAX category this year.

In the reporting period we placed special emphasis on the company's online communications. In 2008, we already made online versions of our annual reports available to our shareholders, investors and stakeholders at @ <u>www.solarworld.de/financialreports</u> – and since the first quarter of 2010 we have also prepared the quarterly and interim reports in this user-friendly form. By way of the global access facilities in the World Wide Web, we are increasing transparency significantly and reaching a broader

public. The online version of the Annual Group Report 2009 received both the Gold Award of the League of American Communications Professionals (LACP) and an award in the Annual Report Competition of MerComm Inc./The International Academy of Arts & Sciences.

We present details of the sustainability achievements of SOLARWORLD for the 2010 reporting period online at @ *annualgroupreport2010.solarworld.de/sustainability*. By these means, we can once again increase the depth of information in the web-based version, provide comprehensive time series and give illustrative examples. In this way, we also save paper and energy. Upon request, the details on sustainability performance can of course also be ordered as a print copy. (a) *Order card \* p. 218//* 

**For further information** on key performance indicators for environment, society and governance EFFAS/DVFA (KPIs for ESG) go to @ KPIs for ESG (Kernleistungsindikatoren der EFFAS/DVFA) • p. S15// as well as at @ annualgroupreport2010. solarworld.de/sustainability/kpis-for-esg.

# TAKE-OVER DIRECTIVE LAW

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 previous 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 AGM on May 20, 2010 the authorizations to increase the nominal capital approved during previous AGM were canceled. At the same time, the Board of Management was authorized with the approval of the Supervisory Board, to increase nominal capital once or several times to a total of up to  $\in$  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.

As of the cut-off date, financial liabilities amounting to  $\notin$  581m (converted) (2009:  $\notin$  697m) 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.

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



#### 060 **MARKET 2010**

## ECONOMIC ENVIRONMENT

GLOBAL ECONOMY SHOWS DIVERSE DEVELOPMENT. The global economy recovered from the recession of the year 2009 during the course of the period under review. 2009 *during the course of the period under review.* 2009 during the course of the period under review. sales markets \* p. 060// After the economy expanded strongly in the first half of 2010, the global economy grew somewhat more moderately in the second half. The tighter financial policy pursued by some industrialized countries after the economic stimulus programs ended did indeed dampen the economic upswing - but according to the Institute for the World Economy, a renewed decline into recession is not to be expected.

ECONOMY IN SOME COUNTRIES DIVERGENT. In the United States, economic growth waned over the course of the year. A sustained improvement in the labor market thus failed to materialize in 2010. The real estate market and the level of indebtedness of private households have not yet fully recovered from the crisis. Nevertheless, the country was able to report an increase in production and the expansion of private consumption, which gave the economy a slight impetus.

In the euro area region, economic performance improved in 2010. While the restrictive fiscal policy of individual states as a result of the debt crisis stifled growth, there was, however, some economic recovery. Major impulses in this direction came from private and state consumption as well as from foreign trade.

The economy in Germany surprised with a growth rate of 3.7 percent in 2010. This development did not result from exports alone; internal consumption stimulated by the high employment rate also made a contribution. Production and trade increased substantially over the previous year.

Source: institute for the world Economy, Jan. 2011					
Region	2009	2010 e	2011 e		
Germany	-4.7	3.7	2.3		
Euro area	-4.1	1.7	1.3		
USA	-2.6	2.8	2.5		
World	-0.9	4.8	3.6		

#### (20) ECONOMIC DEVELOPMENT IN THE MAJOR SOLARWORLD SALES MARKETS

Source: Institute for the World Economy Jan 2011

## THE WORLD ENERGY MARKET

**RENEWABLE ENERGIES ON UPWARD TREND**. With the recovery of the world economy, the international demand for energy and raw materials also went up. As a result, the average oil price for the WTI grade increased by 15 percent from US\$ 78.3 to US\$ 89.2 per barrel over the course of the year. According to the Energy Information Administration (EIA), international oil consumption grew by 2.2 million barrels per day to 86.6 million barrels per day – which was higher than the level of the year 2007 (86.3 million barrels per day), the year before the economic crisis.

In 2010, some future-oriented steps were taken concerning modernization of the world energy supply. The G20 nations indicated their readiness to cut down on the subsidies for fossil fuels. In 2009, these still amounted to around US\$ 312 billion, according to the International Energy Agency (IEA). As a comparison: Worldwide funding for the entire renewable energy sector amounted to US\$ 57 billion.

The results of the negotiations concerning the climate change conference in Cancún, Mexico, also point in the direction of low carbon technologies. Representatives of 193 states came out in favor of the target of limiting the earth's warming to two degrees. The governments of industrialized and developing countries agreed to establish a fund called the "Green Climate Fund" for the financing of climate protection measures. From the year 2020 onwards, the amount of US\$ 100 billion is to be paid into this fund from public, private, and other sources.

Currently, the proportion of renewable energies in worldwide power generation amounts to some 19 percent – with the trend rising. (a) *Investments in renewable energies* \* *p.* 062//

# THE SOLAR POWER MARKET

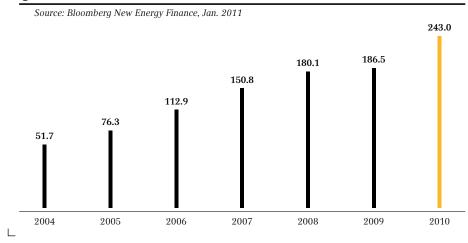
**GROWTH OF SOLAR INDUSTRY CLEARLY ABOVE EXPECTATIONS.** For the solar industry, 2010 was a record year. After the most recent structural streamlining in 2009, the solar market leaped ahead by just under 90 (2009: 24) percent. This development was far more positive than originally expected: At the end of 2009, analysts and market experts were still expecting the market to grow by only 46 percent in 2010. In fact, however, solar modules with a total output of 13.8 (2009: 7.4) GW were newly installed worldwide – and the cumulative solar power output exceeded the 30 GW mark (2009: 21 GW) for the first time. As a result, 30 million people can be supplied with clean solar power worldwide (assumption: 1,000 kWh of annual average power consumption per person). With its rapid development, the solar sector reported the highest growth rate among the renewable energies. The investment volume for solar energy increased by 49 percent and reached US\$ 89.3 (2009: US\$ 59.9) billion. In this process, Europe was the strongest growth driver because European investments in solar energy went up by a total of 91 percent to US\$ 59.6 billion.

\_\_\_\_\_





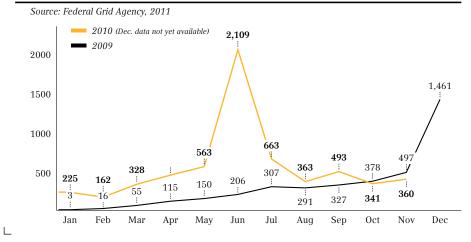
#### INVESTMENTS IN RENEWABLE ENERGIES // IN BILLION US\$



#### INVESTMENTS

Economic recovery is substantially accelerating the rapid growth in the sector. After investments in 2009 initially stagnated due to the financial crisis, the propensity to invest increased significantly in 2010: The investment volume grew by 30 percent to US\$ 243 billion, thus reaching an all-time high.

## 2 NEW INSTALLATIONS IN GERMANY IN THE YEARS 2009/2010 // IN MW

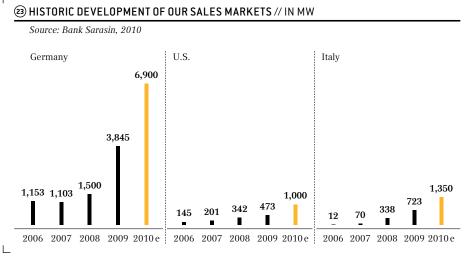


#### NEW INSTALLATIONS

During the course of the year, the German market was influenced by strong pull-in effects caused by the amendment to the Renewable Energy Sources Act during the fiscal year. Newly installed capacity output skyrocketed in June, since the biggest cut in feed-in tariffs (13 percent) was scheduled to become effective on July 1, 2010. In the second half of the year, the market calmed down and demand reached a stable level

Г

Γ



#### MAJOR SALES MAERKETS

During the past five years, SOLARWORLD'S major sales markets, Germany, the U.S. and Italy, have shown strong growth. Until the year 2010, Germany was the biggest growth market driver. In the year under review, Italy as well as the U.S. breached the one gigawatt mark. These two markets are steadily approaching the German market level.

٦

٦

**SUPPLY CONTINUES TO EXCEED DEMAND**. In spite of the strong demand for solar modules, supply consistently exceeded demand and the solar market continued to be an "end customers' market" in the year under review. Solar module manufacturers had to learn how to cope with fierce competition and to "fight" for every customer. On the cost side, solar manufacturers were also forced to optimize their technologies and processes if they wanted to grow with the market despite strong price and margin pressure. This shows that, step by step, the solar industry is developing into a mature industry.

Supported by the positive economy and growing demand, providers invested substantially along the entire value chain in the expansion of production capacities. On balance, the increasing competitive pressure led to a situation where, to maintain and/or expand their market share, they had to cut prices faster than they could reduce costs on the other side.

Chinese competitors used their favorable national credit terms to finance growth. With the devaluation of the euro in the wake of the European debt crisis, their cost advantages were, however, reduced by the middle of 2010. Thus, Asian manufacturers had to increase their prices slightly while European manufacturers were able to pass the cost reductions achieved on to their customers. The price difference between Asian and European manufacturers was therefore halved in the course of the year. European manufacturers also used the positive economic situation and the strong solar demand in order to increase their capacities. Logistical proximity to the end customer markets, a higher level of automation and better product quality gave them competitive advantages and helped them to maintain their position in the market. Consequently, German solar manufacturers were able to defend their market share in 2010. In recent years, they had consistently lost market shares to Asian competitors.

During the course of the period under review contract prices for silicon dropped by some 9 percent to an average of US\$ 48 per kg (December 2009: US\$ 54 per kg). However, the demand could hardly be satisfied in the spot market because silicon suppliers gave preference to long-term customers. For this reason the average spot price climbed by some 32 percent over the course of the year to US\$ 74 per kg (December 2009: US\$ 56 per kg).

In the wafer market capacities, according to Bank Sarasin, went up successively in the year 2010 from 13 to 23 GW. However, temporary demand peaks over the summer months did lead to temporary supply bottlenecks that were associated with slight price increases for wafers.

Crystalline solar modules succeeded in increasing their market share by one percent to 83 (2009: 82) percent versus thin film technology. Lower silicon prices and more favorable systems costs of crystalline technology developed into a competitive advantage. Nevertheless, low production costs and fast scalability constitute advantages for many providers of alternative solar power technologies that are not to be underestimated. The market dominance of crystalline solar technologies will, however, not be jeopardized by this development over the short or medium term.

\_\_\_\_\_



064

**REGULATORY BACKGROUND CONDITIONS CREATE DEMAND PEAKS.** The German solar market is an international solar growth driver. In 2010 Germany experienced a veritable demand boom. According to current estimates by Sarasin Bank, the newly installed output capacity grew by 80 percent to 6.9 (2009: 3.8) GW – that is 50 percent of the worldwide solar market. The proportion of solar power in the German energy mix doubled to 2.0 (2009: 1.1) percent. All in all, as much clean solar energy was made available in Germany within one year as would have been generated by one nuclear power station.

In the first half of the year, and especially in June 2010, the market was characterized by demand peaks. ② *New installations in Germany in the years 2009/2010* \* *p. 062//* The compensation for solar roof-mounted systems dropped in three stages by a total of 25 percent in 2010: first of all by nine percent on January 1, then by 13 percent effective as of July 1, and by another three percent as of October 1. This significant reduction could not be completely compensated for in the prices of solar manufacturers so that both the installers and the end customers had to bear some of the reduction. The prices for solar modules declined over the course of the year by an average of about 14 percent.

The German market again proved to be very elastic. The broad basis of solar companies and installers as well as speedy approval and financing procedures made it possible to respond quickly to changing regulatory background conditions. However, solar companies were not always able to completely service the enormous leap in demand at the end of the first half of the year. Therefore, there were supply bottlenecks concerning important components (e.g. inverters) that partly lasted well into the third quarter.

**EUROPEAN SOLAR MARKETS ON THE UPSWING**. Despite a dramatic reduction in compensation rates in many European markets in the double digit percentage range the demand for solar plants doubled in Europe (excluding Germany). Some solar markets such as Greece, France, and Portugal that were still small until 2009 reached a three digit level of newly installed megawatt output capacity. According to estimates by Bank Sarasin, the installed output performance in Europe (excluding Germany) amounted to some 3.7 (2009: 1.9) GW. The largest growth was reported here mainly in the second half of the year when the demand in Germany was weakening.

After Germany, Italy was the second most important solar market worldwide. According to Gestore di Servizi Energetici (GSE), newly installed output capacity connected to the grid in 2010 was around 1,764 (2009: 723) MW. The announced reduction in feed-in tariffs with effect from January 1, 2011 was an additional driver for the installation of solar plants because Italian customers still wanted to benefit from the attractive tariffs of the year 2010.  $\bigcirc$  *European markets reach attractive size* \* *p.* 134//

In France the regulatory background conditions changed twice during the course of the period under review. There, the funding structures heavily favor building-integrated solar systems – they receive a special tariff which, at  $\in 0.58$  per kWh, is clearly above the international average. This is why integrated roof systems account for approximately 40 percent of the newly installed total output. On the

whole, the demand for solar power plants has more than doubled within one year: According to estimates by Bank Sarasin, 630 (2009: 250) MW worth of output capacity was newly installed in France in 2010. The strong demand together with rapidly declining module prices caused the government to reduce feed-in tariffs for large-scale plants by 12 percent in the fall of 2010. However, the tariffs for small, building-integrated solar systems remained unchanged.

**FUNDING PROGRAMS IN THE U.S. ARE BEGINNING TO TAKE EFFECT.** The long-awaited boom in demand on the U.S. solar market started in the second half of 2010. Newly installed output capacity doubled in 2010 and reached the 1,000 MW mark (2009: 473 MW) for the first time. In the process, commercial roof-mounted systems and free-field systems showed the most dynamic development. California was again the most important sales region. Solar systems with a total output of 434 (2009: 220) MW were newly installed in 2010. Other states such as New Jersey, Colorado, Arizona, Hawaii, and Florida also reported growth in the year under review. (a) *Historic development of our sales markets \* p. 062//* 

# REPERCUSSIONS OF BACKGOUND CONDITIONS ON BUSINESS DEVELOPMENT

\_\_\_\_\_

The year 2010 was a turbulent fiscal year for the solar industry: strong reductions in feed-in compensation and continuous changes to the regulatory background conditions caused volatile developments in demand, combined with abrupt regional shifts. SOLARWORLD optimized its sales strategy accordingly and adjusted to these rapid changes. In doing so, the company managed to increase shipments by 42 percent; at 29 percent, revenue growth developed below-proportionately due to the industry-wide decline in module prices. The company's long years of presence on the German core market coupled with well-established sales networks allowed it to benefit from the leap in demand on the German market in the first half of the year. SOLARWORLD's international presence also enabled it to follow demand shifts into other solar markets in the second half of the year – both in Europe and in the United States. We were therefore able to ensure full capacity utilization of our factories throughout the year.



# 066 SOLAR VALUE CREATION 2010: FROM SILICON TO MODULE

### PROCUREMENT

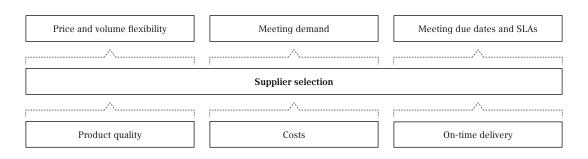
**COST OF MATERIALS RATE REMAINS STABLE**. With the increase in our production volume in 2010, the cost of materials also went up by 20.8 percent to  $\in$  834.8m (2009:  $\in$  691.1m). However, we still managed to reduce the total rate of material costs in the year under review to 63.5 (2009: 64.9) percent. (2) Development of material income statement items \* p. 091//

**BUYING STRATEGICALLY OPTIMIZED**. With declining module prices and increasing competition, the strategic importance of purchasing is increasing for the group. This is why in the year under review we more clearly centralized our procurement activities in the group. Supported by an external consulting company, we analyzed and subsequently reorganized the processes in purchasing and internal procurement. The focus was on a stronger international diversification of suppliers and, at the same time, bundling procurement management: Some 80 percent of all required goods are now ordered by our central purchasing department. As a result we can achieve economies of scale and strengthen our negotiating position. For example, with the help of IT tools all supplier negotiations are documented and stored in a global database. This provides us with groupwide transparency about the current contract and negotiating situation at any time, and we can thus better bundle the purchasing volume and realize savings potentials.

The purchasing conditions relating to all major commodities, auxiliaries, and consumables, components and services are regularly checked and renegotiated if necessary. Even though we mainly rely on central purchasing for every product, we always compare whether local sourcing might make more sense.

SUSTAINABLE SUPPLIER RELATIONS SECURE COMPETITIVE ADVANTAGES. As a result of a rapid increase in worldwide production capacities in the photovoltaic industry there is a risk that some commodities may meanwhile become scarce. In addition, the volatile price development of important raw materials, which is partly due to the economy and partly to demand, plays a significant role in procurement. For this reason sustainable supplier relations are a central element of our purchasing strategy. Our longterm partnerships with suppliers guarantee us not only constant access to important commodities in production but also keep procurement prices stable.

#### SUPPLIER SELECTION IN THE SOLARWORLD GROUP



MATERIAL COSTS FURTHER REDUCED. The supply of raw materials and other consumables was secured throughout the entire year under review at all our production sites. In addition, we managed to reduce the prices for consumables by between five and 20 percent in 2010. By this means we succeeded in cutting our total material costs per module thanks to improved procurement terms and an optimized internal production performance.

The introduction of new products and the optimization of systems technology for existing products in the "Trade" segment also helped us to realize material savings, to profit from using economies of scale, and reduce costs. Here, procurement was significantly guided by the current market development. In order to be able to meet the daily orders promptly, we keep the fast-moving components in this area permanently in stock. Items that are less in demand or components for special solutions are ordered specifically for a given contract. In this way we can also reduce inventory costs.

Towards the end of the second quarter the unusually strong increase in demand on the German market O *Regulatory background conditions create demand peaks* \* *p. 064*// led to an industry-wide supply bottleneck among inverter manufacturers. SOLARWORLD was also affected by these delivery delays. However, our long-standing partnerships and our standing as a good and reliable customer of the inverter producers proved to be an important competitive advantage. Over and above this, however, we adjusted our planning on an almost daily basis during the most hectic phases. In close cooperation with our suppliers we developed new solutions and also adopted unconventional approaches. For example, we geared the planning of our solar kits to the number of inverters available at any one time and concentrated on the delivery of solar generators towards the end of the first half of the year so that our customers could meet their own delivery dates.



068

**SUPPLIER SELECTION SECURES STANDARDS.** In order to meet the company's claims regarding quality and reliability we not only have to examine our internal processes and products at all times, we also have to select our suppliers critically. Through quality agreements as well as supplier audits in accordance with ISO 9001 and 14001, we systematically assess our suppliers and so ensure our own high standards. Strict supplier selection also saves costs: We can reduce the quality checks on incoming goods and better judge our environmental and quality standards along the supplier chain.

## "PRODUCTION GERMANY" AND "PRODUCTION U.S." SEGMENTS

MAJOR COST TARGETS ACHIEVED. In 2010, our factories worked under full capacity utilization throughout the year. At the same time, we achieved major cost targets in production while meeting maximum quality claims – groupwide and along the entire solar value chain. Both, economies of scale resulting from further expansion of our capacities and numerous individual improvements in our cost structures and production processes contributed to this. Moreover, our Corporate Technology enables us to tap savings potentials at all our locations and to introduce innovations quickly and directly as standards. (a) Strategy and action \* p. 027//

**INVESTMENT PROJECTS COORDINATED GROUPWIDE**. 2010 was again a year of major investments in capacity expansion for the company. Projects at our sites in Germany and the U.S. were closely coordinated by way of a central investment management function. In the process, the group further standardized processes and used synergy effects. In doing so, we bundled machine purchases for the module factories in Freiberg, Hillsboro and Camarillo, for example, so that we were in a position to negotiate better terms with our suppliers on the basis of larger quantities. As a result of tight coordination of all projects, we also succeeded in meeting our ambitious time schedules for expansion. This has created good prerequisites for a further increase in capacities in 2011.  $\bigcirc$  *Future development of "Germany Production" and "Production U.S" segments* \* *p.* 136//

Germany	750 → <b>750</b>	$200 \rightarrow 275$	150 → <b>170</b>
U.S.	150 → <b>250</b>	250 → <b>500</b>	150 → <b>500</b>
Joint Venture South Korea			200 → <b>270</b>
Group	900 → <b>1,000</b>	$450 \rightarrow 775$	500 → <b>940</b>

#### 3 GROUPWIDE, NOMINAL YEAR-END CAPACITIES – EXPANSION 2010 // IN MWP

\_\_\_\_\_

#### GERMANY

**RAW MATERIAL PRODUCTION AND RECYCLING USED EFFICIENTLY.** Our subsidiary, SUNICON GMBH, supplements the external procurement of raw material silicon with its own production: In 2010, it upgraded 660 tonnes of SUNSIL®, a high purity solar-grade silicon produced for us by our joint venture JSSI GMBH, for subsequent wafer production. The high quality of this silicon contributed to an increase in the degree of efficiency and thus to decreasing costs in the parameter of silicon per Watt peak. We also use recycling for an inexpensive and efficient raw material supply. The proportion of silicon gained from recycling in the Freiberg wafer production amounted to 21.6 (2009: 21.2) percent and was thus slightly above the previous year's level. We also expanded the capacities of coarse recycling in 2010 so that the processing result increased to 1,830 (2009: 1,640) tonnes, and productivity by 23 (2009: 10) percent.

**COST STRUCTURE FOR WAFERS AND CELLS SIGNIFICANTLY IMPROVED.** In the year under review we succeeded in producing wafers at clearly lower unit costs than before. The reason: the new factory at Freiberg's Industrial Estate East which was completed by the end of 2009 and officially inaugurated in May 2010 has a particularly high level of automation as well as specifically designed and developed equipment in crucial areas. At the end of 2010, we already started the second stage of expansion, again with a volume of 250 MW. (a) *Groupwide nominal year-end capacity – expansion 2011 \* p. 136//* In cell production we were able to make substantial progress on the cost side by continuously increasing the degrees of efficiency and by significantly reducing the consumption of operating supplies. The higher degrees of cell efficiency contributed to our modules performance increase. (a) *Innovation targets and priorities 2010+ \* p. 086//* The original plan of achieving cell production capacity of 250 MW by 2010/2011 was already exceeded at the end of 2010 by optimizing our cell output.

**MODULE EXPANSION MADE PROGRESS.** The construction of module facility Solar Factory III proceeded according to schedule in 2010 so that the ramp-up phase can start in the first half of 2011.  $\bigcirc$  *Future development of "Production Germany" and "Production U.S." segments • p. 136 //* In order to also be in a position to cope logistically with the module capacity that will then be available in Freiberg in 2011, we already expanded our logistics center in 2010.

#### UNITED STATES

**NEW MODULE PRODUCTION STARTED.** The "Production U.S." segment was again characterized by ambitious investments in the build-up of new capacities in 2010. In September the first module from the facility at the Hillsboro site came off the production line – by the end of the year 2010 we had reached the nominal capacity of 350 MW. In the first half of 2011, we will successively ramp-up the production. Technologically, the factory is based on a new concept that we developed ourselves in close cooperation with the plant manufacturer. In the process, we were able to build on the experience gained with existing module production facilities in Germany and the United States. A close exchange of ideas between employees at the German and the U.S. locations had particularly positive effects in this project. (3) Developing project management in the framework of an international exchange \* p. 104//



# 070 SALES MARKETS, BRAND AND PRODUCT 2010

### **"TRADE" SEGMENT**

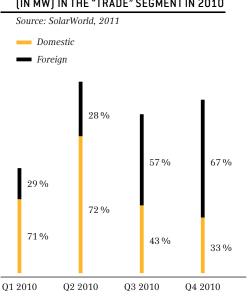
**SALES PICKED UP GLOBALLY**. SOLARWORLD was able to use the strong growth on international solar markets successfully in fiscal year 2010: Our shipments of modules and solar kits increased during this period by 62 (2009: 45) percent. The persistently high price pressure – exacerbated by international competition and a reduction in feed-in tariffs in the most important solar markets – was, however, also reflected on the revenue and earnings side in 2010. This developed not as vigorously as sales. Through optimization in purchasing and efficiency improvements in production, we did, however, manage to keep the margins almost constant. () *Development of sales and profit or loss \* p. 089//* 

The trading business turned out to be very volatile in line with the worldwide market dynamism. The political debate about reducing feed-in compensation in Germany triggered demand peaks during the course of the year, which led to a somewhat unusual seasonal distribution of shipments. In the past, particularly high demand was reported in Germany in the second half of the year; in 2010 the market reached its peak in the second quarter. (2) *New installations in Germany in the years 2009/2010* \* *p. 062//* The rapid and exceptionally high increase in demand during this period was a challenge to our internal logistics. (3) *Material costs further reduced* \* *p. 067//* 

Our on-the-spot presence in major foreign markets provided the company with the necessary flexibility to cope with abrupt regional shifts in demand during the second half of the year. As a result, we were able to substantially increase our foreign business and compensate for the setting of the German market. The share of shipments generated outside Germany rose over the entire course of the year to 47 (2009: 18) percent.

Germany continued to be the company's most important market in the year 2010 with a proportion of 53 percent. In comparison to the previous year, we again succeeded in increasing foreign sales. Most notably, our complete SOLARWORLD SUNKITS<sup>®</sup> solution achieved a vigorous response from end customers: We were actually able to boost shipments of this product by 65 percent.

\_\_\_\_\_



# REGIONAL DISTRIBUTION OF SHIPMENTS (IN MW) IN THE "TRADE" SEGMENT IN 2010

In the year under review the most important European market after Germany was Italy. There, shipments more than quadrupled. Other European markets such as Greece, Belgium or France also developed well. In the first half of 2010, we converted our liaison office in Grenoble, France into a wholly-owned sales subsidiary of SOLARWORLD AG O *Legal structure of the group changed in the year under review* \* *p.* 034// and actively expanded our sales networks. We support our specialist partners with on the spot training and consulting services. In keeping with market requirements, SOLARWORLD launched the building-integrated roof system SOLARWORLD ENERGYROOF® on the French market and received very good market feedback: Shipments of the integrated rooftop systems in France doubled in 2010.

Our U.S. business flourished gratifyingly in 2010. The United States was our second most important sales region after Germany in 2010 – with a rising trend. We increased our personnel capacities in U.S. sales and thus further raised and diversified our strength and effectiveness – an important competitive advantage in this strongly fragmented market with many different regional idiosyncrasies that can hardly be compared with European solar markets. We pushed ahead with brand development and backed our sales activities with marketing measures tailor-made to meet the requirements of this market. Marketing efforts again redoubled \* p. 073// Since 2010, we have offered new financing facilities for solar power systems in the U.S. in cooperation with external service providers. Consequently, we make it easier both for private house owners and for commercial plant operators to make a buying decision in favor of our products, and we tap into new groups of customers. On the whole, we succeeded in more than tripling our U.S. sales of modules and sunkris<sup>®</sup> in the year 2010.



SALES STRATEGY SUPPORTS GROWTH. Our tried and tested sales strategy was continued in the year under review and the groupwide network of well-trained specialist partners was further expanded – an important competitive advantage in markets characterized by great demand volatility. At peak times, in particular, the company can rely on a large network of well-trained installation staff and therefore has enough capacities to place its products on the market.

**CUSTOMERS AGAIN RATE QUALITY AND SERVICE POSITIVELY.** Satisfaction of our module and kits customers is one of our central performance indicators. (a) *Operational metrics act as leading indicators*  $\cdot$  *p. 031//* We therefore measure satisfaction annually in an international survey. In 2010, the result was again positive: With a somewhat higher response rate of 41 (2009: 35) percent, 85.8 (2009: 85.4) percent of our customers said they were "very satisfied" or "satisfied" with SOLARWORLD. A stronger focus on quality assurance is reflected in the figures: 89.1 (2009: 87.6) percent of our customers rate the criterion of "Service" to be "very good" or "good". The quality of our products was rated by 99.2 (2009: 99.8) percent of survey participants as "very good" or "good". Based on these results, we will again identify strengths and weaknesses this year and, against this background, continuously improve our products and services.

PRESENCE AT INTERNATIONAL TRADE FAIRS. In the year under review, SOLARWORLD presented itself at the most important solar trade fairs, among them the European Photovoltaic Solar Energy Conference and Exhibition in Valencia, Spain, Intersolar Europe in Munich, Germany, as well as Solar Power International in Los Angeles, United States. As a result, we intensified existing customer contacts, established new contacts, and presented our products in the wafer, module, and systems field to a broad-based audience. For example, in 2010 we succeeded in achieving a high exhibition response with products like SUNMODULE<sup>®</sup> MONO BLACK, SUNFIX<sup>®</sup> PLUS or SUNPAC. Trade fair visitors focused on our SUNCARPORT<sup>®</sup> and on the SUNPAC, in particular, with which we tackle the important topic of self-consumption of solar power. (a) Products "Made by SolarWorld" \* p. 077//

### **BRAND PROPOSITION AND INVESTMENTS**

**BRAND ADVANCES TO BECOME COMPETITIVE FACTOR**. In the current buyers' market, the communication of a clear-cut brand proposition plays a significant role in helping to consolidate our position as a quality provider of crystalline solar power products worldwide. This applies both vis-à-vis direct customers such as installers and with respect to private end customers. That our brand proposition has actually been well received in the market is shown by the revenue development and by brand surveys. In 2010, Germany was again our most important sales market followed by the EU countries and the United States – reason enough for us to place the emphasis of our marketing and sales activities into precisely those markets in the year under review. (() *Competitive position \* p. 037//* 

We continued the successful Push & Pull strategy of the previous year. The core of this strategy is a mix of actions: on the one hand consisting of investments into brand awareness by way of media formats like TV and print as well as large-scale info mailings with appropriate demand effects from end customers, and on the other hand of investments in sales promotion activities and in the distribution channels together with our specialist partners.

In terms of content, we placed emphasis on the price-performance ratio of our SOLARWORLD brand products in order to create a differentiation from the increasing number of competitive module offers worldwide. SOLARWORLD offers its customers high-performance, long-life, functionally safe modules whose qualities have been proven by a large number of external certifications and performance tests. The added value proposition of our brand is additionally based on a coordinated systems and service assortment that offers the right customer solutions from the roof to large, free-field sites. Products"Made by SolarWorld" \* p. 077//

MARKETING EFFORTS AGAIN REDOUBLED. In the year under review, SOLARWORLD intensified its groupwide marketing activities by around 30 percent over the previous year. Investments in the brand amounted to approximately € 13m.

In Germany, we continued the campaign started in 2009 which features the national football star, Lukas Podolski, as well as our commitment as the premium sponsor of FC Cologne football team. In 2010, the campaign focused on the decentralized, independent supply of solar power generated on your own roof - or, in short, power self-consumption. As a partner of the Saturday evening show "Wetten, dass...?", we presented our "solar filling station", the SUNCARPORT®, that also generates solar power for self-consumption, to a huge audience of end customers. Another testimonial campaign was launched with the renowned international actor, Larry Hagman, who is primarily known from the TV soap "Dallas." This campaign first started in the United States and was accompanied by country-wide media response. In the course of 2010, we adapted the campaign for the German market and for the European markets and backed it up with PR measures such as a Europe-wide road show with Larry Hagman. In the year under review, we once again strengthened our online marketing and, to this end, revised our international web appearance technically, optically, and in terms of content. The objective was stronger orientation towards end customers, greater user friendliness and a higher level of interactivity. In addition, our objective was to create an added value for customers by providing some general information on the topic of solar power. In the United States, we geared our advertising appeal to the special user behavior in that market and attached a great deal of importance to communication via the social media. Furthermore, we also developed marketing measures specially tailored to the U.S. and to this end we cooperated for example with the designer Seth Aaron, who enjoys great popularity in the United States.



Both in Germany and on European markets as well as in the U.S., the company also succeeded in expanding its already well-established networks of specialist partners. In the year under review, we were able to double the number of specialist partners in Germany to more than 500. In parallel, we continued to run sales promotion measures on the information platforms "FachpartnerNet" and "FachpartnerShop." We also established similar sales portals in the wholesale business in 2010 and additionally expanded the Authorized Installer Program in the United States.

**EFFICIENCY CONTROL CONFIRMS STABLE BRAND VALUE DEVELOPMENT.** We continuously check whether and to what extent our investments in brand awareness and sales promotion actually show success. In the process, we rely on different internal and external market studies as well as on the results of annual customer surveys. (a) *Customers again rate quality and service positively* \* *p.* 072//

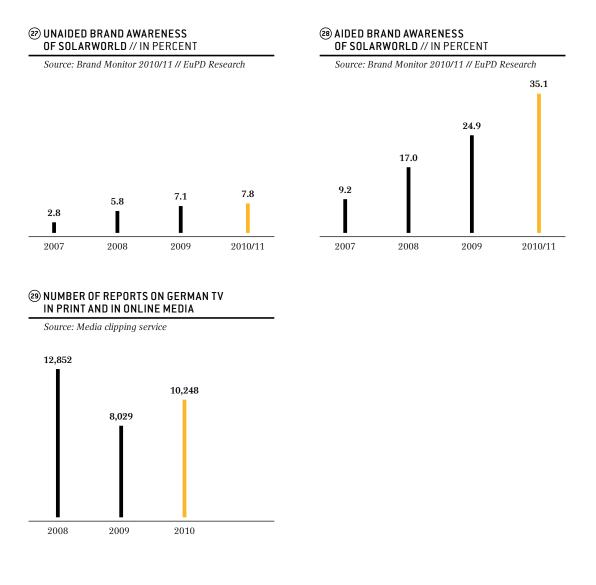
According to the brand value determination performed by Semion Brand Broker, the value of the SOLARWORLD brand amounted to a stable  $\in 25m$  (2009:  $\in 25m$ ), reaching 48<sup>th</sup> (2009: 47<sup>th</sup>) place among the most valuable German brands. According to the Semion Brand Broker survey, this means that we are the most valuable solar brand in Germany.

According to the Brand Monitor 2010/11 by the B2B market research institute EuPD Research published in January 2011, SOLARWORLD is the best known solar brand in Germany both in unaided (7.8 percent) and in aided surveys (35.1 percent). In comparison with previous years, we have substantially improved our awareness level.

This now puts the degree of unaided brand awareness of SOLARWORLD at more than twice the figure for the second, best-known competitors (3.7 percent).

In the aided brand awareness survey, we made substantial headway from 24.9 to 35.1 percent in the year under review and achieved first place in the solar market. The second most frequently mentioned competitor only achieved an aided recall of 25.9 percent.

An advertising tracking measure by the Frankfurt institute, MMA Media Markt Analysen, also proves that, in the year under review, the company succeeded in increasing its brand awareness significantly. While in September of 2009 18.9 percent of respondents still spontaneously mentioned the name of SOLARWORLD, the number rose to 32.1 percent in September of 2010. In terms of aided brand awareness, we succeeded in boosting our value from 31.7 percent (as at September 2009) to 49.9 percent (as at September 2010). In addition, according to this study we are the best-known solar manufacturer in Germany.



**EQUIVALENT ADVERTISING VALUE – PR WORK INCREASES AWARENESS.** An important instrument for increasing our brand awareness is target-oriented Public Relations work. Through corporate news, press releases, interviews, varying events, as well as personal talks we informed the media and therefore also the public about SOLARWORLD in the year under review. In 2010, there were a total of 10,248 (2009: 8,029) reports on German television, in print, and in the online media. The resulting equivalent advertising value amounted to  $\in$  31.69m (2009:  $\in$  58.03m).



While we were indeed able to increase the number of reports in the year under review compared with the previous year, the equivalent advertising value was on the decline. This development is attributable to shifts within the media categories and/or individual publications.

The company's TV presence has developed well in the year under review. The number of reports remained relatively stable at 283 (2009: 295), but significantly more viewers were reached: 95.90 (2009: 42.80) million. In addition, there were more reports during high-reach TV shows such as the "Tagesschau" (evening news), the "Tagesthemen" (late night news), or the ZDF Morning Show, which, as advertising-free broadcast times, are not included in the calculation of the equivalent advertising value.

In German print media, there were clearly more reports (2,984) than in the previous year (2009: 2,155). SOLARWORLD was also mentioned in national lead media such as "Handelsblatt", "Financial Times Deutschland", "Frankfurter Allgemeine Zeitung", or "Süddeutsche Zeitung."

Most reports were again to be found in online media in 2010: 6,981 (2009: 5,579). A particularly large number of reports were carried in the stock exchange and economy-related online formats such as finanznachrichten.de, wallstreetonline.de, boerse.de or onvista.de.

**SOLAR2WORLD SUPPORTS HAITI**. The SOLARWORLD brand not only stands for product quality but also for a worldwide, borderless and fair energy supply. This is why under the name Solar2World we support aid projects in developing countries with off-grid solar power solutions that promote sustainable economic development. So far, it has been possible to realize projects with a total volume of 352 kWp. In 2010, we delivered approximately 161 (2009: 114) kWp. A large part of this went to the Haitian earth-quake region. (a) *Magazine "Solar Certainty"* • *Magazine page 14//* (a) *www.solar2world.de //* Within the framework of our Solar2World commitment, we cooperate on-site with different regional partners: In Haiti, for example, with the Solar Electric Light Fund (SELF) organization and the SunEnergy Power initiative. The latter's founder, Walt Ratterman, was killed in the disastrous earthquake in Haiti – SOLARWORLD awarded the Honorary SOLARWORLD EINSTEIN AWARD to him posthumously.

**NOBEL PEACE PRIZE WINNER HONORED WITH EINSTEIN AWARD**. We have awarded this prize each year since 2005 to personalities who acquired merits in the field of photovoltaic technology. In 2010, SOLARWORLD honored the Nobel peace prize winner and founder of the Grameen Bank, Prof. Muhammad Yunus, with the award. He was awarded the prize for his concept of micro-credits, with the help of which millions of people became economically independent. Micro-credits made it possible, among other things, to install more than 400,000 small solar power systems that ensure an off-grid power supply for people in rural regions of Bangladesh.

# PRODUCTS "MADE BY SOLARWORLD"

FULLY INTEGRATED AS A QUALITY PROVIDER. To us, quality "Made by SOLARWORLD" means: quality from the raw material to the system ready for installation. We secure this by way of fully automated production plants and uninterrupted process and materials monitoring. This is our SOLARWORLD standard at all our sites worldwide. In addition, the company has its own sophisticated test procedures such as regular performance tests in production, life-cycle tests in our climate chambers, the examination of ammonia resistance and corrosion tests in salt mists. To some extent, our tests go well beyond the tests by TÜV (Technical Inspection Agency) or other test organizations and guarantee the high functional safety, stress resistance and long life of our products.

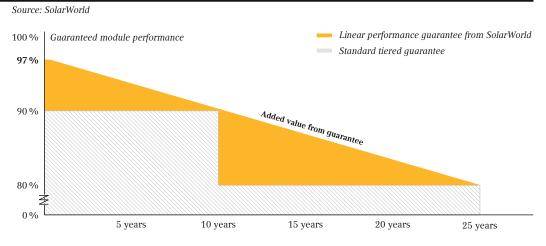
What is more, SOLARWORLD has ten years of competence in systems technology; this is an important differentiating factor in the market of fully integrated solar technology manufacturers whose product range mostly ends with the module. Our assortment of SUNKITS® is largely based on the development work of our engineers – and they adjust the product range to market requirements and customer wishes.

In the year under review, we were again able to sharpen our quality profile vis-à-vis customers. At the beginning of the year, we were therefore the first company in the industry to introduce a 25-year linear performance warranty.

As an additional service, we have offered our German customers a comprehensive insurance package for solar kits of the sunkit<sup>®</sup> brand since July 1, 2010 in cooperation with an external partner. This covers both material damage and theft of the system as well as loss of revenue for two years. The term of the insurance can be extended to up to five years. A linear performance warranty and insurance cover strengthen customers' assurance that a SOLARWORLD brand system is a safe, long-term investment.







External awards and certifications are confirmation of our product quality: In February 2010, a SOLAR-WORLD product was again announced winner in a module yield test carried out by the Photon trade magazine. In addition, one of our modules was awarded the grade "very good" by ÖKO TEST. In a sustainability comparison performed by the U.S. environmental organization, Silicon Valley Toxics Coalition (SVTC), we received the highest number of points among manufacturers of crystalline solar technology in 2010. @ *annualgroupreport2010.solarworld.de/sustainability/2.10awards* // The German Agricultural Association (Deutsche Landwirtschafts-Gesellschaft e.V.) as well as the Swiss test institute, SGS, proved the ammonia resistance of our modules in tests conducted independently of one another – a powerful selling point for customers in agriculture.

**PRODUCT RANGE EXPANDED IN LINE WITH CUSTOMER AND MARKET REQUIREMENTS**. In the year under review, SOLAR-WORLD enhanced its product portfolio to meet increasing and ever more diverse customer and market requirements. This enables the company to better profile itself as a provider of complete solar power solutions in the end customer market. (3) *Innovation targets and priorities* 2010+ \* p. 086//

One example of customer-oriented optimization of our solar application products is the SUNFIX® system and frame technology for inclined roofs; compared to the previous model it is characterized, among other things, by fewer components and bolt-on points. This saves customers and installers a significant amount of time when installing a SOLARWORLD solar power system, and consequently also gives them a competitive edge.

**SUNPAC MAKES MORE POWER SELF-CONSUMPTION POSSIBLE**. The EEG amendment in Germany that came into effect on July 1, 2010 placed special importance on self-consumption of solar power. In parallel, increasing energy prices also made the consumption of power from one's own roof increasingly attractive in other markets. As a provider with long years of know-how in the field of systems solutions for the roof, SOLARWORLD included this trend in the product range strategy and added the SUNPAC product to its portfolio. We can therefore offer a solar power plant for private homes that will enable a large group of customers to use a battery system and an intelligent plant monitoring device to increase self-consumption and to protect against grid failures with an emergency power supply. At the same time, plant operators can benefit from better funding facilities. Storage technology as a strategic issue of the future is at the very top of the agenda of product development since it is the key to building up a decentralized energy supply and to the competitiveness of solar power. () *Promoting storage technology with partners* \* p. 082//

For further information on advertising campaigns, customer relations as well as our product responsibility go to  $\textcircled{PR1} - \underline{PR9} * p. S79$  et seq. // for information on our awards go to P2.10 \* p. S20 et seq. // or online at PR0 \* annual group report 2010. solarworld.de/sustainability/gri-index.



# 080 ENERGY AND CLIMATE PROTECTION

Our business operations and our environmental management focus on energy efficiency and climate protection. This is where we make the strongest impact on the environment. After all, solar power generation is a clean source of energy: It does not pollute the environment, does not produce any greenhouse gases, and does not use any fossil fuels. The production process initially requires an energy input, which, however, is greatly offset by the power generated by the subsequent solar system.

That is why, in analogy to the payback period of an investment, this is referred to as the energy payback period. Solar energy is therefore considered to be a zero-emission source. Below the bottom line, using or tapping solar energy does not produce any damaging emissions for the environment – on the contrary: We prevent far more emissions than we emit.

## ENERGY AMORTIZATION TIME

Energy consumption in the production of solar modules is of central importance to us not only for ecology reasons but also because it constitutes a crucial cost factor. For this reason, we pursue the objective of reducing energy consumption per production unit along the entire value chain. SOLAR-WORLD has participated for some years in an industry-wide Life Cycle Analysis. This year, we can present the first results regarding energy amortization by region. While the energy used in a solar power system in Bonn is amortized after about one and a half years, it does so in San Francisco after less than one year.

#### **31 ENERGY AMORTIZATION TIME**

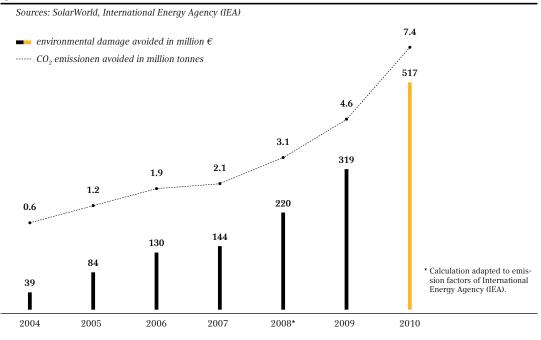
Energy amortization time: On the basis of the Life Cycle Analysis, the following energy amortization times per region were identified for poly-crystalline modules from our Freiberg production plant installed on a roof with a southerly orientation and an optimum inclination:

Region/Country	Representative place	Power yield (kWh/kWp)	Energy amortization time (years)
Southern Europe	Sofia	1,270	1.1
Italy	Perugia	1,260	1.1
France	Clermont-Ferrand	990	1.4
Spain	Madrid	1,580	0.9
U.S.	San Francisco	1,670	0.8
Germany	Bonn	940	1.5

# POSITIVE CO<sub>2E0.</sub> BALANCE

We systematically record and report our groupwide greenhouse gas emissions in our Annual Report. Continuous improvement of our energy and materials efficiency enables us to improve overall processes in terms of economic and ecological aspects, based on a holistic approach. Our groupwide  $CO_{2eq}$  emissions increased to about 179k (2009: 139k)  $tCO_{2eq}$ ; this rise was attributable to a significant increase in production driven by our growth. However, we managed to improve our average emission intensity, i.e. emissions per produced watt-peak, by 37 percent to 103.3 (2009: 164.5)  $gCO_{2eq}/Wp$ .

Based on the modules sold in 2010, it is possible to save some 7.4m (2009: 4.6m)  $tCO_{2eq.}$  during the average module life span of 25 years. This will help avoid costs concerning environmental damage that amount to around  $\in$  517m (2009:  $\in$  319m). If the  $CO_{2eq.}$  emissions avoided by our modules are compared with the  $CO_{2eq.}$  emissions caused by our company, the result is a positive  $CO_{2eq.}$  balance for SOLARWORLD: The emissions avoided exceed the emissions caused by the group by a factor of 41 (2009: 33).



#### **32 CLIMATE PROTECTION**

For further information on the respective assumptions used for the models and the calculations go to EN3+4 \* p. S53// EN16+17 \* p. S56// online at @annualgroupreport2010.solarworld.de/sustainability/gri-index.



# 082 INNOVATION REPORT 2010

## STRATEGIC AND ORGANIZATIONAL DEVELOPMENT APPROACH

HOLISTIC AND EVOLUTIONARY INNOVATION PRINCIPLE. The focus of our development efforts is on the customer. With our holistic understanding of technology, we develop complete energy supply systems. Our manufacturing knowledge ranging from silicon through to the solar module and on to the monitoring of entire solar systems enables us to recognize the potentials in all areas of photovoltaic technology at an early point in time and to use them to our benefit. On this broad basis, we work in parallel on several innovative technology steps: They can be combined and used optionally according to the modular construction principle. This evolutionary approach gives SOLARWORLD a high level of flexibility in development.

**SCIENCE2TECHNOLOGY** – **DEVELOPING FOR PRODUCTION**. Innovation is an idea that becomes a product. This is the general principle under which we always view production processes and products during development activities. The goal is a strong market position as a result of the direct transfer of innovations into production – "Lab to Fab."

We supplement standard production processes with own developments that provide the company with an advantage. In addition, we also use the innovation center of SOLARWORLD INNOVATIONS GMBH in Freiberg as a platform where, together with suppliers such as machine and plant manufacturers, we develop technologies for production processes or verify new processes' and machines' readiness for production. This gives us a crucial advantage over many competitors. This commitment is backed by our own comprehensive test technology, which enables us to bring consistently high quality to the market.

**PROMOTING STORAGE TECHNOLOGY WITH PARTNERS.** With the solar modules of the SUNMODULE PLUS® series, SOLARWORLD masters a key technology throughout the entire depth of the value chain. As another key technology for the future competitiveness of solar power, we have identified energy storage as well as its integration into solar power arrays. In this field, SOLARWORLD does not conduct any basic research of its own, but rather cooperates with a number of partners who work with their varying core competencies on different alternatives such as lithium-ion solar power storage, for example. In this way, the group strengthens its own technology position, can swiftly use suitable options at the right time, and can combine them into an overall solution.

SUPPORT FOR RESEARCH AND SCIENCE. SOLARWORLD works closely with international research institutions. In the period under review, we cooperated with 24 institutes and universities (2009: 25) in various R&D projects or in the framework of direct development contracts. We also support basic research and front-end development activities, e.g. by participating in cluster projects. In the framework of such projects, industrial companies such as SOLARWORLD sponsor projects by institutes and offer them advice and consultation. Apart from the cluster projects SolarFocus, LOANA and PV Reliabilities, SOLARWORLD is also involved in the Vantage project, for example, which examines new laser procedures for use in solar cell production.

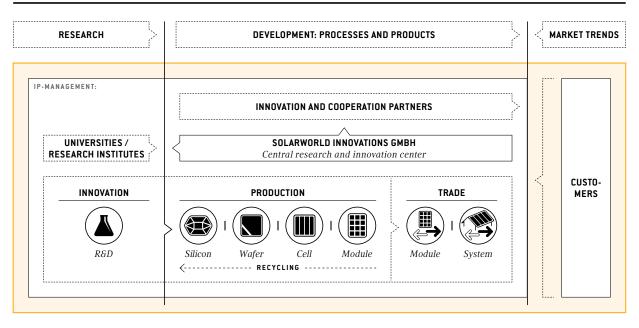
In 2010, our long-standing cooperation scheme with the Freiberg University of Mining and Technology (TUBA) was expanded in the scientific area. The managing directors of the SOLARWORLD subsidiaries, SUNICON, Prof. Armin Müller, and SOLARWORLD INNOVATIONS, Dr. Ralf Lüdemann and Dr. Holger Neuhaus, offer four series of lectures and are involved in examination boards and on search and recruitment committees. The group supports the Graduate School for Photovoltaic Technology, an excellence initiative run by TUBA, where Prof. Armin Müller and Dr. Ralf Lüdemann have been appointed to sit on the advisory council.

HONORARY DOCTORATE AWARDED TO CEO FRANK ASBECK. In July 2010, the CEO of SOLARWORLD AG, Frank Asbeck, was awarded an honorary doctorate by the Freiberg University of Mining and Technology (TUBA). Since then, the graduate engineer has held the title of "Dr.-Ing. E.h.". The university awarded this title to honor his long-standing commitment to photovoltaic research and to cultural life in the city of Freiberg. The Senate also referred to the fact that SOLARWORLD has pooled its international research and development activities at the Freiberg location. (3) <u>SolarWorld Innovations – Organization</u> "Science2Technology" \* p.084//

**STRENGTHENING IN-HOUSE DEVELOPMENTS BY EXTERNAL KNOW-HOW.** In 2010, we succeeded in acquiring fundamental systems engineering know-how in the form of patent applications. This will benefit our in-house developments, help us swiftly expand our competence, and create protected unique selling propositions for us. For 2011, we are also planning to use an exclusive option concerning the basic know-how of a cooperation partner for an innovative metallization procedure. This process successfully proved ready for production in 2010 and is to prove its worth in a small-scale series production project in 2011. The next step will be to transfer this product feature to series production and secure additional cost and quality benefits.



#### 33 SOLARWORLD INNOVATIONS – ORGANIZATION "SCIENCE2TECHNOLOGY"



#### INNOVATION CENTER OF SOLARWORLD INNOVATIONS

The strategy and implementation of groupwide technology developments emanate from SOLARWORLD INNOVATIONS GMBH at our innovation center in Freiberg: Key elements are the wafer, solar cell and module laboratories. We test next generation processes and systems in pilot lines on a scale close to actual production conditions – to some extent under clean room conditions. There are also laboratories for development, for reliability testing, and for quality assurance. Intellectual Property Management and a specialist library are also housed in the innovation center.

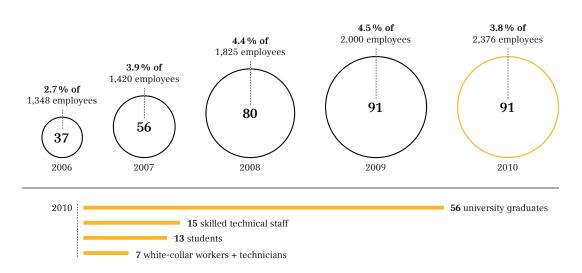
The innovation center of SOLARWORLD INNOVATIONS is the central point of a solar technology campus: Here, we work in close cooperation with our own nearby production facilities, and network with neighboring research establishments, start-ups, and young technology companies of the Gründer- und Innovationszentrum Freiberg (GIZeF) as well as the Freiberg University of Mining and Technology (TUBA).  $\bigcirc$  *Honorary doctorate awarded to CEO Frank Asbeck* \* *p. 083//*SOLARWORLD INNOVATIONS thus forms the creative interface between research, development and production.

As soon as development stages have reached production maturity, we can transfer them quickly and directly into the production lines of all our international locations. Conversely, best-practice approaches permanently flow back into our own technology evaluation function from our worldwide production sites.

Г

STRENGTHENING THE QUALIFICATION STRUCTURE WITHIN SOLARWORLD INNOVATIONS. In 2010, we continued to develop our workforce in SOLARWORLD INNOVATIONS with a sense of proportion. While the headcount continued to be 91, flat on 2009 levels, we increased the number of engineers and scientists within the teams by almost 20 percent. We are thus taking account of the increasing tasks facing us and are expanding our development competence. We will continue to pursue this approach: Our activities in 2011 (c) Future research and development activities 2011 • p. 138// will create new jobs in development. The headcount is to be increased to 120 by the end of 2011. SOLARWORLD INNOVATIONS will therefore also reinforce its service and support areas, e.g. IP and contract management as well as service and project management.

Overall, we attach importance to achieving a sound balance between scientists, engineers, technical staff and skilled workers since inter-disciplinary technology development at SOLARWORLD requires the interaction of different skills and qualifications.



## DEVELOPMENT OF OUR R&D HEADCOUNT

ADDITIONAL STAFF MEMBERS WORKING TO PROMOTE INNOVATION. Apart from solarworld innovations with its core task of research and development, other staff members work in the development of new technological processes and new products.

At the Bonn location of SOLARWORLD AG, the number of employees working in sales-related systems engineering rose strongly in 2010: At the end of 2010, the total headcount was 30 (2009: 11), with employees working in product management, design, and software.



Γ

**35 INNOVATION TARGETS AND PRIORITIES 2010+** 

#### STRATEGIC INNOVATION TARGETS 2010+

#### CUTTING COSTS ASSURING AND ENHANCING QUALITY DEVELOPPING INNOVATIVE AND SUSTAINABLE SOLUTIONS

#### OUR STRATEGIC INNOVATION TARGETS ARE MUTUALLY DEPENDENT: WHEN WE SECURE AND INCREASE QUALITY, WE OPTIMIZE PROCESSES AND MATERIAL CONSUMPTION AT THE SAME TIME.

Special priorities 2010+	<b>Cost reductions:</b> Transfer innovations quickly and directly into production as process improve- ments, review all variables such as production yield and material consumption, check critical incoming materials, and intensively examine new materials
	Focus on the overall system of module, systems and storage technology ↑
	Enhance the customer benefit of our systems, for example by increasing module safety
On-going tasks	<b>Translate market trends into product innovations:</b> market, customer and trend observation → Product innovations with added value and specific future benefits → Opening up new business fields and market potentials
	Maintain value proposition of products "Made by SOLARWORLD": long life, efficiency and functional safety
	Economic and ecological sustainability: Reduce consumption of natural resources, avoid the use of pollutants, prevent the emission of climate gases and pollutants as well as waste
	Systems technology for specific market and customer requirements: Make quick, easy and safe assembly possible, develop design variations, offer the customer technical support
	<b>Process development:</b> Increase yield by way of refined analysis methods, increase throughput and degree of efficiency, improve automation and standardization, reduce cycle times in crystallization, optimize processes for silicon production → productivity ↑
	<b>Product development:</b> Increase specific output of cells and modules → degree of efficiency ↑ optimize long-term behavior of modules through improved manufacturing details as well as new materials
	Material optimization: Improve consumption of auxiliaries and consumables and substitute if necessary with alternative materials
	Energy saving: Reduce energy and water consumption ↓
	Basic research: Promote basic scientific and technical knowledge/qualify alternative materials and consumables
	<b>Employee qualifications:</b> Continually train employees internally and externally → improve specialist know-how and general understanding and expand quality awareness, promote inter- cultural cooperation by way of exchanges between SOLARWORLD locations

	$\sim$
Output increases – modules	<b>Increase output by 4.5 and 4.3 percent, respectively:</b> Production Germany: 230 (2009: 220) W (poly-crystalline)/Production U.S.: 240 (2009: 230) Wp (mono-crystalline)
	<ul> <li>Major contributing factors were:</li> <li>Further development of crystal growing process to increase electronic wafer quality</li> <li>Improved optical confinement in the solar cell through clearly improved cell texture</li> <li>Further optimization of cell interconnection in the module</li> </ul>
Process optimization	Introduction of a new auxiliary process in wafering that has positive repercussions on wafer yiel and personnel deployment
Major product innovations and improvements	SunPac: Complete smart energy solution with battery system
	→ Future performance potential: to increase self-consumption by supplementing our Sunkit®; answer to the changing market situation in Germany after EEG amendment on July 1, 2010 and to rising electricity prices; further development of solar power applications as complete solutions for decentralized energy supply and hence an increase in solar power's competitiveness
	SunCarport <sup>®</sup> : Combination of carport and solar power plant; local power generation for electric and hybrid vehicles; usable in the private and commercial environment, e.g. as a customers' or employees' parking lot or "power filling station"; additionally offers protection for the vehicle parked there; can also be used as an extension or alternative to a roof-mounted system; different versions available for a diversity of applications
	$\rightarrow$ Future performance potential: to enhance the application of solar power technology, to provide basis for mobility that is easy on the climate, the environment, and our resources
	<b>Sundeck®:</b> Flexibly usable, aesthetic in-roof system; replaces roof tiling and makes possible the assembly of standard modules that are largely flush with the surrounding roof tiles
	$\rightarrow$ Future performance potential: to achieve high differentiation in inclined roof segment and to expand the market position; to tap into additional customer groups by means of the "aesthetics" product feature
	Sunfix <sup>®</sup> plus: Assembly system for all conventional inclined roofs; further development of the Sunfix <sup>®</sup> product by reducing the number of components and bolt-on points
	$\rightarrow$ Future performance potential: to cut costs through more efficient use of high-quality materials and detailed development work; to further expand the market position in the roof-mounted solar power plant business by reducing assembly time and costs
	Energyroof plus <sup>®</sup> : Fully integrated roof array; further development of the Energyroof <sup>®</sup>
	$\rightarrow$ Future performance potential: to further develop the competency in fully integrated roof system to improve market opportunities through increased performance and simpler assembly
	Suntrol Portal <sup>®</sup> : Internet portal to monitor plant performance; new operator interface and addi- tional functions including for self-consumption of solar power
	$\rightarrow$ Future performance potential: to increase the attractiveness of the operation of a solar power system and, as a result, tap into new customer groups

088

IP MANAGEMENT PROMOTES INVENTIVE ACTIVITIES BY STAFF MEMBERS. Inventor workshops and other programs launched by our Intellectual Property management promote the inventiveness of our staff and have resulted in a significant rise in the number of registered inventions, up 82 percent year-on-year in the period under review. We generate and secure new inventions and continuously examine our IP portfolio to determine its cost effectiveness; old IP rights with low cost-benefit ratios are removed from our portfolio.

#### **36 DEVELOPMENT OF INVENTIONS AND IP RIGHTS**

	2008	2009	2010
Registered inventions	18	28	51
IP ratio*	23 %	31 %	41 %
IP rights or applications owned	220	209	203
IP rights families owned	103	87	107**

\* Ratio of the number of registered inventions in SOLARWORLD INNOVATIONS to the number of employees

\*\* Of which, 48 with at least one patent granted

#### ③ DEVELOPMENT OF R&D EXPENSES\*

	2006	2007	2008	2009	2010
Total R&D expenses (in €m)	8.6	10.8	13.0	12.0	19.2
Sponsored portion (in %)	45.3	34.2	18.5	15.0	11.5

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

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

	2006	2007	2008	2009	2010
Research ratio	1.7	1.6	1.4	1.2	1.5
Research intensity	1.8	2.0	1.9	1.2	1.6

(research ratio = R&D expenses/revenues 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

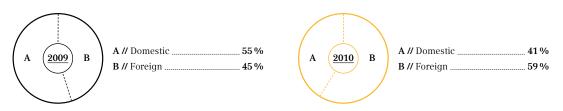
# EARNINGS, FINANCE AND ASSETS SITUATION

## **INCOME SITUATION**

#### DEVELOPMENT OF SALES AND PROFIT OR LOSS

As forecasted, the SOLARWORLD Group was able to sustainably expand its business in 2010. Groupwide shipments of wafers and solar modules increased by 42 percent to 819 (2009: 578) MW. This growth is mainly due to the strong sales development on international solar markets such as the U.S. or Italy. The shift in sales within the individual markets made for an increase by 14 percentage points to 59 (2009: 45) percent of our groupwide foreign sales quota in 2010.

#### **39 SHIPMENTS DIVIDED INTO DOMESTIC AND FOREIGN SALES**

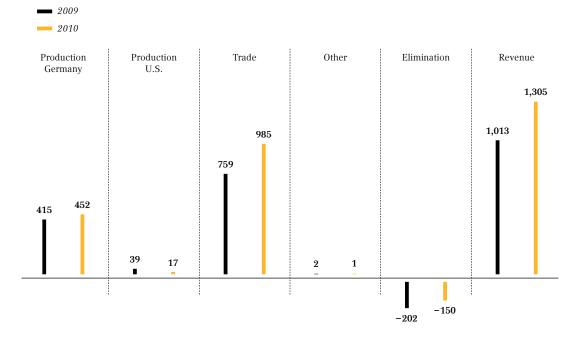


Due to the groupwide growth in shipments, SOLARWORLD succeeded in considerably increasing group revenue, which rose by 28.8 percent or  $\in$  292.1m to  $\in$  1,304.7m (2009:  $\in$  1,012.6m) as compared to the prior year. We therefore met our self-imposed target of sustainably increasing our revenue to more than one billion  $\in$ . The "Trade" segment, in particular, contributed to this development with a revenue increase of 29.8 percent to  $\in$  985m (2009:  $\in$  759m). The foreign proportion of revenue increased to 47 (2009: 29.3) percent. External revenue in the "Production Germany" segment, which is mainly characterized by the wafer business, increased by 8.9 percent to  $\in$  452m (2009:  $\in$  415m). This is due to the fact that, in the reporting year, we mainly focused on our own module manufacturing and processed the significantly increased wafer production volume to module.  $\bigcirc$  39. Segment reporting \* p. 183//





#### ④ REVENUE DIVIDED BY SEGMENTS // IN M€



Despite the fact that prices in the industry experienced a further drop in the reporting year, the company succeeded in keeping the groupwide EBIT margin almost steady. It ranged at 14.8 (2009: 15.1) percent. This development is the result of successful cost management: not only did we manage to realize significant cost cuts with regard to manufacturing processes Production Germany" and "ProductionU.S." segments \* p. 068//, we were also able to optimize our expenses respecting procurement. Procurement \* p. 066//

In 2010, groupwide earnings before interest and tax (EBIT) increased by 26.1 percent or  $\in$  40.0m to  $\in$  192.8m (2009:  $\in$  152.8m). As expected, the start up of cell and module facilities had a negative influence on the result of the "Production U.S." segment: The facility stated producing at the end of the third quarter. However, the EBIT of our "Production U.S." segment still improved to  $\in$  -10.3m (2009:  $\in$  -16.4m).

Groupwide earnings before interest, taxes and depreciation and amortization (EBITDA) increased by  $\notin$  64.8m to  $\notin$  281.3m (2009:  $\notin$  216.5m) over the course of the past twelve months.

SOLARWORLD Group's financial result was substantially characterized by the increased non-current financial liabilities and amounted to  $\in -44.1$ m (2009:  $\in -21.1$ m).  $\bigcirc$  *Financing analyses* \* *p.* 094//

091

Group profit increased by € 28.3m or 48.0 percent to € 87.3m (2009: € 59.0m) in 2010.

## ORDER TREND

A large proportion of our planned 2011 shipments regarding the trading business with modules and kits are hedged through framework agreements both with regard to Germany and other international markets.  $\bigcirc$  *Future sales markets 2011+ • p. 137//* 

#### DEVELOPMENT OF MATERIAL INCOME STATEMENT ITEMS

The expansion of our manufacturing capacities is reflected in the reporting year's personnel expenses. Due to new hires in the fields of manufacturing and distribution, these expenses increased by  $\notin$  26.5m to  $\notin$  126.3m (2009:  $\notin$  99.8m) as compared to the prior year. The slight increase in the personnel expense ratio to 9.6 (2009: 9.4) percent was mainly due to the fact that our new manufacturing segments were still in the ramp-up phase in 2010 and were only available for use at the end of the third quarter.

In contrast, we were able to reduce the cost of materials ratio to 63.5 (2009: 64.9) percent over the past twelve months. This was possible through optimizing our groupwide purchasing processes and due to an improved materials input in manufacturing. Material costs further reduced \* p. 067//

Amortization and depreciation increased by  $\in$  24.8m to  $\in$  88.5m (2009:  $\in$  63.7m) due to the planned continuation of investments in manufacturing capacities.

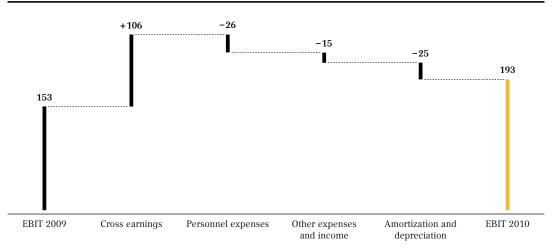
Other operating expenses increased by  $\notin$  45.5 m to  $\notin$  172.6m (2009:  $\notin$  127.1m). This was mainly due to the considerably increased manufacturing and sales volume, investments in expansion of the brand, and expenses for raw material transactions that are not part of our core business. The expenses in raw material transactions ( $\notin$  16.3m) are set off against earnings from raw material transactions amounting to  $\notin$  18.0m. These are shown under other operating income. The expense ratio amounted to 13.1 (2009: 11.9) percent in the reporting year.

As compared to the prior year, other operating income increased by  $\in$  30.9m to  $\in$  100.8m (2009:  $\in$  69.9m). In addition to raw material transactions, this development was also influenced by earnings from the reversal of down payments.

-----



# ④ DEVELOPMENT OF MATERIAL INCOME STATEMENT ITEMS // IN M€



#### ④ FIVE-YEAR COMPARISON OF THE INCOME SITUATION // IN K€

	2006	2007	2008	2009	2010
Revenue	515,246	698,818	900,311	1,012,575	1,304,674
Revenue from continued operations	509,139	689,588	900,311	1,012,575	1,304,674
Changes in inventories products	30,916	-17,670	15,160	48,830	8,434
Own work capitalized	590	542	7,740	3,117	1,025
Other operating income	96,185	57,253	36,841	69,934	100,791
Operating performance	636,830	729,713	960,052	1,134,456	1,414,924
Cost of materials	-302,988	-333,654	-454,060	-691,062	-834,780
Personnel expenses	-54,958	-75,004	-90,130	-99,783	-126,282
Amortization and depreciation	-41,954	-42,054	-55,166	-63,659	-88,503
Other operating expenses	-59,351	-80,129	-99,883	-127,127	-172,607
Subtotal	-459,251	-530,841	-699,239	-981,631	-1,222,172
Result of operations	177,579	198,872	260,813	152,825	192,752
Financial result	1,285	-22,962	-72,144	-21,073	-44,131
Taxes of income	-49,811	-65,027	-53,422	-72,779	-61,309
Result from discontinued operations (after tax)	1,513	2,373	13,432	_	_
Consolidated net income	130,566	113,256	148,679	58,973	87,312

.....

------

#### **43 INDICATORS // IN PERCENT**

	2006	2007	2008	2009	2010
Return on sales (Consolidated net income/revenue)	25.3	16.2	16.5	5.8	6.7
<b>Cost of materials ratio</b> (Cost of materials/revenue from continued operations plus changes in inventory and own work capitalized)	56.0	49.6	49.2	64.9	63.5
Personnel expenses ratio (Personnel expenses/revenue from continued operations plus changes in inventory and own work capitalized)	10.2	11.2	9.8	9.4	9.6

# **FINANCIAL POSITION**

#### PRINCIPLES AND OBJECTIVES OF FINANCIAL MANAGEMENT

Over the short and medium term as well as over the long term, we align our financial management to the requirements of the operational business and our corporate strategy, respectively. This enables us to ensure SOLARWORLD's growth in a sustained manner. O *Strategic financing 2010/2011+* \* *p. 029//* With a large range of financial instruments and measures, we strengthen the group's financial flexibility and thereby reduce dependency on banks and credit institutions. Central financing also gives us a strong position with respect to negotiations, which guarantees we get the best possible terms. O 65b. *Principles and objective of financial risk management* \* *p. 200//* 

The operational business is the main pillar of our group's liquidity reserves. In addition, bonds, promissory notes, and loans cover the group's capital needs.  $\bigcirc$  *Financing analysis* • *p.* 094// Central cash management invests the liquidity positions mostly in fixed deposits (day-to-day money, weekly and monthly deposits) of the public and private German banking sector on a daily basis. Over the longer term, we want to maintain our consistent equity ratio of 35 to 40 percent.

SOLARWORLD's international credit agreements are subject to terms that, in part, run until 2018 and will require respective follow-up financing no sooner than 2014. An overview of non-current loans and the redemption terms can be found in the Notes, margin number 3 <u>65e. Liquidity risks</u> \* p. 202//



## FINANCING ANALYSIS

094

Compared to December 31, 2009, equity increased by € 57.4m to € 922.9m (December 31, 2009: € 865.5m). At the balance sheet date, the equity ratio amounted to 35.0 (December 31, 2009: 39.0) percent. Through several financing measures, the company ensured the required financial flexibility for its growth throughout the reporting year and limited financial risks. For instance, in January 2010 we placed a bond amounting to € 400.0m. The group also redeemed non-current financial liabilities of € 226m. At the balance sheet date, financial obligations increased by € 352.1m to € 1,141.6m (December 31, 2009: € 789.5m), 88.6 percent of which are non-current.

Investment subsidies and grants amounted to  $\notin$  76.2m (December 31, 2009:  $\notin$  68.3m) at the balance sheet date. This increase results from a binding promise of EU funding respecting expansion in Freiberg, Germany. These public means for expansion of the manufacturing capacities deferred on the liabilities side of the balance sheet will be released to income over the course of the useful lives of the subsidized investments.

Other non-current liabilities decreased by  $\in$  34.8m to  $\in$  215.9m (December 31, 2009:  $\in$  250.7m). The non-current proportion of customer advances for supply contracts recognized therein amounted to  $\in$  207.7m (December 31, 2009:  $\in$  242.9m) at balance sheet date.

Capital		31.12.2006	31.12.2007	31.12.2008	31.12.2009	31.12.2010		
Equity		597,321	691,546	841,075	865,462	922,879		
Non-current lia	abilities	273,722	899,266	1,093,559	1,119,411	1,366,757		
Current liabilit	ies	133,367	113,654	185,988	232,177	345,690		
Total		1,004,410	1,704,466	2,120,622	2,217,050	2,635,332		
010	35 %		55	2 %		13 %		
009	39 %		51%					
:008	40 %			9%				
	41 %		7%					
.007								

#### ④ FIVE-YEAR COMPARISON OF THE FINANCIAL SITUATION // IN K€

Equity Non-current liabilities Current liabilities

#### **45 INDICATORS**

	2006	2007	2008	2009	2010
Return on equity (Consolidated net income/equity)	21.9%	16.4%	17.7 %	6.8%	9.5%
ROCE (key date) (EBIT/Capital Employed*)	38.4 %	36.5 %	37.1%	13.7 %	14.7%
First degree liquidity (Liquid funds + securities/current liabilities)	2.3	7.0	4.5	2.2	2.1
Second degree liquidity (Liquid funds + means available on short notice/ current liabilities)	3.0	8.1	5.0	3.2	2.6
Third degree liquidity (Current assets/current liabilities)	4.8	11.3	6.0	4.3	3.6

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

#### INVESTMENT ANALYSIS

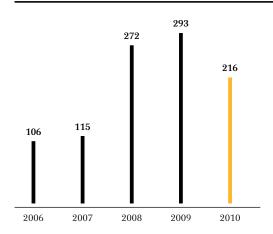
In 2010, we implemented the expansion of our global manufacturing capacities as planned and invested a total of  $\in$  216.1m (2009:  $\in$  293.2m) in intangible and tangible assets. In the process, we were able to significantly undercut the in-house investment budget through more efficient project management and improved purchase terms.

The focus of our investment activities was on the expansion of our integrated module, cell, and wafer manufacturing at the Hillsboro, U.S. location ( $\in$  85.6m), as well as wafer manufacturing ( $\in$  58.4m) and module production ( $\in$  36.2m) at our German Freiberg plant. We invested  $\in$  14.4m in the expansion of our research and development activities. An additional  $\in$  21.5m were invested in the expansion of other SOLARWORLD Group locations.

In the reporting year, the group acquired tangible assets of  $\in$  39.5m through the initial consolidation solarworld ag & solar holding gmbh in gbr auermühle.  $\bigcirc$  <u>Auermühle</u> • p. 163//

The investment in the participating interest, QATAR SOLAR TECHNOLOGIES Q.S.C., that is measured at equity amounted to  $\notin$  25.6m. This joint venture guarantees our group a further source of the important raw material silicon for the future.





#### LIQUIDITY ANALYSIS

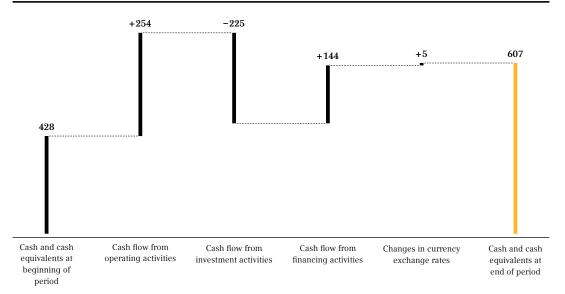
Liquid funds that amounted to  $\in$  613.5m (December 31, 2009:  $\in$  428.1m) at the balance sheet date December 31, 2010 include cash and cash equivalents that mainly consist of day-to-day money and fixed term deposits. In addition, SOLARWORLD has current financial assets of  $\in$  99.1m (December 31, 2009:  $\in$  81.6m).

Cash flow from operating activities came to  $\in 254.2m$  (2009:  $\in -33.0m$ ) and was especially influenced by the increase in the operating result.

Cash flow from investment activities amounted to  $\in -224.9$ m (2009:  $\in 14.5$ m). It was mainly characterized by payments for investments in fixed assets amounting to  $\in -242.0$ m. In addition, deposits from cash investments amounted to  $\in 10.9$ m, deposits for the disposal of fixed assets to  $\in 11.9$ m, and the inflow of investment grants to  $\in 3.3$ m.  $\in 9.0$ m were paid for the acquisition of shares in a consolidated company.

Cash flow from financing activities amounted to  $\notin$  144.1m (2009:  $\notin$  24.9m). It was influenced by the placement of a bond in the amount of  $\notin$  400.0m, and withdrawal of the second part of a syndicated loan in the amount of  $\notin$  100.0m. Simultaneously, we repaid loans amounting to  $\notin$  -261.9m. In addition, this includes payments due to distributions and the acquisition of own shares in an amount of  $\notin$  -59.5m, interest payments amounting to  $\notin$  -39.9m, and payments of third party shareholder of subsidiaries amounting to  $\notin$  7.3m.

#### ④ CASH FLOW RECONCILIATION // IN M€



## **FINANCIAL STANDING**

#### ASSET STRUCTURE ANALYSIS

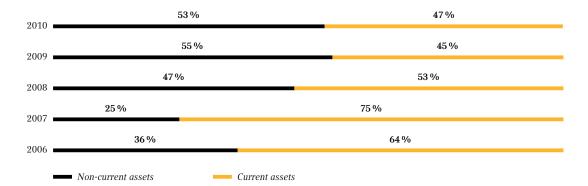
As compared to December 31, 2009, the balance sheet total of the Solarworld Group increased by  $\notin$  418.2m to  $\notin$  2,635.3m (December 31, 2009:  $\notin$  2,217.1m).

Non-current assets increased by  $\notin$  183.6m to  $\notin$  1,395.1m. This is mainly attributable to the increase in tangible assets due to expansion investments. Working capital decreased by  $\notin$  21.2m to  $\notin$  428.4m (December 31, 2009:  $\notin$  449.6m). This is primarily a result of the amount of receivables as of December 31, 2010, which was reduced by  $\notin$  70.5m to  $\notin$  140.9m. As compared to December 31, 2009 ( $\notin$  268.5m), inventories increased to  $\notin$  337.4m. Current advance payments made and recognized within the item amounted to  $\notin$  51.1m (December 31, 2009:  $\notin$  54.6m). As compared to December 31, 2009, trade liabilities increased by  $\notin$  29.4m to  $\notin$  113.3m (December 31, 2009:  $\notin$  83.9m). In total, payments on account amounted to  $\notin$  247.4m (December 31, 2009:  $\notin$  276.0m) at the balance sheet date.



## ④ FIVE-YEAR COMPARISON OF FINANCIAL STANDING // IN K€

Assets	2006	2007	2008	2009	2010
Non-current assets	362,514	422,725	1,000,856	1,211,471	1,395,086
Current assets	641,896	1,281,741	1,119,766	1,005,579	1,240,246
Tota	1,004,410	1,704,466	2,120,622	2,217,050	2,635,332



# (49) INDICATORS

	31.12.2006	31.12.2007	31.12.2008	31.12.2009	31.12.2010
Equity ratio (Equity/total assets)	59.5 %	40.6 %	39.7%	39.0%	35.0%
Investment intensity (Non-current assets/total assets)	36.1%	24.8%	47.2 %	54.6 %	52.9%
Frist degree equity-to-fixed assets ratio (Equity/non-current assets)	1.6	1.6	0.8	0.7	0.7
Second degree equity-to-fixed assets ratio (Equity + non-current liabilities/ non-current assets)	2.4	3.8	1.9	1.6	1.6

\_\_\_\_\_

## **OFF-BALANCE SHEET FINANCIAL INSTRUMENTS**

Off-balance sheet financial instruments do not influence the group's financial standing.

## ASSETS NOT SHOWN IN THE BALANCE SHEET

At the balance sheet date, all assets of the group were shown in the balance sheet.

#### OTHER INTANGIBLE ASSETS

We consider our international investor and capital market contacts to be stable. They are consolidated through comprehensive strategic positioning and transparent communication. Investor Relations work successfully continued \* p. 058//

We substantially generate process advantages regarding both current and future business from our integrated research and development work on all levels of the value added chain. (3) <u>Innovation targets</u> and priorities  $2010+*p.086//(\bigcirc)$  Future products and services \*p.139//

Further development of valuable customer relations is part of our sales strategy. In the reporting year, the company succeeded in increasing brand awareness yet again. We thereby created sustained brand value – for our sales partners and for ourselves. *Brand proposition and investments* \* *p*. 072//



# 100 HUMAN RESOURCES 2010

SOLARWORLD operates in a very lively market environment that is characterized by both double-digit growth rates and considerably intensifying competition. We will only succeed in achieving our growth targets if we win productive, innovative and committed employees for SOLARWORLD and retain them over the longer term. We manage to do so by being an attractive employer and investing in the ongoing training and development of our employees. This approach enables us to find and retain people with the technical and personal skills required to match our corporate culture anywhere in the world.

**PROMOTING QUALITATIVE EMPLOYEE DEVELOPMENT.** In order to achieve our growth objectives and secure our success over the longer term, SOLARWORLD recruits highly qualified new staff and continually promotes and develops employees already working for the company.

Active employee development also pays off in terms of motivation: Employees who enjoy leeway in negotiating, decision-making, and autonomy at work show a higher level of satisfaction with their work situation. This is exactly what we are offering our employees: an open work atmosphere that entails a high level of personal responsibility and leeway that permits them to demonstrate their abilities and undergo personal development. Over the past few years, we have set up a broad range of further training schemes and training programs.

TAPPING POTENTIAL WITH LEADERSHIP AND COMMUNICATION CULTURE. However, employee satisfaction not only results from latitude but also from the competence of supervisors. That is why we are expanding our modular executive development program, which teaches our managers comprehensive skills concerning day-to-day leadership requirements and additional, more far-reaching skills and capabilities. One of the training modules, for instance, is aimed at supporting the role of managers as coaches and personnel developers in their own teams. For example, discussions focus on team roles and team development. Ultimately, managers are multipliers promoting the development of their teams by motivating team members and by recognizing, promoting, and efficiently using their potential.

RAISING AWARENESS OF OUR VALUES. Leadership behavior must reflect SOLARWORLD's values. The Management Board pays careful attention to pursuing this goal. In order to raise our employees' awareness of our values and present them explicitly, we carried out groupwide leadership workshops from September 2009 to September 2010. Participants discussed and described in detail the values and thus validated our value concept groupwide. The company's managers play the role of multipliers in this process and form the link to our entire workforce so that they also cause our employees to influence the group's value concept and help the corporate culture to grow from the bottom up. **RISE IN HEADCOUNT IN LINE WITH THE EXPANSION OF PRODUCTION CAPACITY**. In 2010, the headcount rose by 18.9 percent groupwide to 2,376. In the course of our capacity growth, we increased staff mainly at our two largest production sites in Freiberg, Germany and Hillsboro, U.S.

#### IEADCOUNT DEVELOPMENT // AS AT CUT-OFF DATE DECEMBER 31

Region	2009	2010	+/- absolute
Germany	1,341*	1,495**	+154
U.S.	644	861	+217
Rest of world	15	20	+5
Group	2,000	2,376	+376

\* incl. 86 trainees

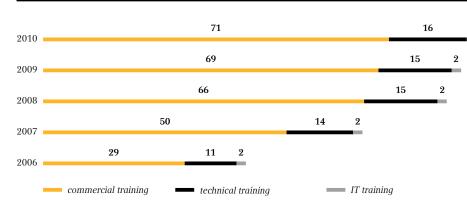
\*\* incl. 87 trainees

**EMPLOYING TEMPORARY STAFF FOR EXPANSION PHASES.** Including our temporary staff, the global headcount in fiscal year 2010 totaled 3,352 in the SOLARWORLD Group. In the period under review, we employed a relatively large number of temporary agency staff, above all at the U.S. production sites that are currently being expanded. If our personnel structures allow us to do so, we offer qualified and suitable temporary agency staff a permanent position after three months. In Freiberg, too, we intend to offer as many temporary employees as possible a fixed position. Overall, 276 (2009: 36) employees were offered a permanent employment contract in the period under review. Our business associates are established temporary agency companies. As a matter of principle, payments and social benefits for temporary staff are based on collective agreements.

VOCATIONAL AND ONGOING TRAINING: PERSONAL DEVELOPMENT TO PROMOTE SUCCESS. SOLARWORLD carries out annual employee appraisal meetings to discuss the personal development perspectives of each individual and initiate corresponding development measures. These confidential discussions focus on the development of the individual employee and on objectives for the forthcoming year, as well as on employee satisfaction. In the period under review, we created a personal development concept for executive, technical, and project careers. We promote our executives and junior executives with specific training programs combined with various forms of feedback. By this means, we ensure evaluation of the results already achieved and also of people's potential. The SOLARWORLD management feedback – a 360° assessment – was implemented for the Management Board and the Bonn-based divisional managers for the first time in 2009. In the period under review, the results were discussed with every manager, and individual measures to strengthen their leadership skills were devised on that basis. Management feedback is to be implemented approximately every two years in future and is to also include the team leaders.



**APPRENTICE TODAY – PERMANENT SOLARWORLD EMPLOYEE TOMORROW.** We had 87 trainees in the period under review: 18 completed the trainee program in 2010 (2009: 18), 14 of which accepted a permanent employment contract with SOLARWORLD immediately afterwards (2009: 11).



SUNUMBER OF APPRENTICES/TRAINEES IN THE SOLARWORLD GROUP // IN ABSOLUTE

SOLARWORLD offers high-quality training in commercial and technical jobs. During their vocational training course, our young trainees get to know different divisions and obtain constructive feedback from their supervisors upon completion of each training module. They are also offered an opportunity to attend internal and external training schemes to teach them soft skills. We also offer many of our trainees an opportunity to take part in English language courses, telephone training, or to carry out a period of practical training abroad. One of our apprentices training to be a "process technician in the metallurgical and semi-finished goods industry, speciality: non-ferrous metallurgy" won the national award as "best trainee" in the period under review. Apart from classical vocational training, SOLARWORLD also provides placements in a practice-oriented sandwich course on "Industrial Management."

SUCCESSFUL SYMBIOSIS – UNIVERSITY TRAINING AND SOLARWORLD. In order to get to know, promote, and ultimately win young talent for the company, we cooperate with a number of universities ④ Support for research and science • p. 083// and continued to expand our university marketing activities in the period under review. 150 university students were offered the possibility to undergo a period of practical training for career guidance purposes at SOLARWORLD, to work for SOLARWORLD as a student assistant or write their dissertation at our group. In this respect, we comply with the principles of the Fair Company Initiative: Our trainees work autonomously in our company; they obtain individual coaching and are paid in line with market rates. In addition, we offer company visits and workshops for young students and deliver technical presentations in the framework of selected university lectures. SOLARWORLD is increasingly perceived to be an employer of choice by junior staff, as has been shown by various studies and rankings published in the year under review: In the Universum Student Survey 2010 @ www.universumaward.com SOLARWORLD ranked tenth among scientists and 13th among engineers. In the 2010 ranking of the trendence university graduate barometer, we ranked 14th (2009: 15<sup>th</sup>) in the engineering edition from among 120 participating German companies. SOLARWORLD's popularity among new graduate students ranked higher than BASF, MTU Aero Engines, Hochtief, and RWE. This strong positioning as an employer of choice among highly qualified junior staff provides us with a competitive edge in the increasingly competitive market for technical staff.

**PROMOTING JUNIOR STAFF – AWARDING THE JUNIOR EINSTEIN AWARD**. In the period under review, SOLARWORLD awarded the SOLARWORLD Junior Einstein Award for the fifth time. The award went to Dr. Christian Reimann, a young scientist at the Fraunhofer Institute for Integrated Systems and Building Element Technology (IISB) in Erlangen. The mineralogist wrote his doctoral thesis about the formation of silicon crystals and the avoidance of impurities in silicon melt. As a result, the efficiency of solar cells can be increased and costs can be reduced. A patent application has meanwhile been filed for the process developed by Reimann.

**GERMANY'S BEST EMPLOYERS 2010**. In 2009, employees of SOLARWORLD AG took part in the "Germany's Best Employers 2010" study carried out by the Great Place to Work Institute<sup>®</sup>. The dimensions assessed in the study were credibility, respect, fairness, pride, and team orientation. Among the 235 companies taking part, SOLARWORLD rose to 55<sup>th</sup> (2009: 57<sup>th</sup>) place. A credible management that shows fairness and respect in its dealings with employees, strong identification with the company, and a strong team spirit are distinguished by this study.

These good working conditions were also reflected in sinking employee fluctuation as well as low absenteeism groupwide.

	2006	2007	2008	2009	2010
Fluctuation ratio	5.79	6.49	3.56	9.26	8.16
Absenteeism ratio	2.46	2.10	2.55	3.37	3.01

## EMPLOYEE FLUCTUATION // IN PERCENT

-----



**STRATEGIC EXPANSION OF INTERNAL COMMUNICATION**. Due to its complexity, a fast-growing company such as SOLARWORLD needs well-functioning internal communication in order to be successful in the long run. In the period under review, we therefore strategically developed the Internal Communications (IC) group division. The first few milestones in this context are: The groupwide survey on communication culture launched in 2010, and the communication concept for the SOLARWORLD values developed in consultation with Human Resources. In addition, we launched the first process phase for developing the SOLARWORLD intranet into a groupwide "Information and Collaboration Tool."

Apart from these new approaches, our employee newsletter, "Sunday", again influenced SOLARWORLD's internal communications concept in 2010. The newsletter has always been an essential and popular instrument in our company's information process among sites.

**DEVELOPING PROJECT MANAGEMENT IN THE FRAMEWORK OF AN INTERNATIONAL EXCHANGE**. We also specifically promote international exchange and thus a cross-border transfer of know-how within the SOLARWORLD Group. Exchanging experts (in particular operators and technicians) between different sites has been firmly established and promotes convergence as well as joint learning within the group in terms of corporate technology and corporate identity. In order to control groupwide projects even faster and more cost-effectively, we prepared a SOLARWORLD specific project management standard in cooperation with employees with specific needs, to be implemented at all sites as of 2011, as well as a trainthe-trainers concept to teach project management skills.

**FACILITATING FLEXIBLE WORKING HOURS MODELS.** Employees' work-life balance is also part and parcel of our corporate culture at SOLARWORLD. We therefore offer flexible working hours in almost all areas and have devised a shift system that meets the needs of our staff at our production sites. Staff with children or with family members in need of care are offered part-time or home-office models; if necessary, we also arrange individual working hours schemes. Our administrative staff, in particular, is offered mobile IT connection and thus the flexibility to work whenever and wherever required.

**HEALTH AND SAFETY**. We attach particular attention to promoting our employees' health and to offering them safe jobs. This concern is steered through the use of a groupwide health and safety management scheme. In cooperation with the competent authorities, occupational insurance bodies and other initiatives, we are working on continually optimizing working conditions at all sites.

In addition, SOLARWORLD offers its staff preventative schemes at many sites, e.g. an annual health day, in-house dorsal training schemes or a subsidized canteen that offers high-quality, healthy and nutritious dishes. At our Freiberg production site, sickness rates are analyzed annually in cooperation with the health insurance companies. If the analysis suggests that action may be required, we initiate corresponding measures. **OPTIMIZING PROCESSES.** As a matter of principle, SOLARWORLD offers an open working climate with flat hierarchies and short decision-making paths so that good ideas are quickly implemented. Many colleagues use their direct relationship with the Management Board to optimize processes and structures. We have established a formal suggestions scheme at our production sites. At Freiberg, Germany, employees submitted a total of 246 (2009: 209) suggestions in 2010. Cost savings achieved thanks to the implementation of suggestions totaled around  $\in$  37,300 (2009:  $\in$  57,950) in 2010. There has to be said that no arithmetical benefit can be calculated for a large number of suggestions (e.g. concerning processes, administration, health, safety and environment). The implementation of those suggestions, however, definitely contributes to better, safer and more efficient processes. We also drive forward continuous process optimization at our German and U.S. production sites through our Total Productive Management (TPM) system.  $\bigcirc$  Interlinking management tools for sustainable development \* p. 031//

**EMPLOYEES PARTICIPATE IN CORPORATE DEVELOPMENT.** SOLARWORLD AG ensures that its employees participate in the financial success of the company and group. The model was introduced at our Freiberg sites as early as 2003 and forms part of our in-house collective agreement at that site. Our employees in Bonn have received a performance-related bonus since 2005 on top of their salaries. In the U.S. we offer employees a company bonus similar to the German model. In 2010, personnel expenditure relating to the profit-oriented participation model totaled  $\in$  17.4m (2009:  $\in$  9.8m) groupwide. We also offer an individual bonus plan to our executive staff. The company's locations in South Africa, Singapore, and Spain operate their own bonus systems.

## In M€ BOULD STATE ST

\_\_\_\_\_

	2006	2007	2008	2009	2010
Expenditure relating to profit-oriented participation model	8.1	10.9	15.0	9.8	17.4
				·	

For further information on Human Resources issues go to D <u>LA1-LA14</u> • p. S62 et seq.// or online at annualgroup report 2010.solarworld.de/sustainability/gri-index.</u>



# <sup>106</sup> SUPPLEMENTARY REPORT

# DISCLOSURE OF EVENTS OF PARTICULAR IMPORTANCE

**SOLARWORLD AG ACHIEVES A 93.71 PERCENT VOTING RIGHTS SHARE IN SOLARPARC AG**. The offer document concerning a voluntary public take-over offer to the shareholders of SOLARPARC AG by SOLARWORLD AG based on the swap of one no-par value share of SOLARWORLD AG in exchange for one SOLARPARC AG share as approved by the Federal Financial Supervisory Authority (BaFin) was published on December 31, 2010.

By the close of the last deadline for acceptance on February 17, 2011, the offer had been accepted for 3,914,116 shares. Thus, the voting rights share held by SOLARWORLD AG in SOLARPARC AG will amount to 93.71 percent after the completed share swap. Due to this response to the take-over offer, SOLARWORLD AG announced on February 22, 2011 that it would implement the planned integration of SOLARPARC AG into SOLARWORLD AG and that, to this end, SOLARPARC AG would be withdrawn completely from the stock exchange and converted into a GmbH.

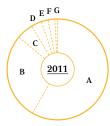
As SOLARWORLD AG will be able to control SOLARPARC AG through the execution of the share swap, SOLARPARC AG will be fully integrated into the group of consolidated companies of the SOLARWORLD with effect from 2011. Take-over Solarparc AG \* p. 198//

# IMPACT OF EVENTS OF PARTICULAR IMPORTANCE

**STRENGTHENING THE PROJECT BUSINESS**. The SOLARPARC AG take-over will enable us to fully integrate the SOLARPARC expertise into our group. In the future, we will be able to use the strengths of SOLARPARC in the planning and operation of large-scale solar power generating plants and, as a result, intensify our business in the field of international solar projects.

In addition, upon completion of the share swap, the shareholder structure of SOLARWORLD AG changed as of February 25, 2011 as follows:

## SHAREHOLDER STRUCTURE AS AT FEBRUARY 25, 2011



A // Free float	58.45 %
B // DrIng. E.h. Frank Asbeck	27.80 %
C // DWS Investment GmbH	5.31 %
D // UBS AG	3.27 %
E // FMR LLC (Fidelity Group)	2.23 %
F // BlackRock Inc	2.11 %
G // SolarWorld AG (treasury stock)	0.83 %

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

\_\_\_\_\_

The economic position of the group is rated as positive by the management of SOLARWORLD AG, taking into account the earnings, finance and asset situation resulting from the consolidated annual financial statements for 2010 as outlined above, as well as considering the ongoing business in 2011 at the time of drawing up the Group Management Report.





------

108

# REPORT ON EXPECTED DEVELOPMENT WITH ITS MAJOR OPPORTUNITIES AND RISKS

# **RISK REPORT**

## **OPPORTUNITY AND RISK MANAGEMENT SYSTEM**

In order to be in a position to secure the existence of the company, generate returns and continually increase corporate value, we have to seize opportunities while, at the same time, identifying risks early on, analyzing them, initiating corresponding measures and monitoring developments. The SOLARWORLD Group already operated a sophisticated opportunity and risk management system in the past. (a) *Group Report 2009/Risk report \* p. 116//* The prioritizing of opportunities and risks is based on an assessment of the respective earnings effect and probability. (b) *Integration of the opportunity and risk management system into the group \* p. 110//* 

# INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM REGARDING THE GROUP ACCOUNTING PROCESS

The objective of the control and risk management system regarding the (group) reporting process is to make sure that reporting is uniform and in line with the legal requirements, the generally accepted accounting principles, and the International Financial Reporting Standards (IFRS) as well as internal group guidelines so as to provide recipients of the annual financial statements with true and reliable information. To this end, SOLARWORLD has principles, processes and measures in place whose essential characteristics can be described as follows:

Within SOLARWORLD AG and/or 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. On this basis, the functions of Finance and Accounting, Controlling, and Investor Relations essential to the reporting process are controlled throughout the group by appropriate departments at SOLARWORLD AG.

The functions and responsibilities of Finance and Accounting, Controlling, and Investor Relations are clearly separated and allocated mutual control processes that assure 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. Standard software is used as far as possible.

Uniform reporting is guaranteed in particular by reporting 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 are themselves responsible for adherence to the group reporting guidelines as well as for the proper and timely management of all reporting-related processes and systems. In this context they are fully supported by group accounting throughout the entire reporting process.

Adherence to the reporting guidelines as well as to 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 reporting facts regarding the contents of the financial statements.

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

On the basis of data supplied by the group companies, consolidation will take place centrally in group accounting. In general, the principle of dual – at the least – control applies at every level.

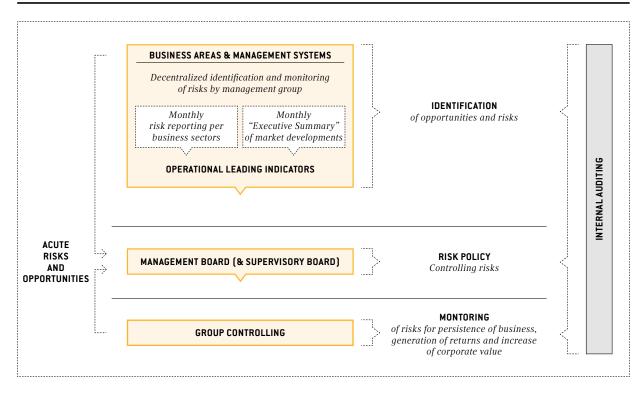
Independently of group accounting, a monthly analysis of target/actual and actual/actual deviations is carried out by group controlling as a result of which an examination of major or implausible changes takes place at an early point in time.

-----





#### INTEGRATION OF THE OPPORTUNITY AND RISK MANAGEMENT SYSTEM INTO THE GROUP



# INTEGRATION OF THE GENERAL OPPORTUNITY AND RISK MANAGEMENT SYSTEM INTO THE EXISTING ORGANIZATIONAL AND OPERATIONAL STRUCTURE

The Management Board determines the risk policy and manages the company in close alignment with group Controlling, which is in charge of risk monitoring. Considering the acceptable overall risk level, the Management Board decides (in cooperation with the Supervisory Board in the event of risks threatening the existence of the company), which risks to take in a controlled manner in order to be able to seize opportunities, and which risks to minimize by taking out insurance cover. All business units and the management systems of all fully consolidated companies of the SOLARWORLD Group are included in the opportunity and risk management system. 2. Consolidated entity and legalgroup structure \* p. 156//

On the basis of a standardized reporting system, monthly risk reviews are presented to the Management Board; the Board is immediately notified of any current risks and opportunities. Risks are identified and monitored in a decentralized manner by the management of the operating business units. Opportunities and risks arising from general economic conditions are determined by means of market, tendency, and competition analyses and are reported to the Management Board in a monthly executive summary. Opportunities and risks of any kind are discussed and deliberated on at Management Board and Strategy Council meetings and are dealt with by the Group Committee.  $\bigcirc$  *Indicatorbased strategic group management* \* *p. 030//* A precise workflow and SOLARWORLD's communications policy ensure that information is rapidly passed on during the entire process.

# **RISK MANAGEMENT SYSTEM REGARDING FINANCING INSTRUMENTS**

As a global player, the SOLARWORLD Group is subject to market, liquidity and default risks respecting its assets, liabilities, and future transactions within the scope of business operations. The task and objective of risk management regarding financial instruments is to continually monitor these risks and limit them by means of operational and financial measures.

Monitoring the various risks is the responsibility of the respective boards and managing directors of the subsidiaries, who directly report existing and newly emerging risks to the Management Board of SOLARWORLD AG. Rules and regulations have been established for the use and handing of financial instruments, which are designed specifically to ensure that no material financial transactions can take place without consulting the Management Board of SOLARWORLD AG. As a general rule, derivative financial instruments are entered into only for hedging 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. O 65b. Principles and objectives of financial risk management \* p. 200//

# **CORPORATE RATING**

The SOLARWORLD Group is not subject to an official external rating pursuant to typical market standards.

# INDIVIDUAL RISKS

Legend:

Risk assessment		Time horizon of effects	
↑	Up year-on-year		
Ļ	Down year-on-year	Short-term	One to three years
$\rightarrow$	Flat year-on-year	Medium-term	Three to five years
×	Does not exist	Long-term	More than five years

**PRELIMINARY NOTE**: With respect to risk analysis and the disclosure of counter-measures, the company does not distinguish between the reportable operative segments "Production Germany" and "Production U.S." in our in-house production. By contrast, risk factors to be assessed differently in different regions constitute exemptions.

-----



# .12 <sup>56</sup> MACRO-ECONOMIC RISKS

$\rightarrow$	
Risks	1. Financial crisis and/or recession: Tighter financing terms and conditions
	<ol> <li>Falling electricity prices for private households: Delays in solar power reaching grid parity; lower propensity to invest among private customers; slowdown in tapping new markets</li> </ol>
Probability	<b>1. Medium:</b> According to economic experts, the economic situation has stabilized. How- ever, the International Monetary Fund still identifies high public debt, which might adversely affect the fragile banking sector, as a potential risk. We assess the risk of tighter financing terms and conditions as medium; in the short term, there might be credit bottlenecks regarding large-scale investment projects
	<b>2.</b> Low: Since falling costs of primary sources of energy were hardly passed on to customers in the past, and prices are expected to tend to rise in future due to a further increase in energy demand, we assess the risk as low. We also assess the risk of a lower propensity to invest among private customers as low, since they will continue to have access to loans for investments in solar power systems in the framework of programs to promote investment and because interest rates are at a historical low.
Effect (strength, time horizon)	<b>1. Low, short-term:</b> Large-scale projects only constitute a small proportion (9 %) of our sales; a decline in these investments would therefore only have a minor effect on SOLAR-WORLD
	<ul> <li>2. Medium, medium-term: Over the medium term, household power prices will impact on our business since end customers may choose between self-produced solar power or power from an utility company, i.e. the electricity generation costs of a solar power system are compared with household power prices.</li> <li>Medium, short-term: A decline in demand by end customers might have a medium effect on our group revenues and earnings.</li> </ul>
Counter-measures	<ul> <li>Trade: Our international presence helps us spread the risk of a decline in consumption among different markets.          <i>→</i> <u>Future sales markets2011+</u> * p. 137//</li> <li>Production; Other: Ongoing cost reductions and efficiency enhancements along the entire value chain enable us to offer competitive prices.          <u>minovation targets and priorities 2010+</u> * p. 086//</li> </ul>

# **57** POLITICAL AND REGULATORY RISKS

↑	
Risks	Changes in laws promoting solar power: Slower market growth due to a reduction in or even abolition of financial incentives in individual countries
Probability	<b>High:</b> In several sales markets such as Germany, Italy, and France, the regulatory framework is increasingly being debated and we expect changes to take effect as of mid-2011 or 2012. $\bigcirc$ Feed-in tariffs for solar power continue to fall * p. 133//
Effect (strength, time horizon)	High, short-term: Declines in demand due to changes in the regulatory framework in individual regions may temporarily impact our revenues and earnings. As long as grid parity has not been achieved in individual markets, SOLARWORLD will be exposed to this risk.
Counter-measures	<ul> <li>Trade: We spread this risk between several markets by means of our international presence. <i>Future sales markets2011+ • p. 137//</i></li> <li>All segments: Continuous cost reductions and efficiency enhancements facilitate faster achievement of grid parity and thus far-reaching independence from promotion incentives and long-term competitive pricing. <i>Imnovation targets and priorities 2010+ • p. 086//</i></li> </ul>

# **58 RISKS FROM TOUGHER COMPETITION**

$\rightarrow$	
Risks	<b>Intensification of competitive pressure:</b> A tendency towards consolidation at all stages of the value chain in the industry; stronger competition from low-wage countries; price competition; oversupply
Probability	<ul> <li>High: As the solar market is increasingly developing into an end customers' market, competitive pressure is intensifying significantly. The fight for market shares and ongoing expansion of supply will result in price reductions in the wafer and module segments.</li> <li> <u>The future solar power market * p. 132//</u> </li> </ul>
Effect (strength, time horizon)	<b>Medium, medium-term:</b> Potential loss of market share and stronger pressure on margins due to tighter price competition may have adverse effects on revenues and earnings. However, due to our solid market position, we assess the probability of a material impact of this risk on our group as only medium.
Counter-measures	<ul> <li>Trade: Investments in expansion of the SOLARWORLD brand; differentiation of our products through quality, service, and innovation; customer retention programs</li> <li><i>Brand proposition and investments</i> * <i>p.</i> 072//</li> <li>Production: Optimization of production along the entire value chain to secure economies of scale and improve our cost structure (<i>Future development of "Production Germany" and "Production U.S." segments</i> * <i>p.</i> 136//; cost reduction through efficiency enhancement</li> <li>Production: Utilization of existing and future wafer capacity by selling of our wafers to a diversified customer base and through internal processing of wafers to solar modules</li> </ul>



# 114 <sup>(g)</sup> RISKS ARISING FROM ALTERNATIVE SOLAR POWER TECHNOLOGIES

$\rightarrow$	
Risks	<b>Technological breakthrough of alternative solar power technologies:</b> Risk of sub- stitution for crystalline technologies
Probability	<b>Medium:</b> Due to current silicon price levels, few manufacturers of alternative solar power technologies have cost benefits versus crystalline manufacturers. This applies above all to the rooftop systems market. Only a few alternative manufacturers are already able to produce on an industrial scale. Moreover, the market for these technologies might also be adversely affected by future regulatory measures, disposal risks, and the finite nature of the raw materials used such as cadmium, tellurium and indium.
Effect (strength, time horizon)	Medium, long-term: Successful competitors might reduce our market share, increase price competition, and thus place stronger pressure on margins. This might adversely affect our revenues and earnings.
Counter-measures	<ul> <li>Production; Other: Ongoing investments in research and development to enhance efficiency and optimize costs</li> <li>Production; Other: Regular, analytical observation of the development of alternative technologies in the market (s) <i>Integration of the opportunity and risk management system into the group</i> * <i>p</i>. 110//</li> </ul>

# PROCUREMENT RISKS

$\rightarrow$	
Risks	1. Convergence of contract and spot market prices for silicon and other raw materials (silver, copper, aluminum, etc.): Purchasing conditions are less advantageous; higher procurement costs than competitors
	2. Supply bottlenecks concerning kit components, consumables: Security of supply at risk
Probability	<b>1. Medium:</b> With a rise in silicon supplies, the risk of market prices falling below the level agreed under long-term contracts increases. The positive macro-economic growth can lead to an increase in raw material prices due to rising production across all branches.
	<b>2. Medium:</b> The solar industry is a young sector so that market growth may lead to supply bottlenecks at suppliers of industry-specific consumables and kit components.
Effect (strength, time horizon)	<b>1. Medium, short-term:</b> Unchanged or rising procurement costs might cause margin erosion and thus adversely impact our earnings if wafer and module prices should fall. As a major customer we have good long-term relationships with our suppliers, which provides us with flexibility in renegotiations. As a result, we assess the impact on our business as medium. ④ <i>Procurement</i> * <i>p.</i> 066//
	2. Medium, short-term: Bottlenecks in supplies of kit components and consumables may adversely affect our cost structure, slow down production processes and thus reduce our earnings
Counter-measures	<ul> <li>Production; Trade: Expansion of our supplier networks and maintenance of our good, long-term supplier relationships (<i>Future procurement * p. 140//</i>)</li> <li>Production; Trade: International procurement management and supplier diversification increases independence from regional bottlenecks</li> <li>Production; Trade: Use of alternative products reduces dependence on individual suppliers.</li> <li>Production; Trade: Own production (e.g. in cooperation with joint venture partners)</li> <li>Production; Other: Steady reduction of silicon requirements per watt-peak</li> </ul>



# (61) CORPORATE STRATEGY RISKS

$\rightarrow$	
Risks	<b>1. Misjudgments concerning future developments:</b> Wrong investment and technology decisions, lack of market acceptance for newly developed products
	2. Industrial espionage: Attractive target for competitors with increasing market success
Probability	<b>1. Low:</b> Thanks to our long-standing market experience and the conclusion of important partnerships and strategic alliances, we assess the probability of this risk as low.
	2. Medium: Stronger competitive pressure increases the risk of industrial espionage.
Effect (strength, time horizon)	<b>High, long-term:</b> Losses of market shares, image, and capital due to incorrect strategic decisions might erode the group's economic position. Lack of acceptance of new products might impact on our revenues and earnings. The loss of intellectual property might reduce our pioneering role.
Counter-measures	<ul> <li>Production; Other: Strategic alliances and joint ventures to diversify the investment risk</li> <li>All segments: Identifying market trends by means of market analyses in all business segments and long-term relationships with customers, suppliers and political decision-makers. (a) <i>Opportunity and risk management system</i> * <i>p</i>. 108//</li> <li>All segments: Stricter security precautions, in particular in IT</li> <li>Other: Performing broad-based research and development activities, and cooperation schemes with universities and research centers (a) <i>Innovation Report 2010</i> * <i>p</i>.082//</li> </ul>

# 62 DEFAULT RISKS

$\rightarrow$	
Risks	Insolvency of individual customers: Loss of receivables outstanding
Probability	<b>High:</b> Due to rising consolidation tendencies in the market, the insolvency risk concerning wafer and trading customers is increasing. Although the additional pressure on companies due to the financial crisis has eased, we assess this risk as high for the company.
Effect (strength, time horizon)	<b>Medium, short-term:</b> Contractual defaults and non-performance of payment obligations might have a negative impact on earnings.
Counter-measures	<ul> <li>Production; Trade: Ongoing monitoring and analysis of receivables and selective conclusion of credit insurance policies</li> <li>Production; Trade: Cash in advance and down-payment arrangements</li> </ul>

# **63** SALES AND PRICE RISKS

$\rightarrow$	
Risks	1. Stronger price pressure and increase in supply: Lower demand for our products
	2. Purchase of less than agreed volume: Non-performance of long-term wafer contracts
Probability	<ul> <li>1. Medium: Growing internationalization, the resulting intensification of competition and changes in the legal framework might create cost pressure in the core markets (e.g. Germany, Italy). This may cause shifts in demand as customers base their purchasing decisions primarily on a return on their investment.</li> <li>The future solar power market * p. 132//</li> </ul>
	2. High: As market prices have fallen and wafer supplies have risen, it is to be assumed that not all wafer customers will meet their contractual purchasing obligations or demand renegotiations in 2011.
Effect (strength, time horizon)	<b>Medium, short-term:</b> None of our wafer or trade customers accounts for more than ten percent of our revenues. Nevertheless, sales and contractual defaults might adversely affect our earnings and order book and result in inventories building up. If long-term contracts were to be cancelled, down payments already made by customers would be retained by SOLARWORLD AG.
Counter-measures	<ul> <li>Production: Creation of capacity (further vertical integration) in order to be able to process not-delivered wafer volumes into SOLARWORLD brand modules in our in-house value chain.</li> <li>Trade: Further expansion of our brand and positioning as a quality supplier with a view to retaining customers and diversifying risk. (e.g. approx. 1,000 customers alone at our Bonn distribution site, i.e. international systems integrators, specialized wholesalers and installers)</li> </ul>



# 64 HUMAN RESOURCES RISKS

↑	
Risks	Shortage of highly-skilled technical and executive staff: Difficulties in filling key positions
Probability	<b>Medium:</b> The availability of highly qualified technical and executive staff in the labor mar- ket is declining, while competition for talent is growing. Additionally, we will face demo- graphic challenges in future. Due to our reputation as an attractive employer and increas- ing personnel marketing, however, we assess this risk as only medium. Moreover, interest in our industry in general, and SOLARWORLD in particular, has risen in the labor market due to the growth of the solar sector.
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 revenues and earnings.
Counter-measures	<ul> <li>All segments: Selective, needs-oriented development of skills of our existing staff</li> <li>All segments: Strengthening our image as an attractive employer</li> <li><i>Human resources 2010</i> * <i>p. 100//</i></li> <li>All segments: university marketing, research cooperation schemes</li> <li><i>Human resources - future development</i> * <i>p. 140//</i></li> <li>All segments: Employee motivation through strong leadership and corporate culture, working hours schemes and profit-oriented variable remuneration systems</li> <li>All segments: Defining deputy roles and powers within the scope of our quality management system</li> </ul>

65 IT RISKS

$\rightarrow$	
Risks	<b>Disturbances in the operation of IT systems and networks:</b> Data security risks and interruption of work at our sites worldwide
Probability	Medium: Our IT systems undergo regular maintenance and our safety standards are regularly reviewed and improved.
Effect (strength, time horizon)	Medium, long-term: Interruption of production and workflows might cause productivity losses.
Counter-measures	<ul> <li>All segments: Regular investments in updates, soft- and hardware systems; up-to-date virus scanners and firewalls reduce the risk of virus and hacker attacks; certified systems to enhance safety and reliability; encryption protects our data.</li> <li>All segments: Separation of IT systems from production and administration to minimize potential failure risks</li> <li>All segments: Regular multiple daily data backups</li> </ul>

# 66 LIQUIDITY RISKS

→	
Risks	<b>1. Difficult framework for refinancing measures:</b> More difficult access to credit markets for the solar industry; higher financing costs due to a widening of interest spreads and shorter maturities in lending
	2. Failure to reach financial indicators: Termination of borrowed funds
Probability	<b>1. Low:</b> Due to our long-term credit agreements and our strong liquidity we assess the short-term risk as low. Should the situation in the credit business not improve over the medium to long term, we would have to accept a widening of spreads in future financing measures.
	<b>2. Low:</b> In the fiscal year under review, the financial indicators were considerably exceeded on a regular basis.
Effect (strength, time horizon)	<b>1. Medium, medium-term:</b> Tougher lending commitments would have a medium negative impact on the funding options concerning our expansion plans.
	<ol> <li>Medium, medium-term: Premature refinancing needs with potentially less favorable terms and conditions</li> </ol>
Counter-measures	<ul> <li>All segments: Diversification and expansion of the group's capital base by means of capital measures concluded in previous years (⇒) Liquidity analysis • p. 096//</li> <li>All segments: Placement of a bond worth € 400m on the capital market in early 2010 (⇒) Liquidity analysis • p. 096//</li> <li>All segments: (⇒) 65e. Liquidity risks • p. 202//</li> </ul>

# **©** OTHER FINANCIAL RISKS

1					
Risks	Currency, interest rate and price risks				
Probability	<ul> <li>Medium to high: 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.</li> <li>Medium, long-term: Impact on the financial result of our business operations. Thanks to a pro-active, regular, careful review of our financial instruments, we assess these risks as controllable.</li> </ul>				
Effect (strength, time horizon)					
Counter-measures	<ul> <li>All segments: Selective use of derivative and non-derivative financial instruments</li> <li>All segments:          <u> <u> </u> </u></li></ul>				



# 68 LEGAL RISKS

→	
Risks	<b>Legal risks:</b> A wide range of tax, competition, patent, anti-trust, copyright, and environ- mental regulations within the scope of our international business operations, infringement of which may cause costs
Probability	<b>Low:</b> SOLARWORLD is currently not aware of any risks from litigation, patent infringement, or other legal risks that might significantly impact the business situation of the company.
Effect (strength, time horizon)	<b>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.
Counter-measures	<ul> <li>All segments: Integrated legal advice from specialized external legal experts</li> <li>All segments: Adherence to strict quality and safety standards in the group</li> </ul>

# (9) WARRANTY AND OTHER LIABILITY RISKS

$\rightarrow$					
Risks	<b>1. Warranty risks:</b> Granting a warranty of 25 years for solar modules sold by us. Since January 1, 2010, this has been a linear performance warranty.				
	2. Other customary liability risks: (e.g. product safety)				
Probability	<b>1. Low:</b> Due to careful examination of our process and product quality, we assess the risk of claims being made against our product warranty as low.				
	2. Low: Thanks to pro-active regular controls concerning protection against hazards and health and safety protection at our sites, we assess the probability of these risks as low.				
Effect (strength, time horizon)	<b>1. Medium, long-term:</b> Potential negative impact on our earnings, finance and asset situation in the event of warranty				
	2. Medium, long-term: Production losses, loss of assets, potential claims for damages				
Counter-measures	<ul> <li>All segments: Risk provisioning in the balance sheet for the company's warranty commitment through the formation of a provision</li></ul>				
	<ul> <li>All segments: Securing other risks via comprehensive insurance cover based on customary market concepts; regular review of the extent of insurance cover for risks, based on site inspection; compliance with legal provisions and voluntary adherence to more far-reaching standards (e.g. ISO 9001 and ISO 14001, codes of conduct)</li> <li>All segments: Analysis of complaints and improvement of the product guality</li> </ul>				

# ENVIRONMENTAL AND OTHER RISKS

$\rightarrow$					
Risks	1. Environmental risks: Higher insurance premiums due to more frequent storms/fires/ drought periods caused by progressive climate change; punishment for infringement of environmental laws				
	2. Conflicts with stakeholders: E.g. because of inconveniences caused by noise and light radiation for residents living in direct vicinity of our production sites				
Probability	<ol> <li>High: Climate experts forecast an increase in extreme weather incidents. (cf. "Climate Change 2007", IPCC Fourth Assessment Report)</li> <li>Low: Fines or compensation payments are less probable since we ensure compliance with standards by means of our environmental management system.</li> </ol>				
	2. Low: There are many stakeholders with many different needs. However, we facilitate a direct exchange with our stakeholders and thus reduce the probability.				
Effect (strength, time horizon)	<ol> <li>Low, medium-term: Potential damage due to more frequent storms/fires or costs in the wake of drought periods and floods will not affect us more strongly than other companies Medium, medium-term: Fines or compensation payments might impact on the financia position of our company.</li> </ol>				
	2. Medium, long-term: 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.				
Counter-measures	<ul> <li>All segments: Current risks are largely covered by insurance policies</li> <li>All segments: Further development of the company's environmental management system</li> <li>All segments: Stakeholder dialogue, for instance through exchanges with residents at neighborhood meetings and the joint preparation of measures, e.g. to reduce noise and light radiation</li> </ul>				





# 122 OVERALL STATEMENT BY THE MANAGEMENT BOARD ON THE RISK SITUATION OF THE GROUP

According to our assessment, the risks described above are controllable and do not jeopardize the continued existence of the SOLARWORLD Group at the time of reporting. This applies both to the individual companies and to the group. The overall risk situation resulting from the individual risks presented above has changed year-on-year, in particular due to tighter competition and potential changes in the regulatory framework. In connection with the individual risks mentioned above and based on the assumption that the market will remain stable, no negative deviations from the developments outlined in the Forecast Report will occur.

From today's perspective we do not expect any major changes in the risk situation.

×						
Risks	Risks threatening the SOLARWORLD Group's continued existence as a going concern					
Probability	From the management perspective, there are no specific trends that might have an essential and sustained negative impact on the SOLARWORLD Group's earnings, finance and asset situation.					
Effect	Negative effect on the results of our business operations, risks endangering the continued existence of our company					
Counter-measures	The company's opportunity and risk management system monitors external and internal developments to enable it to act in good time					

#### (1) RISKS ENDANGERING THE CONTINUED EXISTENCE OF THE COMPANY

At present there are no risks apparent that would endanger the SOLARWORLD Group's continued existence as a going concern.

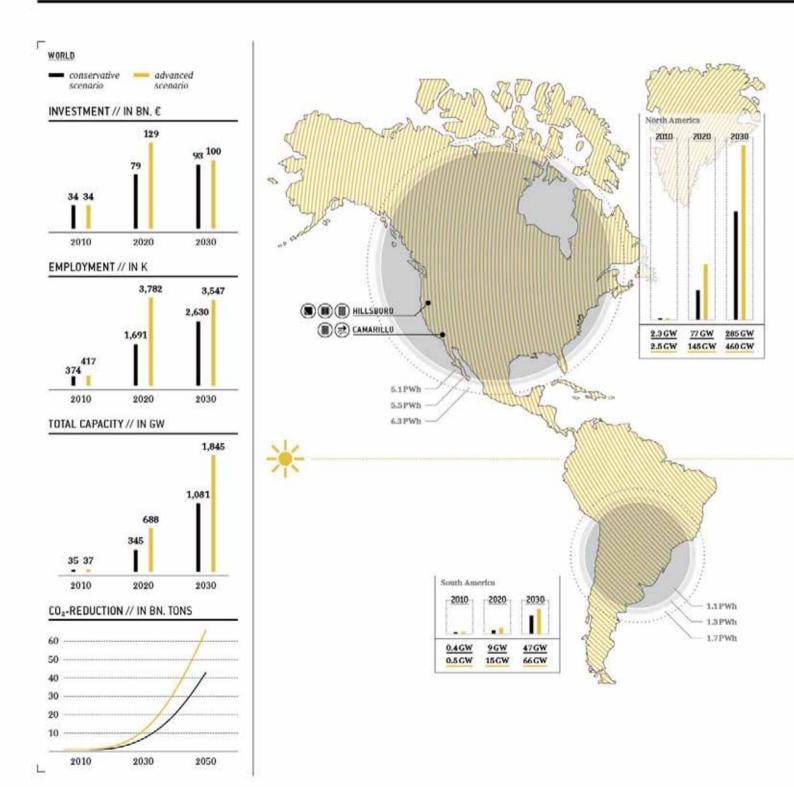


# "From Canada to Chile, I see solar rapidly growing. More and more Americans realize that solar is no longer a technology of the future; it is the technology of today."

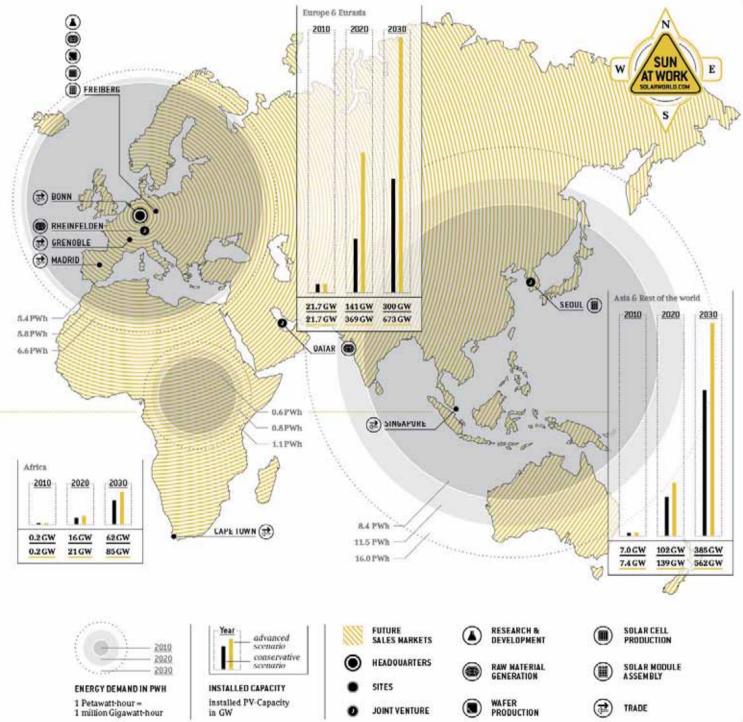


Г







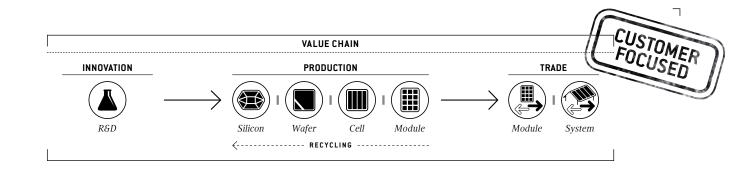




# FACTSHEET /

## 3 BUSINESS POLICY OF THE SOLARWORLD GROUP 2011+





## — BUSINESS POLICY CONTINUITY IN THE FORTHCOMING TWO FISCAL YEARS

In response to growing end customer markets, we will increase the production capacity for wafers and cells through to modules in 2011 and 2012, and thus consolidate our international market position. Groupwide module capacity, in particular, will be substantially increased by the end of 2011 to 1.4 GW. We will grow organically. Our location policy will continue to focus on the integrated production sites in Freiberg, Germany, Camarillo, U.S. and Hillsboro, U.S. as well as Seoul, South Korea. This will reduce the group's complexity costs and help it benefit from logistic proximity to the European and North American markets.

There will be growth potential in our expanded business areas in the large-scale solar plant business. Thanks to the take-over of SOLARPARC AG, we will successively expand the project business. Supplementary report \* *p*. 106// As of the end of 2012, groupwide silicon capacities will be expanded in the framework of the newly formed joint venture, QATAR SOLAR TECHNOLOGIES Q.S.C.. This will also provide the company with access to new markets on the Arabian Peninsula.

We are continually working on optimizing processes in order to achieve steady cost savings and further enhance the quality of our products. We will work in cooperation with experienced partners in the expanded business areas, e.g. storage technology. We will also continue our brand investments.

We are probing new markets as we are planning to considerably increase the relative share of sales of our groupwide foreign operations.

Should corresponding opportunities arise, we will examine new strategic business areas in order to drive forward our vision of clean, safe, infinite, and fair energy supplies for the future.  $\bigcirc$  <u>Strategy and action</u> • p. 027//

# FORECAST REPORT 2011+

# **OPPORTUNITIES**

# **OPPORTUNITIES FROM THE DEVELOPMENT OF GENERAL CONDITIONS**

-----

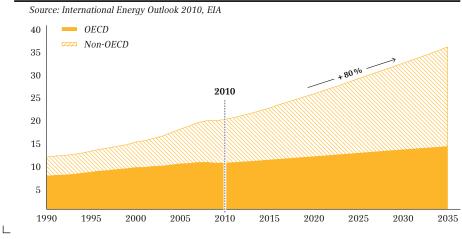
**FURTHER RISE IN ENERGY DEMAND**. The boost in the demand for energy expected over the next few decades will open up new global sales markets for the company. (2) *Expected development of global electricity demand* \* *p. 128//* Solar power in combination with other renewable sources of energy constitutes a response to the global scarcity of energy and resources and to ongoing climate change. Due to our good global distribution structures, which were built up in good time, the company will not only be able to strengthen its market presence in today's key sales regions but also in future growth markets hardly tapped to date, e.g. Asia, Africa, Latin America, and the Pacific region.

SOLARWORLD BENEFITS FROM THE SOLAR ENERGY OPPORTUNITIES. Thanks to planned capacity expansion and an associated increase in production volumes, SOLARWORLD will be able to grow with the international solar market and serve the rising demand for climate-friendly, sustainable power technologies.
 Expected development of the global solar market \* p. 128// We will thus be able to increase revenues and sales. The company has launched innovation programs for the development of products and processes, driving the achievement of grid parity in the near future further ahead. We presume that the market potential for solar products will multiply upon reaching grid parity since solar power technology will then be extremely attractive in economic terms, even in regions without incentive mechanisms. (a) Achieving grid parity in the key solar markets \* p. 128//

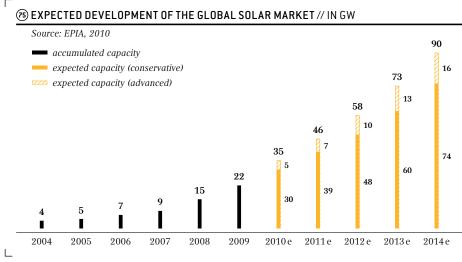


OPPORTUNITIES FOR SOLAR POWER

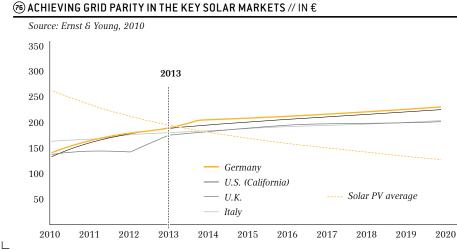
# EXPECTED DEVELOPMENT OF THE GLOBAL ELECTRICITY DEMAND// IN TRILLION KWH



\_



#### Γ



#### ELECTRICITY DEMAND

By 2035, global electricity demand is expected to rise by around 80 percent. Growth will be particularly strong in non-OECD countries.

At present, around 1.5 billion people worldwide do not have access to energy, while another two billion only have limited access.

The rising demand for energy opens up new markets. This creates major opportunities, above all for solar power, which can be generated in a decentralized and sustainable manner.

#### CLIMATE PROTECTION

The current system of energy supply produces major greenhouse gas emissions. Around 40 percent of energy-related emissions are attributable to the electricity sector (transportation causes just 23 percent). Accordingly, electricity generation offers major savings potentials. Solar power, which can be generated in a particularly climate-friendly manner, constitutes a potential alternative in order to create a more environmentally friendly system of energy supply over the longer term. Investments in the solar sector rise every year – political and social interest in solar energy as a future source of energy is rising.

# PROFITABILITY

Thanks to economies of scale and scope as well as technological progress, the solar sector is continually reducing costs. This facilitates faster achievement of grid parity. At the same time, prices for conventionally produced power are rising.

In the key solar markets such as Germany, Italy, and the U.S., solar power is expected to be able to compete with prices for conventional domestic power as early as in 2013, even without incentives. Upon achieving grid parity, the proportion of solar power in the global power supply will rise significantly.

# STRATEGIC OPPORTUNITIES

**TAPPING NEW RAW MATERIAL SOURCE**. In the period under review, SOLARWORLD acquired a 29 percent stake in the joint venture, QATAR SOLAR TECHNOLOGIES Q.S.C. O Legal structure of the group changed in the year under review \*p.034// This joint venture constitutes a further step on the path towards full integration. The gas-based, low energy prices in the emirate Qatar represent a crucial cost advantage for the energy-intensive production of silicon. The company plans to use the first silicon supplies from this joint venture as from 2012/2013.

**EXPANSION OF SALES CHANNELS.** We have identified additional strategic opportunities in forming a new distribution site in France. Closeness to customers is a crucial factor for further successful market penetration and revenue growth.  $\bigcirc$  *Future sales markets 2011+ \* p. 137//* Through the take-over of SOLARPARC AG, the project business is being expanded. The experienced project management company will improve our sales channels.

With our production sites and distribution branches in the key solar markets, we are in a position to respond to rapidly changing conditions in a highly flexible manner.  $\bigcirc$  <u>Worldwide locations of the</u> <u>group</u> \* p. 037//

Expanding our service portfolio will open up additional opportunities for the company. The U.S. solar market, for instance, is characterized by tougher financing obstacles when compared to the European market. Working together with an external finance provider, in 2010 we are therefore offering new financial possibilities that enable customers to lease modules from SOLARWORLD or pay in installments. The company has also expanded its services range in Germany and has launched specific customized insurance packages. (a) *Products "Made by SolarWorld"* • *p.* 077// With these new offerings, which extend far beyond pure sales and the installation of products, SOLARWORLD intends to further strengthen its customer loyalty and market position.

\_\_\_\_\_



# 130 ECONOMIC PERFORMANCE OPPORTUNITIES

**OPTIMIZING PROCESSES.** The company took advantage of the favorable situation in the raw material markets in 2010 to optimize procurement costs. Long-term delivery contracts as well as critical selection of suppliers enabled us to reduce our specific cost of materials. We are planning to cut costs further in the next few years by means of similar effects.

We continue to work towards an in-house optimization of our production processes. The experience gained from long-standing production and R&D activities has been taken into account, e.g. in the construction and design of production workflows of the new wafer production site in Freiberg. The more efficient and cost-effective wafer production processes are expected to have a positive effect on earnings of the "Production Germany" segment. O *Cutting costs through state-of-the-art technology* \* *p.* 137//

In 2010, we expanded our logistics center to further optimize delivery processes. Following successful conversion of our warehouse operations to a four-shift scheme in 2009, capacity expansion in our warehouse marked the next step in optimizing delivery processes. Doubling throughput and considerably accelerating order processing will ensure faster order handling. This offers SOLARWORLD an opportunity to increase sales and associated revenues.

# MARKET 2011+

# FUTURE ECONOMIC ENVIRONMENT

POST-RECESSION GROWTH. In 2010, the global economy recovered from the recession and entered a phase of moderate expansion. A growing number of countries will initiate the first few steps to reduce their budget deficits in 2011 so that fiscal policies overall are expected to tighten. According to estimates by the German Global Economy Institute (IfW), the global trade volume is expected to grow by around five (2009: 11.5) percent in 2011. In 2012 it is expected to rise slightly to 6.5 percent. Overall, the global economy is expected to grow further in 2011 and 2012, albeit less swiftly than in 2010. *Expected economic development in SolarWorld's key sales markets \* p. 1311*//

If W also expects moderate economic growth in our production and sales regions for the next two fiscal years. Private consumption, however, might decline year-on-year since private households in some countries in the Eurozone and the U.S. are trying to reduce their debts. Overall, however, both production and trade are expected to continue to grow in 2011. This trend might strengthen in 2012 since the growth-curbing effect of fiscal policies driven by debt reduction will lose momentum, according to If W.

Region	2012 e	2011 e	2010
Germany	1.3	2.3	3.7
Euro area	1.3	1.3	1.7
U.S.	3.0	2.5	2.8
World	4.0	3.6	4.8

#### (7) EXPECTED ECONOMIC DEVELOPMENT IN SOLARWORLD'S KEY SALES MARKETS

\_\_\_\_\_

Source: German Global Economy Institute, Jan. 2011



# 132 THE FUTURE GLOBAL ELECTRICITY MARKET

**RISE IN DEMAND FOR ELECTRICITY – RENEWABLE ENERGIES GAIN MARKET SHARES**. With the anticipated positive development of the global economy and a rise in global production, the demand for energy will continue to rise worldwide. The Energy Information Administration (EIA) forecasts the demand for oil to grow by 1.4m barrels/day in 2011, and by 1.6m barrels/day for 2012. As a result, demand would amount to 88.0m barrels/day in 2011, and to 89.6m barrels/day in 2012. The rise in energy demand is expected to trigger some minor bottlenecks in the energy market so that oil prices are expected to rise. The EIA therefore presumes that the average monthly price for oil (WTI) will rise to US\$ 93.42 (2010: US\$ 79.41) per barrel for 2011. This trend is expected to continue in 2012: The EIA expects the average price of oil to stand at US\$ 97.50 per barrel. Bottlenecks respecting refinery capacities, reductions in oil production volumes by OPEC, and a shortage of oil supplies might again trigger strong price volatility during the course of the year.

Global demand for electricity will grow faster than all other final energy sectors such as heat or transportation over the next two fiscal years. According to EIA forecasts, the average annual growth rate in the electricity sector is 1.9 percent, while the overall final energy sector will only grow by 1.3 percent annually. Renewable energy sources are contributing an increasingly large portion to the power mix: With average growth of 3.0 percent, they are growing considerably faster than all other sources of energy (gas: 2.1 percent; coal: 2.3 percent; nuclear power: 2.0 percent; oil: -0.4 percent). Renewable energies will therefore gain additional market shares in the global power mix over the next few years. This trend will strengthen since prices for conventional energies will rise with an increase in demand, while the cost of renewable energies will continue to fall; the reason for this is that the primary energy sources (sun, wind, water, geothermal energy) of renewable energies are free of charge – costs are limited to technology, and these will tend to fall.

# THE FUTURE SOLAR POWER MARKET

**SOLAR MARKET GROWTH FORECAST**. On the way to achieving grid parity, the years 2011 and 2012 will be crucial. According to a forecast by Bank Sarasin, the solar sector will continue to grow in 2011, although somewhat more slowly than in the period under review. Newly installed solar power capacity is expected to rise by 10 percent to 15.2 (2010: 13.8) GW in 2011. In 2012, the market is expected to grow more quickly at around 20 percent and achieve newly installed capacity of 18.3 GW. The European Photovoltaic Industry Association (EPIA) also expects newly installed solar power capacity of up to 15.4 GW for 2011. For 2012, however, it expects more moderate growth than Bank Sarasin at up to 19.1 GW.

At the turn of the year, major reductions in solar incentive schemes took effect in Europe's leading solar markets. This had a curbing effect on demand for solar modules and thus put additional pressure on prices and margins. Structural change in the solar market therefore continues. In the past, the solar sector accomplished an enormous achievement – prices for solar power have more than halved over the past two years and are about to reach the level of power tariffs for private customers. Only a few more years will be required for the solar sector to be in a position to hold its own in its core markets, even without incentive schemes.

**FURTHER RISE IN SUPPLY**. In the light of solar market growth and tighter competition, the solar industry is increasingly developing into a mass production market. Solar manufacturers have to control their cost structure so as to hold their own in the market. They therefore continually enlarge production to achieve economies of scale.

According to market experts, silicon production capacity in the solar sector is expected to grow by 26 percent to 150,000 (2010: 119,000) tonnes in 2011. In the subsequent year, the solar industry would then have 169,000 tonnes available. A rise in silicon supplies on the market might cause lower silicon prices. Sarasin Bank expects the average price of silicon contracts to decline to US\$ 40 to 50 (2010: US\$ 54) per kg in 2011. This trend will help manufacturers of solar power technology – such as SOLAR-WORLD – to further improve their cost structures and thus be able to cushion potential price reductions in the end customer market. Solar manufacturers may tap additional cost reduction potential through efficiency enhancements in wafer and cell production.

Over the next two years, global production capacity for wafers, cells and modules will continue to rise. Sarasin Bank expects global crystalline cell production capacity to grow by around 30 percent to 19.7 (2010: 15.2) GW in 2011, and by a further 15 percent to 22.7 in 2012. Production tends to be outsourced to specialized contract manufacturers, which offers solar module manufacturers greater flexibility in adjusting to the strongly fluctuating market environment.

**FEED-IN TARIFFS FOR SOLAR POWER CONTINUE TO FALL.** The rise in demand on the German market in 2010 caused a 13 percent reduction in feed-in tariffs as of January 1, 2011. In Germany, these tariffs are linked to market growth corridors. The most recent reduction, which followed a 25 percent reduction in the tariff in 2010, is expected to curb the growth in demand in 2011. Demand in Germany already dropped in the fourth quarter of 2010. (2) *New installations in Germany in the years 2009/2010* \* *p. 062//* Market experts expect the solar market in Germany to decline in 2011, although it will continue to be the largest solar market worldwide in absolute terms. Bank Sarasin forecasts a market decline of 20 percent to 5.5 (2010: 6.9) GW for 2011.



In February 2011 the Bundestag approved the proposal by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the German solar industry to reduce the feed-in tariff structure in 2011. As in the past, the adjustment of feed-in tariffs is to be related to the annual, newly installed output capacity. However, the basis for the calculation is to be adjusted. In future, newly installed capacity for the three months from March to May will be taken as a basis and multiplied by four to obtain the value for the entire year. The tariff can thus be adjusted as the year progresses, depending on market developments.

Should the solar power output calculated in this way exceed 3.5 GW, the feed-in tariff will be decreased by three percent by mid-year (July 1, 2011). The tariff would fall by an additional three percentage points for every additional gigawatt of solar power output installed. Should the estimated newly installed capacity exceed the 2010 level and account for more than 7.5 GW, the tariff would be reduced by 15 percent by mid-2011.

The output capacity-related reduction in tariffs facilitates a swifter adjustment of tariffs to the development of the German market and thus prevents "over-subsidizing". Should the solar industry manage to stimulate demand through strong price cuts, incentives would be automatically reduced. However, if demand were to remain weak, the incentives would remain stable or would not be reduced as strongly. This mechanism provides manufacturers, installers, and customers with stronger investment security, while limiting the levy on German electricity consumers.

**EUROPEAN MARKETS REACH ATTRACTIVE SIZE**. Unlike Germany, the remaining European markets are expected to continue to grow over the next two years, although they will probably not reach the absolute volume of the German market. These markets are expected to exceed the 2,000 MW threshold as early as 2011. Market experts forecast newly installed capacity in Europe (excl. Germany) to almost quadruple to 4.3 (2010: 1.1) GW in 2011. Markets such as France, Spain, Greece, Czech Republic, Belgium, and the UK are expected to show a positive trend with newly installed capacity in the triple-digit MW range.

However, the Italian market will make the strongest contribution to market growth in other European markets. In 2011, feed-in tariffs in Italy will be reduced in three stages: by January 1, May 1 and September 1, 2011. Large, free-field systems will be most strongly affected by the new regime – the tariff reductions will total 27.5 percent in this area. Tariffs for small rooftop systems up to 3 kW, by contrast, will only be cut by ten percent. An additional bonus will be paid for integrated roof systems. In spite of the planned tariff cuts, the Italian solar market is highly attractive for solar power due to intense solar radiation and high electricity prices. Bank Sarasin expects newly installed solar capacity to grow to 2.0 (2010: 1.8) GW in 2011. According to announcements made by the Gestore Servizi Energetici some additional three GW of solar systems installed at the end of 2010 will be connected to the electricity grid in 2011. Currently, a new amendment to the Italian solar incentive law is being discussed.

**US ON GROWTH PATH**. Following strong growth of the U.S. solar market in 2010, this development is expected to continue in 2011. The U.S. market has matured – approval procedures have been accelerated in recent years, and distribution channels and installer networks have been established. The market also benefits from a substantial improvement in funding schemes for solar power systems. These should fuel further market growth in the years 2011 and 2012. Market analysts expect the U.S. solar market to double to 2.0 (2010: 1.0) GW in 2011. Unlike Europe, the U.S. market is expected to show strong growth in free-field systems. This is due to the fact that many U.S. utility companies are interested in increasing their solar power share due to the introduction of statutory minimum shares of renewable energies in the power mix. As these companies also qualify for a 30 percent tax grant or can make use of the current cash grant program, building large-scale plants is attractive to them.

ASIAN MARKETS GAINING IMPORTANCE. In 2011, Japan will be the key growth driver. According to expert forecasts, the Japanese market will grow by 30 percent to 1,040 (2010: 800) MW in 2011. However, China might replace Japan as the key sales region in Asia as early as 2012, with expected newly installed capacity of 1,458 (2011: 778) MW. Overall, the Asian market is expected to achieve newly installed capacity of 2,550 (2010: 1,687) MW in 2011.

Source: Bo	ank Sarasin, Nov. 2010							
2015 e 📃	14.3			11.3			9.9	5.0
2014 e	12.4			8.4		7.5	3.6	
2013 e	11.0		5.8		5.5	2.2		
2012 e	9.5	3.6	3.8	1.4				
2011e	9.8	2.0	2.6 0.8					
2010	10.6	1.0	1.7 0.5					
_	Europe Nort	h Ameri	ca 💻 A	sia	_	ROW		

#### EXPECTED DEVELOPMENT OF THE SOLAR MARKET BY REGION // IN GW

\_\_\_\_\_



# 136 DEVELOPMENT OF BUSINESS 2011+

# FUTURE ORIENTATION OF THE GROUP

The SOLARWORLD Group will continue its business strategy as a fully integrated global solar technology group in 2011 and 2012. Read more at <sup>(2)</sup> *Business policy of the SolarWorld Group 2011*+ • *p.* 126//

# FUTURE LEGAL GOUP STUCTURE

Effective as of January 13, 2011 our subsidiaries deutsche solar ag and sunicon ag were converted into deutsche solar gmbh and sunicon gmbh.

After the end of the last acceptance period for the offer to take over SOLARPARC AG on February 17, 2011, SOLARWORLD AG owned just about 94 percent of the SOLARPARC AG shares. This means that SOLARPARC AG will already be consolidated in the SOLARWORLD Group as of the first quarter of 2011.

# FUTURE DEVELOPMENT OF "PRODUCTION GERMANY" AND "PRODUCTION U.S." SEGMENTS

**CONTINUED GROWTH**. In 2011, we will continue groupwide capacity expansion according to plan and increase the module capacity to 1.4 GW. In future, we will be able to expand our production capacity even faster and in line with our needs since we have already developed construction concepts for various production sites. These optional concepts may be implemented, depending on the market development.

#### (9) GROUPWIDE NOMINAL YEAR-END CAPACITY - EXPANSION 2011 // IN MWP

Germany	750 → <b>1,000</b>	275 → <b>300</b>	170 → <b>600</b>
U.S.	250 → <b>250</b>	500 → <b>500</b>	500 → <b>500</b>
Joint venture South Korea			270 → <b>300</b>
Group	1,000 → <b>1,250</b>	775 → <b>800</b>	940 → <b>1,400</b>

**CUTTING COSTS THROUGH STATE-OF-THE-ART TECHNOLOGY.** In the "Production Germany" segment, we are setting high technological standards in wafer production in the Freiberg Commercial Estate East and at the Solar Factory III module plant. We will operate highly flexible production systems in Solar Factory III, for example, enabling us to produce different module standards and process various cell types. By the end of the first half of 2011, we will have module capacities amounting to 600 MW at our disposition in Freiberg. We will successively upgrade older equipment across the value chain to reach state-of-the-art technology standards and thus further reduce production costs. In the "Production U.S." segment, both the Hillsboro and Camarillo production sites feature state-of-the-art technology.

# FUTURE SALES MARKETS 2011+ // "TRADE" SEGMENT

With the ramp-up of our module production capacity in the U.S. and Germany, we will be able to place larger production volumes on the global markets in 2011. Overall, we expect worldwide shipments to increase by more than 30 percent.

2011 promises to be an eventful year. The planned cuts in tariffs in European countries, but above all in the core market Germany, will challenge the cost structures of solar manufacturers. We are confident that we can withstand this challenge with our long-standing market experience, high product quality, broad-based international distribution presence, and the high flexibility of our logistics processes. We are able to swiftly respond to short-term regional shifts in demand and thus adjust and optimize our sales as the year progresses.

We will continue to increase investments in raising brand awareness with a view to consolidating our position as the leading manufacturer of high-quality, crystalline solar power solutions and gaining additional market shares. We intend to focus again on communicating the quality features of our products, e.g. product quality, service, and a 25-year performance warranty. We will drive forward brand development all the way to end consumers in the growing European markets and the U.S. We expect these activities to generate a demand effect, which will reflect itself on the purchasing behavior of private and commercial roof owners as well as on the group's shipments and on the sales by SOLARWORLD specialist partners. A further focus of activities will be on maintaining and expanding our specialist partner network in these markets. We will thus strengthen our distribution and market power.

We expect to increase market shares in Germany in 2011 – despite the anticipated decline in demand driven by the planned strong reduction in tariffs in mid-2011. We will benefit from our high brand awareness and the distribution network built up over many years. We expect significant business growth, above all with SOLARWORLD SUNKITS<sup>®</sup>.

In the remaining European markets plans are in place to increase shipments by more than 30 percent in 2011. This development will be primarily driven by Italy and France, but other markets such as



Greece, Spain, and the UK will also support the sales growth in Europe. For 2011, Bank Sarasin forecasts a total market volume of up to 4.3 GW for Europe, excluding Germany. → *European markets* <u>reach attractive size</u> • p. 134//

However, the strongest rise in sales is expected to be generated in the U.S. in 2011. Thanks to the logistical benefits of production in the U.S. and the distribution networks already established, we expect shipments to more than double in the region. Our order book for the first half of 2011 was already very strong at the end of 2010. In cooperation with wholesalers, we also intend to increasingly operate in the components business.

SOLARWORLD has identified additional sales potential in the off-grid segment. Our sales office in South Africa expects rising demand for off-grid applications in the African continent. In Asia and South America we also expect demand to grow for off-grid solutions, served by our rural modules.

# FUTURE RESEARCH AND DEVELOPMENT ACTIVITIES 2011+ // "OTHER" SEGMENT

**DEVELOPMENT OF NEW MODULE CONCEPT**. Our innovation activities will continue to cover the entire solar value chain and consequently enhance the cost efficiency and quality of processes and products. Prime examples are a current project to improve electronic quality in crystallization, and patent protection for independent cell and module developments. Our activities will also include a new switching concept for our new solar module. This will further boost output and create a new and particularly aesthetic visual design.

ATTACHING PRIORITY TO STORAGE TECHNOLOGY. The company will create new developments in systems engineering, tapping further potential to set itself apart from the competition. We are increasingly focusing on the entire system, including the solar system, energy storage, roof and building automation. We attach particular priority to storage technology to promote self-consumption. The SUNPAC product with a battery system was already launched in 2010 and we are now planning to develop new solutions – e.g. based on lithium ion storage – into marketable products as quickly as possible in cooperation with various partners. Promoting storage technology with partners \* p. 082//

SECURING THE COMPETITIVENESS OF THE GERMAN SOLAR INDUSTRY. A project sponsored by the federal government within the scope of the Photovoltaic Innovation Alliance is to support our development activities. The consortium, headed by our subsidiary, SOLARWORLD INNOVATIONS GMBH, comprises eleven partners and six subcontractors from the materials suppliers, plant engineering, engineering, production, and science sectors. The aim of this joint development project is to secure the competitiveness of the German solar industry. SOLARWORLD's intention and plan is to contribute substantially to this project.

# FUTURE PRODUCTS AND SERVICES

**CONTINUING OUR SUCCESSFUL PRODUCT STRATEGY**. SOLARWORLD will continue to focus its portfolio on crystalline solar power technology. The company intends to improve and expand its high-quality range of solar modules and solar application products. An overview of the innovative technology and its future output potential is provided in the (3) <u>Innovation targets and priorities 2010+</u> • p. 086//

Fully integrated quality continues to form the basis for our high-quality product promise. Since early 2011, we have therefore offered customers our SUNMODULE® PLUS modules with the "TÜV power controlled" certificate issued by TÜV Rheinland, which was granted following an extensive auditing and inspection process. "TÜV power controlled" guarantees that the performance of our modules has been measured under extremely strict conditions and confirmed by an independent test institute. We thus provide customers with additional security concerning the efficiency of our products.

ACKNOWLEDGED IN INTERNATIONAL MARKETS AS A SYSTEMS SUPPLIER. SOLARWORLD will align its portfolio of solar application products even more strongly to the varying requirements of its markets. Our aim is to meet customer requirements more accurately with our components and systems portfolio. These requirements result from different building structures, installation habits, and market trends, for example. In contrast to our pure module business, in which international demand can be served with a small number of standardized products, diversification in accordance with different market and customer requirements is a crucial factor for success in our systems engineering division – and SOLARWORLD will benefit from this strong competitive edge with its systems competence.

-----



# 140 FUTURE PROCUREMENT

We have secured our planned corporate growth in terms of procurement. To this end, we have concluded long-term delivery contracts for silicon. These are take-or-pay contracts, i.e. even if the contracted volume is not called, down-payments would not be returned. Since SOLARWORLD is currently strongly increasing its wafer capacity, we expect our silicon needs to go beyond the contracted volumes. Thus, we have also tapped an additional source of silicon supplies through our 29 percent stake in QATAR SOLAR TECHNOLOGIES Q.S.C., a joint venture formed in March 2010. Moreover, supplies of highpurity solar-grade silicon of the SUNSIL® brand will also be obtained from our joint venture JSSI GMBH.

We are confident that the supply situation and reliability will remain stable in 2011. The key objective of our groupwide procurement strategy continues to be steady cost reduction along the entire value chain while preserving quality levels. We will continue to endeavour to secure long-term supplier relationships and jointly devise optimized purchasing conditions and solutions for more efficient use of materials with our suppliers. At the same time, we will continually monitor raw material prices in order to benefit from attractive terms and conditions.

The company's in-house activities include continuous work to further optimize consumption and increase efficiency in order to reduce the specific cost of materials.

# HUMAN RESOURCES – FUTURE DEVELOPMENT

At the beginning of fiscal year 2011, the global role of our HR department was expanded when the People and Brand position was newly filled. The objective of the position, which is closely related to the Board, is to expand our strategic HR and organizational management in order to optimally handle future international challenges. The strength of SOLARWORLD hinges on motivated, loyal and efficient staff in worldwide organizational structures, who thus contribute to implementing our growth and other corporate targets.

In line with global expansion of our production capacity, the company's HR strategy also focuses on quantitative and qualitative employment growth even beyond the year 2010. At the end of 2012, the global headcount of permanent employees is expected to increase by 25 percent (2010: 2,376). New recruitments will mainly focus on the core areas of production and distribution to optimally serve the growing markets.

The focus will be on expanding leadership skills, intercultural management, and promoting high potentials. Our objective has to be to promote top executives and enable them to lead international teams across various sites and to jointly identify and pursue best practice approaches. One of the key aspects in this respect is to understand and respect different mentalities and cultural differences. In

order to support planned further global expansion, global career planning for top executives is being developed. Based on that plan, executives will be prepared early on to face future international challenges. By means of these measures, SOLARWORLD intends to implement its global approach and build on its success.

# EXPECTED EARNINGS AND FINANCIAL SITUATION

## EXPECTED REVENUE AND EARNINGS DEVELOPMENT

The SOLARWORLD Group will maintain its speed of growth in 2011 and 2012 and will expand production at the same time. We are planning to increase the sales volumes by more than 30 percent in fiscal year 2011. Provided that the background conditions are stable, we expect the previous year's revenue level of  $\in$  1.3 billion to be exceeded. For 2012 we strive to increase revenue and results. In this context, it is crucial to know at what level the increased market price pressure on the cost side can be compensated for by efficiency increases, economies of scale, full production capacity utilization and procurement cost reductions. Within the next two years we want to further boost our foreign share up to 75 percent. The largest sales market will be the United States. In Europe, Asia, and Africa, we are also expecting further business growth.

## EXPECTED DIVIDEND AND DISTRIBUTION

On the basis of the sound earnings development, the Management Board and the Supervisory Board will propose to the Annual General Meeting on May 24, 2011 the distribution of a dividend of 19 (for fiscal year 2009: 16) eurocents per share.

Provided that the distribution of the dividend is approved, the remaining balance sheet profit of SOLARWORLD AG amounting to  $\in$  107.8m will be allocated to revenue reserves. The equity capital base of the SOLARWORLD Group will be strengthened in this way.

SOLARWORLD AG wants to continue to maintain dividend continuity in the future.



# 142 SCHEDULED FINANCING MEASURES

Against the backdrop of our financial situation  $\bigoplus$  *Financing analysis* \* *p.*094// as at December 31, 2010, we are working on the assumption that we will have the funds required to realize our medium-term expansion plans. At present, no major financing measures on a significant scale are being planned.

#### PLANNED INVESTMENTS

In the next two fiscal years the SOLARWORLD Group will continue to pursue its course of growth consistently as planned and, above all, invest in the expansion of production capacities and sales and distribution structures. The expansion of our wafer and module capacities in Germany will be given priority in 2011.  $\bigcirc$  *Groupwide nominal year-end capacity – expansion 2011* • *p. 136*//

#### EXPECTED LIQUIDITY DEVELOPMENT

On December 31, 2010, liquid funds amounted to  $\in$  613.5m (December 31, 2009:  $\in$  428.1m). The probable future development of liquidity in fiscal year 2011 will depend particularly on the earnings development, working capital, and on investments. From today's point of view, we are assuming that the investments planned for 2011 can essentially be financed from the operating cash flow.

# GENERAL STATEMENT OF THE MANAGEMENT BOARD ON FUTURE GROUP DEVELOPMENT

In the two coming fiscal years SOLARWORLD will expand its groupwide production capacities at all levels of the value chain. The strategic focus of expansion in 2011 will be on the strongly developing U.S. market. In line with the expansion of our production volumes, we also expect significant growth of our worldwide shipments; our largest sales market will be the U.S., followed by Europe. At the same time we will open up growth markets in Asia and Africa.

Quality leader under a strong brand – that is also the strategic direction for the future. With the objective of a higher reach in the relevant target groups, the focus will be on increasing brand and product awareness in the young solar markets in Europe and the U.S., in particular; the investments in the brand will continue to be high. Thanks to full integration at all levels of the value chain, a strong Research & Development function as well as a fully utilized production capacity, the group will continue to be in a position to tap economies of scale and efficiency potentials and secure competitive advantages in terms of costs, quality, and environmental protection. This is how we will shape the company's long-term growth in the world market.

#### ------





# **CONSOLIDATED FINANCIAL STATEMENTS**

# 144

#### ----- CONSOLIDATED FINANCIAL STATEMENTS

\_\_\_\_\_

- 146 INCOME STATEMENT
- 147 STATEMENT OF COMPREHENSIVE INCOME
- 148 BALANCE SHEET
- 149 STATEMENT OF CHANGES IN EQUITY
- 150 CASH FLOW STATEMENT

# NOTES

- 151 GENERAL DISCLOSURES
- 162 ACCOUNTING POLICIES
- 176 COMMENTS ON THE INCOME STATEMENT
- 186 COMMENTS ON THE BALANCE SHEET
- 198 OTHER COMMENTS
- 215 AUDITOR'S REPORT
- 216 RESPONSIBILITY STATEMENT

L



# *"Our productions in Germany and the U.S. are growing together into one efficient organism. That creates synergies which are also reflected in our figures."*

---- DR. GUNTER ERFURT // GLOBAL CAPITAL INVESTMENT/TECHNOLOGY TRANSFER, FREIBERG/GERMANY

146

Γ

1

FACTSHEET /

# CONSOLIDATED FINANCIAL STATEMENTS

### FOR THE BUSINESS YEAR JANUARY 1, 2010 TO DECEMBER 31, 2010

### INCOME STATEMENT // IN K€

	Notes	2010	2009
1. Revenue	25, 27, 39	1,304,674	1.012,575
2. Change in inventories of finished goods and work in progress	13, 25, 48	8,434	48,830
3. Own work capitalized	28	1,025	3,117
4. Other operating income	6, 25, 29	100,791	69,934
5. Cost of materials	30	-834,780	-691,062
6. Personnel expenses	31	-126,282	-99,783
7. Amortization and depreciation	32, 40	-88,503	-63,659
8. Other operating expenses	6, 25, 33	-172,607	-127,127
9. Operating result		192,752	152,825
10. Result from investments measured at equity	11, 35, 44	250	-4,579
11. Interest and similar financial income	25, 35	24,472	29,844
12. Interest and similar financial expenses	25, 35	-80,657	-55,206
13. Other financial result	6, 25, 35	11,804	8,868
14. Financial result		-44,131	-21,073
15. Income before taxes on income		148,621	131,752
16. Taxes on income	26, 36	-61,309	-72,779
17. Consolidated net income		87,312	58,973
18. Earnings per share	37		
a) Weighted average number of shares outstanding (in 1,000)		108,842	111,720
b) Consolidated net income (in €)		0.80	0.53

/ SE<u>ITE</u> 147

Г

### (®1) STATEMENT OF COMPREHENSIVE INCOME // IN K€

Note 38	2010	2009
Consolidated net income	87,312	58,973
Other comprehensive income		
Net result from cash flow hedges		
Profits/losses of the current period	17,620	-12,662
Reclassifications to income statment	-9,168	497
	8,452	-12,165
Effects of taxes on income	-2,694	3,866
	5,758	-8,299
Currency translation of foreign operations	27,505	-9,699
Effects of taxes on income	-3,679	456
	23,826	-9,243
Net result from financial assets available for sale	·	
Profits/losses of the current period	0	0
Reclassifications to income statement	0	-290
	0	-290
Effects of taxes on income	0	4
	0	-286
Other comprehensive income for the period, net of tax	29,584	-17,828
Total comprehensive income for the year	116,896	41,145

PAGE / 148

# FACTSHEET /

į

### CONSOLIDATED FINANCIAL STATEMENTS

Г

### 

ASSETS	Notes	Dec. 31, 2010	Dec. 31, 2009
A • Noncurrent Assets		1,395,086	1,211,471
I. Intangible assets	8, 40, 41	39,607	37,297
II. Property, plant and equipment	9, 40, 42	951,856	787,536
III. Investment property	10, 40, 43	20,994	0
IV. Investments measured at equity	11, 44	65,481	50,243
V. Other financial assets	16, 46, 65	1,165	849
VI. Deferred tax assets	26, 36, 46	5,195	5,899
VII. Other noncurrent assets	6, 12, 47	310,788	329,647
B • Current Assets		1,240,246	1,004,743
I. Inventories	6, 13, 48	337,370	268,507
II. Trade receivables	14, 49, 65	140,883	211,401
III. Current income tax assets	26, 36, 50	428	2,157
IV. Other receivables and assets	15, 51	48,956	12,987
V. Other financial assets	16, 20, 52, 65	99,136	81,602
VI. Liquid funds	17, 53, 65, 66	613,473	428,089
C • Assets Held for Sale	18, 54	0	836
		2,635,332	2,217,050

EQUITY AND LIABILITIES	Notes	Dec. 31, 2010	Dec. 31, 2009
A • Equity	55	922,879	865,462
I. Subscribed capital		106,881	111,720
II. Capital reserve		296,489	296,489
III. Other reserves		18,067	-11,517
IV. Accumulated profits		501,442	468,770
B • Noncurrent Liabilities		1,366,757	1,119,411
I. Noncurrent financial liabilities	19, 20, 56, 65	1,011,855	750,584
II. Accrued investment grants	21, 57	76,219	68,279
III. Noncurrent provisions	22, 23, 58	25,418	24,023
IV. Other noncurrent liabilities	24, 60	215,917	250,662
V. Deferred tax liabilities	26, 36, 61	37,348	25,863
C • Current Liabilities		345,696	232,177
I. Current financial liabilities	19, 20, 56, 65	129,776	38,915
II. Trade payables	19, 59, 65	113,270	83,943
III. Income tax liabilities	26, 36, 62	13,797	25,218
IV. Current provisions	23, 58	8,784	5,426
V. Other current liabilities	24, 60	80,069	78,675
		2,635,332	2,217,050

٦

### Γ

### (83) STATEMENT OF CHANGES IN EQUITY // IN K€

			Other reserves				
Notes 4, 55	Subscribed capital	Capital reserve	Exchange reserve	Reserve from hedg- ing of cash flows**	Reserve for assets available for sale*	Accu- mulated profits	Total
As per Dec. 31, 2008	111,720	296,489	-3,123	9,148	286	426,555	841,075
Dividend distribution						- 16,758	-16,758
Total comprehensive income			-9,243	- 8,299	-286	58,973	41,145
As per Dec. 31, 2009	111,720	296,489	-12,366	849	0	468,770	865,462
Dividend distribution						-17,649	-17,649
Acquisition of treasury shares	-4,839					-36,991	-41,830
Total comprehensive income			23,826	5,758	0	87,312	116,896
As per Dec. 31, 2010	106,881	296,489	11,460	6,607	0	501,442	922,879

\* Hereinafter "AfS-reserve" \*\* Hereinafter "Hedging reserve"

<sup>page /</sup>

# FACTSHEET /

į

### CONSOLIDATED FINANCIAL STATEMENTS

Г

### 

Note 66	2010	2009
Income before tax	148,621	131,752
+ Amortization and depreciation	88,503	63,659
+ Financial result	44,131	21,073
+ Loss from disposal of assets	595	608
<ul> <li>Reversal of accrued investment grants</li> </ul>	-14,548	-10,461
- Other material non-cash income	-28,620	-25,417
= Cash flow from operating result	238,682	181,214
+ Changes of prepayments and customer advances	23,819	10,148
<ul> <li>Increase of inventories (excl. prepayments)</li> </ul>	-72,443	-67,969
+/- Increase/decrease trade receivables	69,397	-140,200
+ Increase of trade liabilities	29,444	17,038
+/- Changes in other net assets	23,900	-6,147
= Cash flow from operating result and changes in net assets	312,799	-5,916
+ Interest received	6,160	15,497
– Taxes on income paid	-64,784	-42,578
= Cash flow from operating activities	254,175	-32,997
- Cash outflow for asset investments	-241,950	-318,415
+ Cash inflow from investment grants	3,344	5,103
+ Cash inflow from the disposal of assets	11,860	1,767
+ Cash inflow from financial investments	10,861	320,112
-/+ Cash outflow/inflow from the acquisition/disposal of consolidated entities	-9,002	5,885
= Cashflow from investing activities	-224,887	14,452
+ Cash inflow from borrowings	498,044	100,000
<ul> <li>Cash outflow for redemption of borrowings</li> </ul>	-261,885	-18,601
– Interest paid	-39,913	-39,746
– Dividend distributions	-17,649	-16,758
<ul> <li>Cash outflow from purchase of treasury shares</li> </ul>	-41,830	0
+ Payments of external shareholders	7,289	0
= Cash flow from financing activities	144,056	24,895
+ Net changes in cash and cash equivalents	173,344	6,350
+/- Currency and consolidation-related change of cash and cash equivalents	5,121	-1,615
+ Cash and cash equivalents at the beginning of the period	428,089	423,354
= Cash and cash equivalents at the end of the period	606,554	428,089

# 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 Executive Board prepared the consolidated statements on March 11, 2011 and released them for disclosure on the same day.

SOLARWORLD Group is one of the leading manufacturers of crystalline solar power technology worldwide. The focus of its operations is on production and international distribution of solar energy applications that range from rooftop solar systems to large-scale facilities. SOLARWORLD AG and its subsidiaries research, develop, produce and distribute on all levels of the solar value added chain. The resource cycle is complete through in-house recycling.

In accordance with § 315a para. 1 HGB, SOLARWORLD AG prepared its consolidated financial statements per Dec. 31, 2010 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 not yet compulsory were not applied.

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

#### Initial mandatory application of standards and interpretations in 2010

The following standards and interpretations or essential changes were to be initially applied in 2010:

Standards/interpretations	
Amendment of IFRS 2	Share-based payment
Improvements of IFRS	Improvements IFRS (IASB April 2009)
IFRIC 18	Transfers of Assets from Customers
IFRIC 17	Distributions of Non-cash Assets to Owners
Amendment of IAS 39	Financial instruments: recognition and measurement
Amendment of IAS 27	Consolidated and separate financial statements
IFRS 3 (revised)	Business combinations
IFRIC 12	Service Concession Arrangements
	Amendment of IFRS 2         Improvements of IFRS         IFRIC 18         IFRIC 17         Amendment of IAS 39         Amendment of IAS 27         IFRS 3 (revised)

**IFRS 2** – **SHARE-BASED PAYMENT** The amendments regarding IFRS 2 were published by the IASB on June 18, 2009, adopted into EU law on March 23, 2010 and are applicable to reporting period beginning on or after Jan. 1, 2010. A substantial change is the expansion of the application range of IFRS 2. Hence, an entity must recognize goods or services it receives in the scope of share-based payment regardless of whether the obligation is settled in cash or in shares. Moreover, it is not important which consolidated entity settles the liability. In addition, IFRIC 8 and IFRIC 11 – both interpretations of the standard – were integrated in IFRS 2. These changes do not affect SOLARWORLD Group.

**IMPROVEMENTS OF IFRS** In April 2009, the IASB published IFRS updates in terms of smaller and less urgent adjustments in the scope of its annual improvement process. These updates were adopted into EU law on March 23, 2010. As a basic principle, these changes are applicable upon the beginning of the first business year after Dec. 31, 2009. The adjustments mostly concern clarifications and definitions of existing IAS/IFRS or changes that result from IFRS modifications already made. The following selected contents of the collection of minor amendments needed to be taken into account for the preparation of SOLARWORLD AG's consolidated accounts:

- IFRS 5 NON-CURRENT ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS In the scope of this improvement, the IASB was concerned with the issue whether these assets require disclosures in accordance with other standards in addition to those required by IFRS 5 if the application range of these standards does not expressly exclude these assets. Upon adjustment of IFRS 5, the IASB clarifies that mandatory disclosures exceeding those required by IFRS 5 are only necessary if a different standard schedules specific disclosures for non-current assets held for sale and discontinued operations or if disclosures for measuring assets and liabilities of a disposal group to which the measurement requirements of IFRS 5 do not apply are required to the extent to that these disclosures are not yet made in the scope of the notes to the financial statements. This clarification has no consequences for SOLARWORLD AG.
- IFRS 8 OPERATING SEGMENTS This modification clarifies that amounts of segment assets and liabilities only need to be disclosed if these amounts are reported to the chief operating decision maker on a regular basis. Since neither segment liabilities nor segment assets constitute information reported to SOLARWORLD AG's chief operating decision maker in the scope of internal reporting, segment reporting for the business year 2010 does not include respective disclosures.
- IAS 1 PRESENTATION OF FINANCIAL STATEMENTS IAS 1.69 now includes that the classification of a liability as current or non-current is not influenced by existing requirements governing that this liability can be settled by issuance of equity instruments due to the other party's option. This change does not affect SOLARWORLD AG's consolidated statements.

\_\_\_\_ .

- IAS 7 STATEMENTS OF CASH FLOWS IAS 7 now clarifies that only those expenses that lead to an asset recognized on the balance sheet may be recognized in the scope of the cash flow from investment activities. This modification does not affect SOLARWORLD AG's consolidated statements.
- IAS 17 LEASES These changes comprise the classification of leases regarding property. The unlimited economic useful life of the property is of special importance in this context. Attention needs to be paid to special transitional provisions regarding the classification of property components in the scope of leases not yet expired. This change is irrelevant for SOLARWORLD Group.
- IAS 36 IMPAIRMENT OF ASSETS The modification of IAS 36 clarifies that a cash-generating unit for which goodwill is allocated that was acquired in the scope of a business combination may not exceed an operating segment in terms of IFRS 8 before aggregation in accordance with the criteria listed in the latter standard. The change does not affect the group as the impairment test had already been adjusted to the new segments in the business year 2009. In this respect, we refer to note 8.
- IAS 38 INTANGIBLE ASSETS IAS 38.36 clarifies that if intangible assets acquired in the scope of a business combination can only be separated in connection with a contract or an identifiable assets or liability the intangible asset shall be recognized separated from goodwill but together with the respective contract or asset or liability. Moreover, IAS 38.37 states that a group of complementary intangible assets shall be recognized as a single asset if the individual assets of the group have similar useful lives. IAS 38.40 f. now includes clarifications regarding the measurement process for intangible assets for which an active market does not exist. These changes do not affect SOLARWORLD Group.
- IAS 39 FINANCIAL INSTRUMENTS: RECOGNITION AND MEASUREMENT The clarifications mainly concern the treatment of prepayment penalties as embedded derivatives closely linked with the host contract as well as definitions regarding cash flow hedge accounting. The changes do not affect SOLARWORLD'S consolidated statements.
- IFRIC 9 REASSESSMENT OF EMBEDDED DERIVATIVES The IASB now clarifies that in addition to contracts acquired in the scope of business combinations, contracts that are acquired in the scope of business combinations of entities under joint control or upon founding of joint ventures in terms of IAS 31 are excluded from the application of IFRIC 9. This clarification does not affect SOLARWORLD's consolidated statements.

**IFRIC 18 – TRANSFERS OF ASSETS FROM CUSTOMERS** IFRIC 18 was published on Jan. 29, 2009, adopted into EU law on Nov. 27, 2009 and is effective for annual periods beginning on or after Nov. 1, 2009. IFRIC 18 concerns general statements regarding the recognition of transfers of assets from customers. The IASB believes that this especially concerns the energy sector. The interpretation clarifies how to handle agreements in the scope of IFRS in which a customer transfers assets to an entity that are supposed to connect the customer to a network or to provide the customer with ongoing access to a supply of goods or services. This also concerns cases in which cash means are granted that serve the purpose of acquisition or production of such assets by the entity. The interpretation summarizes when or under which circumstances an asset is at hand, initial recognition and measurement, identification of the determinable services in exchange for the transferred asset, the time of revenue realization and how the transfer of means of payment from customers is supposed to be recognized. The regulations of IFRIC 18 do not affect the consolidated statements of SOLARWORLD AG.

**IFRIC 17** – **DISTRIBUTION OF NON-CASH ASSETS TO OWNERS** IFRIC 17 was published on Nov. 27, 2008, adopted into EU law on Nov. 26, 2009 and is applicable to annual periods beginning on or after Nov. 1, 2009. IFRIC 17 governs how an entity has to measure assets other than cash that are distributed to its owners as dividends. A dividend payable shall be recognized if the dividend was authorized by the responsible bodies and is no longer at the discretion of the entity. This dividend payable shall be recognized at fair value of the net assets to be distributed. The difference between the dividend payable and the carrying amount of the asset to be distributed shall be recognized through profit and loss. Additional disclosures are required in the notes if the assets to be distributed correspond with the definition of a discontinued operation (IFRS 5). Since SOLARWORLD Group did not distribute any non-cash assets in 2010, IFRIC 17 does not affect SOLARWORLD's consolidated statements.

**IAS 39 – FINANCIAL INSTRUMENTS: RECOGNITION AND MEASUREMENT** The changes of IAS 39 were published on July 31, 2008 and shall be applied for annual periods beginning on or after July 1, 2009. It was adopted into EU law on Sept. 15, 2009. It is clarified that it is admissible to designate only part of the changes of the fair value or cash flow fluctuations of a financial instrument as hedged item. This also includes the designation of inflation risks as hedged risks or proportions thereof in certain cases. Consequences for the consolidated statements of SOLARWORLD AG do not originate therefrom.

**IAS 27 – CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS AND IFRS 3 – BUSINESS COMBINATIONS** The revision of IFRS 3 was carried out in connection with a modification of IAS 27 in the scope of the second phase of the "business combinations" project. The revision of IFRS 3 and the modification of IAS 27 were published on January 10, 2008, adopted into EU law on June 3, 2009 and are initially applicable for annual periods beginning after June 30, 2009. IFRS 3 (revised) introduces substantial changes regarding the accounting for business combinations that make for consequences on the measurement of non-controlling interests, the accounting for transaction costs, initial recognition and measurement after recognition of contingent consideration and business combinations achieved in stages. IAS 27 (revised) governs that a change in the amount of the investment in a subsidiary that does not result in a loss of control shall be accounted for as a transaction. In addition, regulations regarding the allocation of losses to owners of the parent company and the non-controlling interests and the accounting regulations for transactions that lead to a loss of control are changed. The new regulations of IFRS 3 and IAS 27 were taken into account upon the acquisitions conducted in 2010.

**IFRIC 12** – **SERVICE CONCESSION ARRANGEMENTS** IFRIC 12 was published on Nov. 30, 2006 and adopted into EU law on March 25, 2009. The EU endorsement changed the mandatory date of initial application from annual periods beginning on or after Jan. 1, 2008 to annual periods beginning after March 28, 2009. The interpretation concerns accounting for service concession agreements for entities that offer public services like, for instance, the construction of streets, airports or energy supply infrastructure on behalf of public authorities. While the authority to dispose with regard to the assets remains with the public sector, the entity is contractually obliged to construct, operate and conduct maintenance. IFRIC 12 concerns the question of how rights and obligations originating from such contractual agreements have to be accounted for. The regulations of IFRIC 12 are irrelevant for SOLARWORLD Group.

#### Standards and interpretations not yet mandatory

In 2010, SOLARWORLD AG did not apply any standards that were not yet mandatory. At this time, we assume that the potential effects of the following standards and interpretations are marginal:

EU-Endorsement until Dec. 31, 2010	Standards/interpretations	
July 23, 2010	IFRIC 19 and amendments IFRS 1	Extinguishing financial liabilities with equity instruments and First-time adoption of IFRS
July 19, 2010	IFRIC 14	Prepayments of a Minimum Funding Requirement
July 19, 2010	IAS 24 (revised) and amendments IFRS 8	Related party disclosures
Dec. 23, 2009	Amendments IAS 32	Financial instruments: presentation

**IFRIC 19 – EXTINGUISHING FINANCIAL LIABILITIES WITH EQUITY INSTRUMENTS AND IFRS 1 – FIRST-TIME ADOPTION OF IFRS** IFRIC 19 was published on Nov. 26, 2009 and adopted into EU law on July 23, 2010. First-time adoption is required for annual periods beginning on or after July 1, 2010. In the aftermath of adopting IFRIC 19, amendments to IFRS 1 became necessary. The interpretation clarifies that equity instruments issued to a creditor for extinguishing financial liabilities are classified as paid consideration. The issued equity instruments are measured at fair value. Should it be impossible to reliably determine said fair value, the measurement shall be conducted on the basis of the fair value of the extinguished payable. Profits and losses are recognized through profit and loss immediately. The application of this interpretation is probably not going to have any consequences for the consolidated statements of SOLARWORLD AG.

**IFRIC 14 – PREPAYMENTS OF A MINIMUM FUNDING REQUIREMENT** IFRIC 14 was published on Nov. 15, 2009 and adopted into EU law on July 19, 2010. The amendment concerns IFRIC 14 as an interpretation aid for IAS 19 and governs the case that an entity is subject to minimum funding requirements in connection with its pension plans and makes a prepayment in this respect. The amendment makes it possible for entities to capitalize the benefit from such prepayment as an asset. It is applicable for annual periods beginning on or after Jan. 1, 2011. SOLARWORLD Group does not expect the amendment to have any consequences for the consolidated statements.

**IAS 24 – RELATED PARTY DISCLOSURES AND IFRS 8 – OPERATING SEGMENTS** On Nov. 4, 2009, the IASB published a revised version of IAS 24, which was adopted into EU law on July 19, 2010. The changes are applicable for annual periods beginning on or after Jan. 1, 2011. The changes facilitate mandatory disclosures for entities under state control or significant governmental influence. Moreover, the definition of a related party was clarified. To guarantee coherence of the IAS, IFRS 8 was subject to necessary amendments once the revised version of IAS 24 was adopted. Material changes for the consolidated statements of SOLARWORLD Group are not expected.

**IAS 32 – FINANCIAL INSTRUMENTS: PRESENTATION** The amendments of IAS 32 were published by the IASB on Nov. 8, 2009 and adopted into EU law on Dec. 23, 2009. The definition of a financial liability is modified insofar as subscription rights (and certain options and warrants) shall be classified as equity instruments if such rights entitle to the acquisition of a fixed number of equity instruments of the entity at a fixed price in any currency and the entity offers them – pro rata – to all current owners of the same class of its non-derivative equity instruments. The amendments are applicable for annual periods beginning on or after Feb. 1, 2010. SOLARWORLD Group does not expect this amendment to have significant consequences for the consolidated statements.

#### The following accounting standards were passed in 2010 however not yet adopted into EU law at Dec. 31, 2010:

**IFRS 9 – FINANCIAL INSTRUMENTS** IFRS 9 was published on Nov. 12, 2009 and reflects the first phase of the IASB project for replacing IAS 39. It concerns the classification and measurement of financial assets as defined in IAS 39. The standard is applicable for annual periods beginning on or after Jan. 1, 2013. In further phases, the IASB will handle classification and measurement of financial liabilities, hedging relations and derecognitions. The finalization of the project is expected for early 2011. The application of the first phase of IFRS 9 will have effects on the classification and measurement of financial assets of the group. To give a comprehensive presentation of potential effects, the group will quantify the effects in connection with the other phases as soon as they are published.

**IMPROVEMENTS OF IFRS (MAY 2010)** On May 6, 2010, the IASB published IFRS updates in the scope of its annual improvement process. The amendments concern IFRS 1, IFRS 3, IFRS 7, IAS 1, IAS 27, IAS 34 and IFRIC 13. At this point, SOLARWORLD Group does not expect the application of the amendments to have significant influence on the presentation of the consolidated statements once the EU adopts the amendments.

**IFRS 7 – FINANCIAL INSTRUMENTS: DISCLOSURES** The IASB resolved amendments of IFRS 7 regarding mandatory disclosures in the event of derecognition of financial assets on Nov. 7, 2010. This is supposed to enable the balance sheet addressees to get better insight with respect to the risks remaining with the entity after assets are derecognized. From now on, additional disclosures are also required if an excessive proportion of such transaction can be observed in close proximity to the balance sheet date. The IASB wants to counteract accounting policy motivated "window dressing" with regard to off-balance-sheet transactions. At this time, SOLARWORLD Group does not expect that the application of the amendments will significantly influence the presentation of the consolidated statements once the EU adopts the amendments.

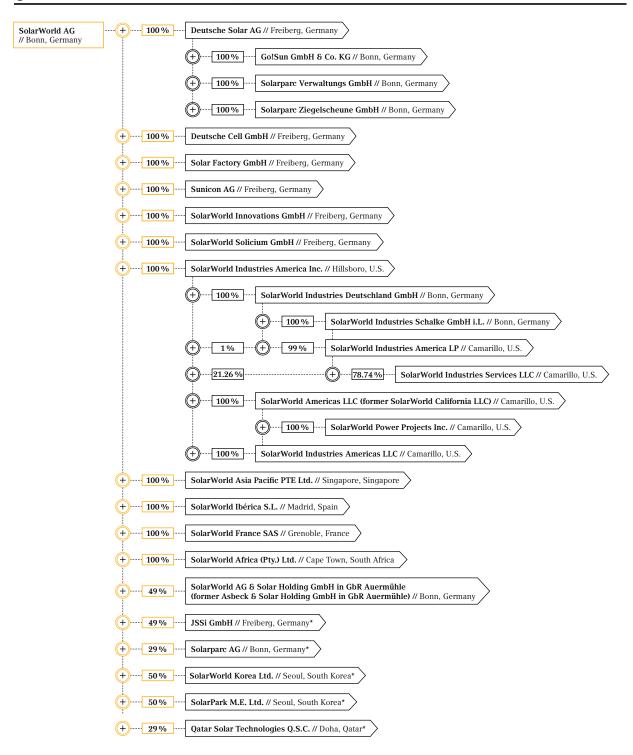
# 156 2. CONSOLIDATED ENTITY AND LEGAL GROUP STRUCTURE

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 power of the company or can otherwise control the company's activities. These companies 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 are capitalized using the equity method.

As of Dec. 31, 2010, the following companies are part of SOLARWORLD Group in the structure presented below.

SOLARWORLD 2010 SOLARWORLD GROUP

#### ISOLARWORLD GROUP AS OF DECEMBER 31, 2010



\* Consolidated at equity

Г

Effective per Jan. 13, 2011, Freiberg-based corporations DEUTSCHE SOLAR and SUNICON were transformed into limited liability companies. Hence, below, it is referred to these only as DEUTSCHE SOLAR GMBH and SUNICON GMBH.

DEUTSCHE SOLAR GMBH, DEUTSCHE CELL GMBH, SOLARFACTORY GMBH, SUNICON GMBH and SOLARWORLD INNOVATIONS GMBH make use of the disclosure and preparation facilitations of § 264 para. 3 HGB.

On April 30, 2010, SOLARWORLD AG acquired 49 percent of the shares in SOLARWORLD AG & SOLAR HOLDING GMBH in GBR AUERMÜHLE (formerly Asbeck & Solar Holding GmbH in GbR Auermühle) (AUERMÜHLE). This is an entity that mainly owns and leases an office building with storage space in Bonn. The acquisition took place against the back-ground of SOLARWORLD AG's continuous growth and the need for space at the Bonn sales site therewith connected. In connection with the acquisition of the shares, SOLARWORLD AG or Solar Holding Beteiligungsgesellschaft mbH each were granted the right to acquire or sell a further 45 percent of the shares in the entity. Hence, the company was fully consolidated at April 30, 2010 and a purchase price liability was recognized for the future transfer of shares.

In April 2010, SOLARWORLD FRANCE SAS was founded as a wholly owned subsidiary in Grenoble/France. The entity has the purpose of further supporting market presence in the European region.

In the scope of a capital increase on July 29, 2009, SOLARWORLD AG acquired new shares in the joint venture SOLARWORLD KOREA LTD., which increased the investment rate to 76.5 percent at Dec. 31, 2009. In Feb. 2010, the joint venture partner of SOLARWORLD KOREA LTD. made use of his right to acquire 26.5 percent of the shares in SOLARWORLD KOREA LTD. within one year at a fixed price to re-establish an equal investment rate. Hence, SOLARWORLD AG again owns 50 percent of the shares in SOLARWORLD KOREA LTD. at Dec. 31, 2010.

In April 2010, SOLARWORLD AG acquired 29 percent of the shares in the newly founded QATAR SOLAR TECHNOLOGIES Q.S.C. domiciled in the Emirate of Qatar. Together with Qatar Foundation and Qatar Development Bank, SOLARWORLD AG is constructing a manufacturing facility for polysilicon on the Arabian Peninsula, its planned annual capacity amounting to 3,600 tons.

Effective per Nov. 8, 2010, deutsche solar gmbh disposed of the 35 percent share in RGS Development BV, Broek op de Langedijk/The Netherlands, for  $\in$  1.

Effective per Nov. 1, 2010, Solarworld California LLC was renamed Solarworld Americas LLC.

With share transfer agreement of Dec. 22, 2010, SOLARPARC AG sold 100 percent of its shares in SOLARPARC VERWAL-TUNGS GMBH to DEUTSCHE SOLAR GMBH. SOLARPARC VERWALTUNGS GMBH is general partner of SOLARPARC ZIEGEL-SCHEUNE GMBH & CO. KG. It does not make any contributions and has no investments in SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG's assets. It is, however, entitled and obliged to sole management and representation.

With limited partnership share acquisition and assignment agreement of Dec. 28, 2010, DEUTSCHE SOLAR GMBH acquired 100 percent of the limited partnership contribution of the sole limited partner of SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG. Nature and purpose of SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG is the planning, construction and operation of photovoltaic systems including the sale of the electric power generated by operating the photovoltaic systems.

#### **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 8 to 26). The financial statements of the subsidiaries are prepared for the same reporting period as those of the parent company. All inner-group balances, income and expenses as well as unrealized profits and losses and dividends from inner-group transactions are eliminated in full.

For capital consolidation, cost of the participating interest is offset with the respective attributable equity proportion – measured at fair value – at the time of the acquisition. Any resulting positive difference is added to assets to the extent to that their carrying amount differs from fair value. Any remaining positive difference is considered goodwill. Any resulting 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., SOLARPARK M.E. LTD., QATAR SOLAR TECHNOLOGIES Q.S.C. and SOLARWORLD KOREA LTD. whose functional currency is the 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 an exchange reserve, thereby not affecting profit or loss. The amount recognized in the reserve for a foreign operation is re-recognized and shown on the income statement upon disposal of the foreign operation.

		Closing rate		Avera	ge rate
1€=		2010	2009	2010	2009
USA	USD	1.34	1.44	1.32	1.40
South Africa	ZAR	8.86	10.67	9.66	11.52
Korea	KRW	1,499.06	1,666.97	1,529.73	1,770.04

The following exchange rates were decisive for currency translation:

#### 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 were made when applying the Group's accounting principles in 2010:

SOLARWORLD Group concluded supply and purchase agreements that are – from an economic point of view – to be considered toll manufacturing and were therefore accounted for accordingly.

Customer advances and prepayments particularly include those in connection with long-term sale contracts regarding silicon wafers and long-term purchase agreements regarding elemental silicon. According to the agreements concluded, these advances and prepayments are non-interest-bearing. Due to the fact that from an economic standpoint these agreements contain a financing component, an implicit or matched maturity interest rate is compounded. The most significant assumptions and estimations concern the evaluation of the potential need for a goodwill impairment, the usability of deferred tax assets, the reversal of customer advances through profit and loss, the uniform group specifications regarding the economic useful lives of property, plant and equipment, the measurement of financial instruments as well as the recognition and measurement of provisions. 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 market fluctuations and the market situation 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 regarding goodwill are based on calculations using the discounted cash flow method. The cash flows are derived from the finance plan of the next five 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. Details on the basic assumptions for determining the recoverable amount for the cash-generating unit are described in note 8.

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. Since the group assumes that the possibility of a legal dispute and corresponding cash payments for tax liabilities is marginal, no contingent liabilities were recognized in this respect.

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. Further information on this can be found in note 36.

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 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. Should this be impossible, determination of the fair values is – to some extent – a decision based on judgment. Judgments concern parameters like liquidity risk, credit risk and volatility. Any change in the assumption of these factors could have an effect on the recognized fair value of the financial instruments. For further details, we refer to note 65.

Expenses from post-employment 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, future increases in wages and salaries, 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. Future increases in wages, salaries and pensions are based on expected future inflation rates. Further details regarding the applied assumptions can be found in notes 22 and 58.

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 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.

# 162 ACCOUNTING POLICIES

#### **6. CHANGES IN DISCLOSURE**

For the purpose of an improved presentation of the earnings situation, the effects on the result originating from hedging instruments, especially those that are not subject to hedge accounting, are now recognized in correspondence with their affiliation as regards content either in the scope of the operating result or the financial result. Consequently, exchange rate gains and losses are also recognized in the operating result to the extent to that they concern business operations.

k€	4. Other operating income	8. Other operating expenses	9. Operating result	13. Other financial result	14. Financial result
As per Dec. 31, 2009 before reclassification	50,653	-108,865	151,806	9,887	-20,054
Reclassification of gains/ losses from currency translation	16,062	-17,299	-1,237	1,237	1,237
Reclassification of result from hedging instru- ments with relation to	2.910	0(2)	9.95(	9.95(	9.95(
operating activities	3,219	-963	2,256	-2,256	-2,256
As per Dec. 31, 2009 after reclassification	69,934	-127,127	152,825	8,868	-21,073

Moreover, prepayments that were made in connection with raw material purchase agreements and that are utilized after more than 12 months after balance sheet date are recognized in the separate balance sheet item "other non-current assets".

k€	B.I. Inventories		A.VII. Other no	ncurrent assets
	As per Jan. 1, 2009	As per Dec. 31, 2009	As per Jan. 1, 2009	As per Dec. 31, 2009
Before reclassification	523,766	598,154	0	0
Reclassification of non- current prepayments	-333,972	-329,647	333,972	329,647
After reclassification	189,794	268,507	333,972	329,647

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

#### Business combinations since Jan. 1, 2010

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 the group acquires an entity, it assesses the appropriate classification and designation of the financial assets and assumed liabilities in compliance with the contract terms, economic framework and conditions prevailing at the time of acquisition.

Upon initial recognition, goodwill is measured at cost that is assessed as 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 is recognized on the income statement ("badwill").

#### Auermühle

On April 30, 2010, SOLARWORLD AG acquired 49 percent of the shares in AUERMÜHLE. In connection with the acquisition of the shares, SOLARWORLD AG or Solar Holding Beteiligungsgesellschaft mbH was also granted the right to acquire or dispose of up to a further 45 percent of the shares in the entity. Hence, the company was fully consolidated on April 30, 2010 while a purchase price liability was recognized for the future transfer of shares.

The following chart shows the preliminary fair values of the identified assets and liabilities of AUERMÜHLE at the time of acquisition:

	k€
Fixed assets	39,503
Current assets - Receivables - Liquid funds	<b>5,457</b> 5,442 15
Total assets	44,960
Total financial liabilities	- 35,944
Identifiable net assets at fair value	9,016
Transferred consideration	9,016

The acquired receivables' fair value equals that of the contractually agreed gross amounts of the receivables.

Since AUERMÜHLE is a BGB company [partnership organized under the Civil Codel in which the partners are entitled to a right to terminate that cannot be waived through contract in accordance with § 723 BGB, capital shares of the other partners (51 percent, € 9,384k at the time of initial consolidation) are classified as financial liabilities for consolidation purposes (IAS 32.AG29A).

Acquired fixed assets were re-measured in the scope of initial consolidation. Since the value of the acquired entity materially results from the measurement of the individual assets, especially the building, and debts and not any ongoing operations, the purchase price paid was used as a basis for the re-measurement of the fixed assets.

Since the entity has been integrated in the group, it did not contribute turnover but a result for the period of  $\in -1,275$ k to the group. Had the business combination taken place at the beginning of the year, the result for the period would have only been slightly higher or lower. Thus, for reasons of practicability and efficiency, we did not determine the disclosures in accordance with IFRS 3.B64 (q) (ii).

#### The business combination resulted in an actual cash outflow of $\in -9,007$ k that is made up as follows:

	k€
Outflow liquid funds	-9,016
Transaction costs of acquisition (included in cash flow from operating activities)	-6
Liquid funds taken over	15
Actual cash outflow	-9,007

Transaction costs were included in other operating expenses. The purchase price obligation and the capital shares of non-group partners are recognized in current financial liabilities.

#### Solarparc Verwaltungs GmbH and Solarparc Ziegelscheune GmbH & Co. KG

With share transfer agreement dated Dec. 22, 2010, SOLARPARC AG sold 100 percent of its investment in SOLARPARC VERWALTUNGS GMBH to DEUTSCHE SOLAR GMBH. SOLARPARC VERWALTUNGS GMBH is general partner of SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG. It does not make contributions and does not participate in SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG's assets but is entitled and obliged to sole management and representation.

With limited partnership share and assignment agreement dated Dec. 28, 2010, DEUTSCHE SOLAR GMBH acquired 100 percent of the limited partnership interest of the sole limited partner of SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG. SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG plans, constructs and operates photovoltaic systems and sells electricity generated by operating the photovoltaic systems.

The fair value of the identifiable assets of the two entities as of acquisition date amounted to  $\notin$  221k, the fair value of the identified liabilities amounted to  $\notin$  282k. The consideration transferred amounted to  $\notin$  26k.

No hidden reserves or encumbrances were to be disclosed in the scope of initial consolidation. Total goodwill of  $\notin$  86k was written off through profit and loss.

Since the two entities belong to the group, they have not contributed turnover or a result for the year. Had the business combination taken place at the beginning of the year, the contributions would have been insignificant. Thus, for reasons of practicability and efficiency, we did not determine the disclosures in accordance with IFRS 3.B64 (q) (ii).

The business combinations made for an actual outflow of cash amounting to  $\in -1k$  which is composed of the outflow of cash amounting to  $\in 26k$  and the take-over of cash amounting to  $\in 25k$ . There had been no material transaction costs.

#### 8. 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 the goodwill mentioned below, 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 separability therefore does not exist. Sustained impairments are taken into account by extraordinary amortization.

Profits or losses from de-recognition 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 de-recognized.

Goodwill – including that from capital consolidation – is subjected to an annual impairment test in accordance with IFRS 3 and IAS 36 and 38. As in prior years, the impairment test per Dec. 31, 2010 again showed that goodwill recognized is not impaired.

For the purpose of the impairment tests, the goodwill's carrying amount was assigned to the respective cash-generating unit (CGU) "Production Germany" which equals the "Production Germany" segment.

Prior to and, for lack of impairment, after the impairment test as well, the carrying amount of the goodwill assigned to the CGU "Production Germany" amounted or amounts to  $\notin$  29,587k (2009:  $\notin$  29,587k).

The recoverable amounts were determined as value in use. Discounted cash flow procedures were used for determination. Cash flow forecasts based on the most up-to-date planning approved by management were used for determining the recoverable amount. The forecasts, in turn, were based on the basic assumptions stated below. Basic assumptions are those that, if subjected to change, make for the highest level of sensitivity as regards the recoverable amount of the CGU.

With regard to the CGU "Production Germany", the forecasts are based on the following basic assumptions:

- Expansion of manufacturing capacities at our Freiberg facility in accordance with current investment planning
- increase of wafer production volumes and standard module production volumes to some 1,000 MW and 600 MW, respectively
- Annual decrease of selling prices in a one-digit percentage range

Cash flow forecasts for the CGU "Production Germany" were derived from the detailed budgeting for a five-year period. For the period beyond that, an extrapolation was performed on the basis of the last detailed forecast year. In doing so, a growth rate of 2.5 percent (2009: 2.5 percent) was assumed in accordance with growth expectations for SOLARWORLD AG taken from long-term external surveys.

For determining the recoverable amount, future cash flows of the CGU "Production Germany" were discounted using a risk adequate discount rate after taxes of some 9.4 percent (2009: 9.1 percent). External analysts of SOLAR-WORLD AG corroborate this interest rate.

#### 9. 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 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 2010. Hence, all borrowing costs were recognized as expenses.

# 166

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.

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	Term of lease agreements (max. 10 to 15 years)
Technical equipment and machinery	up to 10 years
Other equipment, factory and office equipment	3 to 5 years

In accordance with IAS 36, intangible assets and property, plant and equipment are subject to extraordinary depreciation per balance sheet date if impairment is indicated and if the then performed impairment test shows that the recoverable amount of the asset fell below the carrying amount. We refer to our statements in note 32. Irrespective of such indications, an impairment test is performed annually as regards assets assigned to a goodwill-bearing CGU. Insofar, we refer to note 8 above.

Property, plant and equipment are derecognized either upon retirement 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.

Residual amounts, useful lives and depreciation methods of the assets are subject to inspection at the end of each business year and are adjusted prospectively if the need arises.

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. In this regard, we refer to notes 21 and 57.

#### **10. INVESTMENT PROPERTY**

Investment properties are measured initially 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 regular depreciation and impairment expenses. With regard to measurement bases and useful lives we refer to note 9.

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 9 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 inter-company 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 inter-company 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.

## 168 12. OTHER NON-CURRENT ASSETS

Non-current prepayments made on inventories are recognized in other non-current assets since Dec. 31, 2010. We refer to note 6 in this regard. Some of the current prepayments recognized in inventories were paid in US\$. Since non-monetary items in terms of IAS 21.16 are concerned, measurement is carried out at historic rate at the time of spending. Since the effected payments are not interest bearing in accordance with contract, the facts and circumstances, however, are implicitly based on a financing transaction, they are subject to accruals in correspondence with term-consistent or implicit interest rates.

#### **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. Though these prepayments are stipulated to be non-interest bearing, the circumstances, however, imply that the respective agreements contain a financing component, and therefore an implicit or matched maturity interest rate is compounded.

#### **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. Receivables stated in foreign currencies are accounted for at closing rate. 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 from construction contracts were accounted for in accordance with the percentage-of-completionmethod as set forth by IAS 11. We refer to our statements in notes 25 and 27.

#### **15. OTHER RECEIVABLES AND ASSETS**

As a basic principle, other receivables and assets are accounted for at nominal value. Identifiable individual risks and general credit risks are taken into consideration by making 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
- derivates 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.

At balance sheet 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 revenueoptimized liquidity management and is, for the most part, centrally managed by SOLAR WORLD AG.

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 65.

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 derecognition of 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 remaining other 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).

#### 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 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.

#### 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.

At Dec. 31, 2010, assets and liabilities held for sale or discontinued operations did not exist.

#### **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 or loss. The results are thereby 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 hedging instruments and effective as such are categorized as current or non-current or split up in a current and a non-current part.

SOLARWORLD Group applies hedge accounting provisions in accordance with IAS 39 for cash flow hedges.

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 in "other financial result".

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 65.

## 172 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.

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. SOLARWORLD group made use of the option to recognize actuarial gains and losses as expenses or income if the net cumulated unrecognized actuarial gains and losses at the end of the prior reporting period exceed 10 percent of the obligation at this date. 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 is not met but the possibility of an outflow of resources embodying economic benefits is all but remote, the respective obligations are recognized as contingent liabilities. In this context, we refer to note 67.

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 to the extent to that a detailed formal restructuring plan is prepared and announced to the concerned parties.

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.

#### 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. Though these customer advances are stipulated to be non-interest bearing, the circumstances, however, imply that the respective long-term agreements contain a financing component, and therefore a compounding is conducted at matched maturity or implicit interest rate.

In the scope of a "trust agreement for insolvency protection", payments to an escrow account in connection with the accrued liabilities for profit-oriented employee compensation have been made since 2009. These payments concern obligations from the business years 2009 and before. 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 has to be 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 balance sheet date.

### 174 25. RECOGNITION OF REVENUES AND EXPENSES

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. Under this method, 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). To the extent to that SOLARWORLD Group received payments on account for receivables from construction contracts, these are separated from the receivables from construction contracts. If received payments on account exceed the receivables from construction contracts, the construction contracts are recognized with their liability balance. Receivables and liabilities from construction contracts are not offset.

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.

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

#### 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.

#### **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.

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.

#### 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".

# 176 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€	2010	2009
Module- and assembly kit sales (group and third party manufacturing)	947,749	674,377
Cells/wafers	309,980	247,543
Project proceeds	37,018	86,132
Other revenue	9,927	4,523
Total	1,304,674	1,012,575

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

Ongoing projects exist at balance sheet date, the revenue of which was accrued in accordance with the POC-method as stated in IAS 11. At balance sheet date, this makes for the following receivables and liabilities (2009: liabilities) resulting from business transactions in 2010 and prior years:

in k€	Dec. 31, 2010	Dec. 31, 2009
Aggregate amount of costs incurred and recognized profits (less recognized losses)	26,003	6,246
Advances received	-6,614	-6,439
Total	19,389	-193
Receivables from construction contracts (note 49)	7,487	0
Liabilities from construction contracts (note 59)	-515	-193

Due to DEUTSCHE SOLAR GMBH'S acquisition of SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG in Dec. 2010, the expense of  $\in$  12,417k incurred in connection with the construction of a photovoltaic facility on the basis of the general contractor's agreement between SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG and SOLARWORLD AG was recognized as construction in process instead of receivables from construction contracts. Revenue in accordance with the PoC-method realized in the period of non-consolidation was recognized as such in external project proceeds.

Other revenue mainly include income from silicon processing, power input and the sale of other intermediate and preliminary products.

#### 28. OWN WORK CAPITALIZED

Own work capitalized especially concerns the construction of photovoltaic systems operated by the group companies GO!SUN GMBH & CO. KG, SOLAR FACTORY GMBH and DEUTSCHE SOLAR GMBH.

#### **29. OTHER OPERATING INCOME**

in k€	2010	2009
Reversal of advances received	28,620	25,417
Gains from currency translation	18,828	16,062
Income from other trade	17,960	2,159
Reversal of accrued investment grants	14,548	10,461
Reversal of provisions and liabilities	5,046	5,120
Income from derivative financial instruments	3,218	3,219
On-charging of expenses	2,790	548
Income from licenses and rights of use	1,370	243
Earnings from grants for research and development	2,179	1,813
Compensation payments	1,164	1,147
Income relating to other periods	652	926
Miscellaneous other operating income	4,416	2,819
Total	100,791	69,934

Income from the reversal of received customer advances results from the lapse of the obligation to credit advances for wafer supplies against future supplies.  $\in$  13,074k (2009:  $\in$  14,319k) of the income result from the complete lapse of the obligation with regard to individual customers while an amount of  $\in$  15,546k (2009:  $\in$  11,098k) results from shortfalls of orders for wafer supplies that were subject to fixed order volumes in 2010.

In the annual period 2010, other trade income of  $\notin$  17,071k results from silicon sales that are not part of ordinary business activities. The corresponding expenses amount to  $\notin$  16,258k (compare note 33).

€ 4,154k of the income from the reversal of accrued investment grants concern past periods.

With regard to income from derivative financial instruments, we refer to the statements in note 6.

The Research and Development grants received are subject to a number of requirements. In accordance with what we know today, we will be able to meet all of these requirements. Hence, repayment obligations are not expected to arise.

#### **30. COST OF MATERIALS**

in k€	2010	2009
Cost of raw materials, supplies and merchandise	710,618	597,584
Cost of purchased services	124,162	93,478
Total	834,780	691,062

#### 31. PERSONNEL EXPENSES

in k€	2010	2009
Wages and salaries	106,075	84,361
Social securities and pensions	20,207	15,422
Total	126,282	99,783

The increase in personnel expenses is due to the increase in employees. We refer to note 69 in this regard. For further details on the remuneration of the executive board, we refer to the management report and note 70.

Share-based payment programs do not exist at SOLARWORLD Group.

#### 32. AMORTIZATION AND DEPRECIATION

The composition and allocation of amortization and depreciation of fixed intangible assets, property, plant and equipment and investment property can be taken from the fixed-asset-movement schedule. We refer to note 40 in this respect.

The item includes extraordinary depreciation of  $\in$  1,782k.

#### **33. OTHER OPERATING EXPENSES**

in k€	2010	2009
External staff	24,207	19,861
Selling expenses	18,493	9,114
Maintenance expenses	18,430	16,693
Marketing costs	17,058	12,809
Expenses in connection with other trade	16,325	0
Losses from currency translation	15,645	17,299
Insurances and contributions	6,724	5,490
Data processing expenses	5,049	3,774
Travel expenses	4,955	3,386
Rent and lease expenses	4,898	4,284
Expenses from additions to warranty provision	4,706	4,340
Allowances for receivables and uncollectible receivables	4,614	2,523
Legal fees, consultancy and audit expenses	4,459	3,588
Research and development costs (third party)	3,328	3,183
Sewage and waste disposal	2,083	1,699
Depreciation of assets held for sale	1,943	415
Expenses relating to other periods	1,912	1,376
Other personnel expenses	1,680	1,015
Phone, stamps, internet	1,547	1,303
Expenses from derivative financial instruments	1,057	963
Miscellaneous other operating expenses	13,494	14,012
Total	172,607	127,127

The losses from currency translation are faced by gains from currency translation amounting to  $\in$  18,828k (2009:  $\in$  16,828k) which are included in other operating income (Note 29).

 $\in$  16,258k of the expenses in connection with other trade result from silicon sales. The respective income amounts to  $\in$  17,071k. We refer to note 29.

With respect to expenses from derivative financial instruments, we refer to our statements in note 6. They are confronted with income from derivative financial instruments amounting to  $\in$  3,218k (2009:  $\in$  3,219k) which are included in other operating income.

#### 34. RESEARCH AND DEVELOPMENT

Research and Development costs of Solarworld Group made for a total amount of  $\in$  19,233k (2009:  $\in$  11,958k), the largest part of which results from non-personnel expenses.

#### **35. FINANCIAL RESULT**

#### a) Result from investments measured at equity

in k€	2010	2009
Income from investments measured at equity	6,604	5,856
Expenses from investments measured at equity	-6,354	-10,435
Total	250	-4,579

Expenses from investments measured at equity of € 1,941k resulted from the disposal of RGS Development BV in Nov. 2010.

#### b) Interest and similar income

in k€	2010	2009
Interest income	6,472	10,608
Other financial income	18,000	19,236
Total	24,472	29,844

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".

Other financial income mainly includes income from the addition of accrued interest from received customer advances.

#### c) Interest and similar expenses

in k€	2010	2009
Interest expenses	65,319	38,671
Other financial expenses	15,338	16,535
Total	80,657	55,206

# 180

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 mainly include expenses from the addition of accrued interest from received customer advances and commitment interest.

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€	2010	2009
Net gains and losses from		
financial assets and financial liabilites designated as measured at fair value	5,683	11,095
financial assets held for trading	3,781	-2,227
financial liabilities measured at amortized cost	2,340	0
Total	11,804	8,868

With respect to changes in recognition of items included in the other financial result, we refer to note 6.

The net result of the category "designated at fair value through profit or loss" is only marginally (2009:  $\in$  4m) influenced by the changes in credit risk.

Derivatives being 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. TAXES ON INCOME**

The following chart shows the composition of recognized tax expenses:

in k€	2010	2009
Actual domestic tax expenses	55,058	46,180
Actual foreign tax expenses	114	14
Total actual tax expenses	55,172	46,194
Deferred domestic tax expenses	3,745	6,003
Deferred foreign tax expenses	2,392	20,582
Total deferred tax expenses	6,137	26,585
Total recognized tax expenses	61,309	72,779

Taxes paid or owed on income in the individual countries as well as deferred taxes are recognized as taxes on income.

The US entities incurred tax losses in the past year as well as in prior years. At first, these were due to restructuring measures and, subsequently, the set up of new manufacturing facilities in Camarillo and a new and enlarged manufacturing facility in Hillsboro. On the basis of the strategic alignment of the Group, the market expectations and the current planning of the US entities, the realization of the deferred tax assets resulting from these losses can still be expected. IAS 12, however, makes great demands when it comes to capitalization of deferred taxes in case of losses in the near past. As in the prior year, no deferred taxes for loss carryforwards were set up by U.S. entities (potentially  $\notin$  17,465k).

With regard to the "Federal tax" the tax loss carryforwards of the US entities amount to an equivalent of some  $\notin$  136m. They can be offset with tax profits until at least 2024 and will then gradually be forfeited in the years 2025 and 2030. Deferred tax assets of some  $\notin$  42m fall upon these loss carry forwards. With regard to "State Tax" the tax loss carry forwards amount to some  $\notin$  105m. They can be offset with tax profits until at least 2018. They will then gradually be forfeited in between 2010 – 2021 in amount of  $\notin$  31m. For the rest, they ewill gradually be forfeited in between 2022 – 2031. Altogether, deferred taxes of som  $\notin$  9m fall upon these loss carry forwards.

For the rest, tax loss carry forwards within the group are marginal. For the main part, no deferred tax assets have been set up.

The following chart shows unbalanced and balanced deferred tax assets and liabilities with regard to accounting differences in the different balance sheet items as well as with regard to tax loss carryforwards:

	Deferred	tax assets	Deferred tax liabilities		
in k€	Dec. 31, 2010	Dec. 31, 2009	Dec. 31, 2010	Dec. 31, 2009	
Intangible assets/property, plant and equipment	1,382	1,550	31,109	25,609	
Other noncurrent assets	2,364	0	0	0	
Current assets	12,293	8,663	15,979	11,053	
Accrued investment grants	5,230	5,272	0	0	
Other noncurrent liabilities	2,088	3,481	5,720	2,873	
Current liabilities	3,376	895	5,154	521	
Tax loss carry forwards	214	231	0	0	
Allowance on other deferred tax assets	-1,138	0	0	0	
Total	25,809	20,092	57,962	40,056	
Offsetting	-20,614	-14,193	-20,614	-14,193	
Recognized deferred taxes	5,195	5,899	37,348	25,863	

In connection with hedge accounting as well as in connection with the accounting for financial assets available for sale, deferred tax assets of  $\notin$  219k (2009:  $\notin$  349k) and deferred tax liabilities of  $\notin$  3,273 k (2009:  $\notin$  709k) resulting in neither profit nor loss were recognized in equity at balance sheet date.

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, 2010. The corresponding temporary differences make for a total of  $\notin$  14.116k (2009:  $\notin$ 12,979k).

The substantial differences between nominal and effective tax rates in the course of the business year and the prior year are illustrated below:

in k€	2010	2009
Income before taxes	148,621	131,752
Expected income tax rate (incl. trade tax)	30,0 %	30,0 %
Expected income tax expenses	44,586	39,526
Deviating domestic and foreign tax burden	-3,863	-1,621
Actual taxes relating to other periods	1,589	1,146
Taxes from non-deductible expenses	3,020	2,778
Tax reductions due to tax exempt gains	-631	-1,436
Not formed deferred taxes on new tax loss carryforwards	17,926	12,916
Allowances for existing deferred taxes on loss carryforwards	0	19,814
Utilization of impaired tax loss carryforwards	-1,169	0
Allowance on other deferred tax assets	1,138	0
Other deviations of tax expenses	-1,287	-344
Recognized income tax expenses	61,309	72,779
Effective income tax rate	41.3 %	55.2 %

### **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 exclusively results from continued operations. Due to the acquisition of a total of 4,838,723 treasury shares, the number of shares in circulation decreased in the annual period 2010. The weighted average of the shares in circulation used as a basis for the determination of earnings per share was recalculated per balance sheet date and now amounts to 108,841,663. A pro-rata temporis weighting of the outstanding shares was conducted in the scope of average determination.

# **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.

Since the amounts that were re-classified from equity to result of the period 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 USA,
- Trade.

The reason for this is the prevailing internal organization, reporting and steering structure of SOLARWORLD AG that focuses on the end product "solar module" both as regards production and trade. The greater objective of the group is to increase the existing synergy and efficiency potentials of the entire value added chain and, thus, to be able to achieve strategic competitive advantages for the end product "solar module".

No operating segments were combined for setting up the aforementioned reportable operating segments.

Each of the two production segments combine 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 modules.

The category "all other segments" includes various business activities of the group that did not materially affect the financial position and financial performance in 2010.

The measurement methods remained unchanged from those used in the prior year.

# 184 Information on operating segments for the annual period 2010 // in M ${\rm e}$

	Production Germany	Production USA	Trade	All other segments	Elimination	Con- solidated
Sales						
External sales	452	17	985	1	-150	
Intersegment sales	347	277	1	9	-634	
Total sales	799	294	986	10	-784	1,305
Result						
Operating result (EBIT)	164	-10	53	-5	-9	193
Financial result						-44
Income before taxes on income						149
Taxes on income						-62
Consolidated net income						87
Amortization and						
depreciation	53	33	1		-1	
Material non-cash items	29	0	0	0	0	29

# INFORMATION ON OPERATING SEGMENTS FOR THE ANNUAL PERIOD 2009 // IN M€

	Production Germany	Production USA	Trade	All other segments	Elimination	Con- solidated
Sales						
External sales	415	39	759	2	-202	
Intersegment sales	365	179	3	7	-554	
Total sales	780	218	762	9	-756	1.013
Result						
Operating result (EBIT)	166	-16	9	-1	-5	153
Financial result						-21
Income before taxes on income						132
Taxes on income						-73
Consolidated net income						59
Amortization and						
depreciation	40	22	1	1	0	64
Material non-cash items	25	0	0	0	0	25

With respect to external revenue and inter-segment revenue, the elimination column includes eliminations in connection with toll manufacturing transactions and expense and income consolidation, respectively. Reconciliation of the balance of the segment results to the consolidated result is mainly attributable to journal entries in connection with the intra-group profit elimination and to other consolidation entries with effect on profit or loss.

Revenue of the category "all other segments" primarily comprises the following:

in m€	2010	2009
Research and development (intra-group)	9	7
Proceeds from power input	1	1
External project proceeds and module sales	0	1
Total	10	9

# 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.

in m€	Reve	enue	Intangible assets, property, plant and equipment and investment property		
	2010	2009	Dec. 31, 2010	Dec. 31, 2009	
Germany	691	716	627	516	
Rest of Europe	304	180	0	0	
Asia	127	75	0	0	
USA	155	33	385	309	
Others	28	9	0	0	
Total	1,305	1,013	1,012	825	

# 186 COMMENTS ON THE 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:

	Cost						
in k€ I. Intanqible assets	As per Jan. 1, 2010	Additions to consoli- dated entity	Reclassi- fications	Additions	Disposals	Currency difference	As per Dec. 31, 2010
1. Concessions, industrial property and similar rights and assets, and licenses in such rights and assets	16,937		2,686	2,146	115	182	21,836
2. Goodwill	34,797			86			34,883
3. Prepayments	390		-390	238			238
	52,124	0	2,296	2,470	115	182	56,957
II. Property, plant and equipment							
1. Land and buildings	251,090	18,128	31,784	18,320		7,200	326,522
2. Technical equipment and machinery	545,868	26	128,058	106,980	3,196	12,176	789,912
3. Other equipment, factory and office equipment	23,256	85	3,247	3,479	841	475	29,701
4. Construction in progress and prepayments	182,639	165	-165,385	84,814	2,694	6,318	105,857
	1,002,853	18,404	-2,296	213,593	6,731	26,169	1,251,992
III. Investment property	0	21,264	0	0	0	0	21,264
	1,054,977	39,668	0	216,063	6,846	26,351	1,330,213

	Cost						
in k€	As per Jan. 1, 2009	Additions to consoli- dated entity	Reclassi- fications	Additions	Disposals	Currency difference	As per Dec. 31, 2009
I. Intangible assets							
<ol> <li>Concessions, industrial property and similar rights and assets, and licenses in such rights and assets</li> </ol>	12,267		527	4,246	16	-87	16,937
2. Goodwill	34,547			250			34,797
3. Prepayments	116		-221	495			390
	46,930	0	306	4,991	16	-87	52,124
II. Property, plant and equipment							
1. Land and buildings	139,003		53,545	61,876	121	-3,213	251,090
2. Technical equipment and machinery	417,871		75,793	70,049	11,874	-5,971	545,868
3. Other equipment, factory and office equipment	17,415		426	6,253	611	-227	23,256
4. Construction in progress and prepayments	165,409		-130,070	150,013	107	-2,606	182,639
	739,698	0	-306	288,191	12,713	-12,017	1,002,853
	786,628	0	0	293,182	12,729	-12,104	1,054,977

mounts	Carrying a	Amortization and depreciation					
As pe Dec. 31, 200 <sup>4</sup>	As per Dec. 31, 2010	As per Dec. 31, 2010	Currency difference	Disposals	Additions	Reclassi- fications	As per Jan. 1, 2010
7,32	9,782	12,054	83	97	2,451		9,617
29,58	29,587	5,296			86		5,210
39	238						
37,29	39,607	17,350	83	97	2,537	0	14,827
220,33	280,595	45,927	692		14,483		30,752
372,473	551,086	238,826	1,754	2,844	66,519	2	173,395
12,08	14,814	14,887	274	747	4,192	-2	11,170
182,63	105,361	496	-6		502		
787,53	951,856	300,136	2,714	3,591	85,696	0	215,317
	20,994	270	0	0	270	0	0
824,83	1,012,457	317,756	2,797	3,688	88,503	0	230,144
mounts	Carrying a			depreciation	Amortization and		
As pe Dec. 31, 2003	As per Dec. 31, 2009	As per Dec. 31, 2009	Currency difference	Disposals	Additions	Reclassi- fications	As per Jan. 1, 2009
4,15	7,320	9,617	-40	16	1,563	1	8,109
29,58	29,587	5,210			250		4,960
11	390						
11) <b>33,86</b>	390	14,827	-40	16	1,813	1	13,069
		<b>14,827</b> 30,752	<b>-40</b> -374	16	<b>1,813</b>	<u> </u>	<b>13,069</b> 21,038
33,86	37,297			8,789			
<b>33,86</b> 117,96	<b>37,297</b> 220,338	30,752	-374		10,002	86	21,038
<b>33,86</b> 117,96 283,50 8,53	<b>37,297</b> 220,338 372,473 12,086	30,752 173,395	-374 -984	8,789	10,002 48,875	86 -76	21,038 134,369
<b>33,86</b> 117,96 283,50	<b>37,297</b> 220,338 372,473	30,752 173,395	-374 -984	8,789	10,002 48,875	86 -76	21,038 134,369

# 188 41. INTANGIBLE ASSETS

Goodwill recognized in intangible assets results from the acquisition of DEUTSCHE SOLAR GMBH in 2000. This goodwill is attributed to the CGU "Production Germany". We refer to note 8.

Self-generated intangible assets were not 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 PROPERTIES**

To some extent, the building complex of AUERMÜHLE will be rented to third parties starting in 2011. The concerned parts of the building are therefore classified as investment property. Due to the disclosure of hidden reserves in the scope of the acquisition of AUERMÜHLE in 2010, the carrying amounts of these building parts equal their respective fair value. The determination of the fair value occurred via internal calculations on the basis of transactions effected in the business year.

in k€	2010
Rental income derived from investment properties	426
Direct operating expenses generating rental income	-95
Direct operating expenses that did not generate rental income	-226
Net profit arising from investment properties carried at amortized cost	105

The group is not subject to any limitations regarding the disposability of investment property while contractual obligations to acquire, establish or develop investment property do not exist. Contractual obligations to repair, maintenance or improvement do not exist either.

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.

For the period April 1, 2011 to March 31, 2014, a rent agreement was concluded. The future minimum rental payments are as follows:

in k€	2010
In the next year	414
From 2 to 5 years	1,243
After the 5th year	0
Total	1,657

### 44. INVESTMENTS MEASURED AT EQUITY

in k€		Dec. 31, 2010	Dec. 31, 2009
QATAR SOLAR TECHNOLOGIES Q.S.C.	29%	23,082	0
SOLARWORLD KOREA LTD.	50%	22,212	26,428
JSSI GMBH	49%	12,146	12,318
SOLARPARC AG	29%	7,316	8,375
SOLARPARK M.E. LTD.	50%	725	1,181
RGS DEVELOPMENT B.V.	0%	0	1,941
Summe		65,481	50,243

In April 2010, SOLARWORLD AG acquired a 29 percent share in 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 on the Arab Peninsula.

SOLARWORLD AG holds the investment in SOLARWORLD KOREA LTD. The investment concerns a 50 percent share in the assets and results. The entity operates a module plant.

The investment in JSSI GMBH is held via SOLARWORLD AG and concerns a 49 percent share in the assets and result. Together with EVONIK-Degussa GmbH, the company has developed and produced a manufacturing process for solar silicon on the basis of which it now produces solar silicon.

SOLARWORLD AG holds the investment in the listed SOLARPARC AG. The investment concerns a 29 percent share in the assets, the result and the voting rights. In addition to renewable energy generation, the operations of the entity include management, development, conceptual design and marketing of solar parks and wind power stations. At balance sheet date, the fair value of SOLARPARC AG's shares – derived from its market price – amounted to € 12,300k (2009: € 12,915k). On Nov. 15, 2010 SOLARWORLD AG decided to offer the stakeholders of SOLARPARC AG to acquire all registered shares of SOLARPARC AG by way of a voluntary take-over bid by granting one registered share of SOLARPARC AG share. For details we refer to our explanations in note 64.

Effective per Nov. 8, 2010, deutsche solargmbh sold the 35 percent investment in RGS Development BV to Sunergy Investco B.V., Middelburg/The Netherlands, for  $\in$  1.

SOLARWORLD AG holds the investment in SOLARPARK M.E. LTD., which concerns a 50 percent share in assets and result. So far, the entity mainly developed and constructed manufacturing facilities for module production.

We refer to note 68 as regards related party disclosures.

The following chart includes summarized financial information regarding the 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€	Dec. 31, 2010	Dec. 31, 2009
Attributable assets	172,167	201,236
of which current	73,172	144,415
of which noncurrent	98,994	56,821
Attributable liabilities	103,127	151,826
of which current	68,411	131,931
of which noncurrent	34,716	19,895
Attributable revenue	195,155	138,130
Attributable net income for the year	2,191	576

#### 45. NON-CURRENT OTHER FINANCIAL ASSETS

The other financial assets mainly include amounts classified as non-current for re-insurances of  $\in$  894k (2009:  $\in$  849k) 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 balance sheet date. The current proportion is recognized in current other financial assets (compare note 52). In addition, the item includes securities amounting to  $\in$  167k (2009:  $\in$  0k).

### **46. DEFERRED TAX ASSETS**

Deferred tax assets entirely result from accounting policies for recognition and measurement of assets and liabilities that differ from tax principles. The development of deferred tax assets is included in the comments on tax expenses (note 36).

#### **47. OTHER NON-CURRENT ASSETS**

The item exclusively concerns the non-current proportion of prepayments made on raw materials. We refer to our statements in note 12.

# **48. INVENTORIES**

in k€	Dec. 31, 2010	Dec. 31, 2009
Raw materials and supplies	94,382	74,485
Work in progress	75,896	71,104
Finished goods and merchandise	116,031	68,276
Current prepayments	51,061	54,642
Total	337,370	268,507

Finished goods of the group in terms of the aforestated itemization only concern solar modules and wafers of DEUTSCHE SOLAR GMBH.

In the annual period, inventory impairments of  $\in$  7,817k (2009:  $\in$  5,276k) were recognized as expenses. If the reasons that made for the impairment of inventories cease to exist, the recognized impairment loss is reversed. As in the prior year, reversals of impairment losses were not conducted in the annual period.

As in the prior year, restrictions on ownership or disposal did not exist.

# 49. TRADE RECEIVABLES

in k€	Dec. 31, 2010	Dec. 31, 2009
Trade receivables	133,396	211,401
Receivables from construction contracts	7,487	0
Total	140,883	211,401

The following chart illustrates the aging structure of the receivables:

in k€	Dec. 31, 2010	Dec. 31, 2009
Neither past due nor impaired	87,924	181,280
Past due but not impaired		
- up to 30 days	21,833	10,712
- between 31 and 60 days	9,845	4,458
- between 61 and 90 days	1,805	5,263
- between 91 and 180 days	5,308	2,945
- between 181 and 360 days	6,207	6,543
- exceeding 360 days	5,299	200
Impaired	2,662	0
Total	140,883	211,401

We did not identify any indications requiring valuation allowances for those trade receivables not impaired or allowances did not have to be set up due to existing collaterals. Approximately half of the receivables included in the cluster "between 61 and 90 days" were paid in the course of preparation of the consolidated financial statements. The majority of the receivables included in "between 91 to more than 360 days" result from wafer sales that mostly originate from long-term agreements. With regard to the respective default risks, we refer to note 65. In addition, the item includes receivables from project operations that have the character of security deposit.

The following chart illustrates the development of valuation allowances:

in k€	2010	2009
As per Jan. 1	2,477	1,239
Utilization	-587	-240
Net appropriation	3,799	1,426
Currency translation	3	52
As per Dec. 31	5,692	2,477

# 50. INCOME TAX ASSETS

Tax assets concern refund claims for corporation and trade tax paid or corresponding foreign taxes due to excessive prepayments and necessary changes to the tax assessment of previous business years.

# **51. OTHER RECEIVABLES AND ASSETS**

in k€	Dec. 31, 2010	Dec. 31, 2009
VAT receivables	22,166	3,124
Receivable from investment subsidies	18,435	0
Deferred items	3,628	2,835
Electricity tax refund	2,275	1,718
Other prepayments	705	2,970
Other	1,747	2,340
Total	48,956	12,987

The receivable from investment subsidies deals with an expected cash inflow on the basis of the legal terms of the Investment Subsidy Act of 2009 or rather 2010 according to the decision of the European Commission as of July 6, 2010.

Unsettled receivables from electricity tax refunds result from the German Electricity Tax Act.

# **52. OTHER CURRENT FINANCIAL ASSETS**

in k€	Dec. 31, 2010	Dec. 31, 2009
Debt securities and similar investments	25,939	56,458
Money market and similar investments	24,506	21,888
Derivative financial instruments	23,298	0
of which in hedging relationship: k€ 8,295 (prior year k€ 0)		
Loans to related parties	21,206	3,000
Other borrowings	3,541	0
Other financial assets	646	256
Summe	99,136	81,602

With respect to investment strategy, measurement and risks of money market and similar investments, we refer to our financial instrument disclosures in notes 5, 16 and 65.

Derivative financial instruments include an interest rate limit transaction in form of a maximum rate agreement (cap) for hedging increasing interest rates for interest-bearing loans and credit lines. The cap has a fair value of  $\notin$  4,880k as of balance sheet date. No hedge accounting was applied with regard to the cap.

In addition, derivative financial instruments include commodity swaps with fair values amounting to  $\notin$  10,123k in total that are not included in a hedging relationship. These are countered by mirror image commodity swaps with negative fair values of  $\notin$  6,905k.

#### 53. LIQUID FUNDS

Liquid funds almost entirely concern bank balances. As per balance sheet date, these were invested in – mostly short-term – fixed term deposits and day-to-day money at different banks.

#### 54. ASSETS AND LIABILITIES HELD FOR SALE

At balance sheet date, there were no assets (2009:  $\in$  836k) and liabilities (2009:  $\in$  0k) held for sale. Impairments were accounted for in amount of  $\in$  1,943k (2009:  $\in$  415k) for assets held for sale during the year. They were recognized in other operating expenses. Property, plant and equipment held for sale concerned several facilities that were not supposed to be used for the production or research process and, thus, were disposed of on short notice.

# 55. EQUITY

### Subscribed capital

At balance sheet date, the capital stock amounts to  $\in$  111.72m (2009:  $\in$  111.72m) and exclusively comprises common stock, a total of 111,720.000 non-par bearer shares.

#### Authorized capital

At the shareholders' meeting of May 20, 2010, the capital stock increases authorized in past shareholders' meetings were revoked and the executive board was authorized for a maximum period of 5 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 a total of  $\in$  55,860,000 by issuing new bearer or registered shares for cash contribution or contribution in kind.

### **Conditional capital**

SOLARWORLD AG does not have any conditional capital.

#### **Treasury shares**

By resolution of the shareholders' meeting of May 20, 2010, the executive board was authorized to purchase treasury shares. In accordance with § 71 para. 1 No. 8 AktG, the authorization is subject to a fixed-term and expires per 12 midnight of May 20, 2015, and is limited to an extent of up to 10 percent of the capital stock. The earlier authorization for acquisition of treasury shares, granted by resolution of the shareholders' meeting of May 20, 2009, was revoked upon the new authorization taking effect.

On the basis of the authorization of the shareholders' meeting of May 20, 2009 and May 20, 2010, SOLARWORLD AG acquired a total of 4,838,723 treasury shares with a nominal value of  $\in$  1 at cost of  $\in$  41,830k until Dec. 31, 2010. The weighted average of the shares in circulation used as a basis for the determination of the result per share was recalculated per balance sheet date and amounts to 108,841,663 units.

#### Other reserves

**EXCHANGE RESERVE**. The exchange reserve includes differences arising from currency translation in the course of translating financial statements of foreign subsidiaries.

**HEDGING RESERVE AND AFS-RESERVE**. An amount of  $\in$  6,607k (2009:  $\in$  849k) of the hedging reserve are gains and losses from hedging relations that were classified as highly effective in the scope of cash flow hedges. At balance sheet date, an AfS-reserve no longer exists (2009:  $\in$  0k). With regard to deferred taxes set off against the hedging reserve, we refer to note 36.

# 194 Dividend distribution

The distributable amounts concern SOLARWORLD AG's unappropriated retained earnings, which follows German commercial law. For the annual period 2009, a dividend of  $\in$  0.16 per share (total amount:  $\in$  17,649k) was distributed after approval of the shareholders' meeting on May 20, 2010.

#### **Dividend suggestion**

The executive board suggests the distribution of a dividend of  $\in$  0.19 per share for the reporting year 2010. The payment of this dividend depends on the approval of the shareholders' meeting in May 2011. If approved by the shareholders, the dividend distribution will amount to some  $\in$  21,1m taking into account the shares exchanged in the course of the take-over bid to the shareholders of SOLARPARC AG. The dividend is subject to tax deductions amounting to 26.38 percent (25 percent capital yields tax and 5.5 percent solidarity surcharge).

# 56. NON-CURRENT AND CURRENT FINANCIAL LIABILITIES

in k€	Dec. 31, 2010	Dec. 31, 2009
Bonds	429,397	8,978
Issued assignable note loans	380,939	404,569
Issued senior notes (US-Private Placement)	130,944	121,720
Bank loans	122,962	227,594
Deposits from toll manufacturers	47,617	13,589
Derivative financial instruments	7,637	12,289
of which in hedging relationship: $\in$ 732k (prior year $\in$ 10,057k)		
Other	22,135	760
Total	1,141,631	789,499

Bank loans are hedged by customary chattel mortgages of property, plant and equipment and inventories as well as by land charge creation in an amount of  $\in$  19,2m (2009:  $\in$  18.7m) that are the respective group companies' responsibility.

The increase in bonds results from the placing of a bond amounting to  $\in$  400m in Jan. 2010.

The decrease in bank loans results basically from repayment of one syndicated credit.

Deposits from toll manufacturers are payments received from toll manufacturers at balance sheet date regarding SOLARWORLD products that are to be processed and will only be returned after successful processing.

Other financial liabilities include a purchase price obligation and capital shares of external shareholders that result from the acquisition of AUERMÜHLE. We refer to note 7. In addition, other financial liabilities include an amount of  $\notin$  148k (2009:  $\notin$  66k) for a financial guarantee issued by SOLARWORLD AG. We refer to our statements in note 16.

# **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. Thus, repayment obligations are not expected to arise.

in k€	As per Jan. 1, 2010	Utilization	Reversal	Addition	Currency translation	As per Dec. 31, 2010
Warranties	15,397	1,278	149	5,160	139	19,269
Pensions	7,995	390	0	424	0	8,029
Building restoration obligations	4,467	0	0	195	347	5,009
Pending losses from onerous contracts	741	658	9	704	43	821
Other provisions	849	694	40	961	-2	1,074
Total	29,449	3,020	198	7,444	527	34,202

### 58. NON-CURRENT AND CURRENT PROVISIONS

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 (the performance guarantee is granted for a period of 25 years). It is subject to compounding at matched maturity interest rate. In the business year, this makes for interest expenses of € 454k (2009: € 306k), which are recognized in other financial expenses in note 35c).

The provision for building restoration obligations concerns tenant fixtures that have to be removed by SOLARWORLD Group after expiration of the lease term. Due to the non-current nature of the provision, it is subject to compounding at matched maturity interest rate. In the reporting year, this makes for interest expenses of  $\in$  195k (2009:  $\in$  172k), which are recognized in other financial expenses in note 35c).

The addition to the provision for pending losses from onerous contracts of  $\in$  704k results from taking into account contingent losses in connection with rental payments for currently not used vacant premises.

Other provisions include provisions for risks of litigation in an amount of  $\in$  340k (2009:  $\in$  508k), which concern possible claims from pending legal disputes.

#### 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 DBO (defined benefit obligation):

	Dec. 31, 2010	Dec. 31, 2009
Discount rate	5.3%	5.5%
Future salary increase	2.5%	2.5 %
Future pension increase	2.0%	2.0%

The Heubeck standard tables RT 2005 G were used with regard to mortality and invalidity.

# Reconciliation of the DBO with the balance sheet is illustrated below:

in k€	Dec. 31, 2010	Dec. 31, 2009
Present value of funded obligations	7,682	7,470
Unrealized actuarial gains	347	525
Pension provision	8,029	7,995

The following chart illustrates the DBO's development:

in k€	2010	2009
Extent of obligation per Jan. 1	7,470	7,407
Interest expenses	411	407
Current service cost	13	14
Benefits paid	-390	-338
New actuarial losses (+)/ gains (–)	178	-20
Extent of obligation per Dec. 31	7,682	7,470

The following amounts were recognized for defined benefit plans in the current and prior reporting periods:

in k€	2010	2009	2008	2007	2006
Extent of obligation per Dec. 31	7,682	7,470	7,407	7,419	8,200

Unredeemed actuarial gains can be taken from the following chart:

in k€	2010	2009
As per Jan. 1	525	505
Addition	0	20
Reversal	-178	0
As per Dec. 31	347	525

# 59. TRADE PAYABLES

in k€	2010	2009
Trade payables	112,755	83,750
Liabilities from construction contracts	515	193
Total	113,270	83,943

# 196

# **60. OTHER NON-CURRENT AND CURRENT LIABILITIES**

in k€	Dec. 31, 2010	Dec. 31, 2009
Customer advances	247,410	275,965
Profit-oriented employee compensation	18,639	8,951
Outstanding invoices	12,131	12,520
Other personnel obligations	11,016	14,095
VAT	561	7,404
Claimed contributions	0	938
Other	6,229	9,464
Summe	295,986	329,337

Customer advances mainly concern advances from long-term wafer purchase agreements.

The recognized obligation from profit-oriented employee compensation includes only that proportion of employee profit-sharing that was incurred in 2010 as well as the employer's share of social security contributions regarding obligations originating in prior periods. Employee entitlements that originated more than twelve months before balance sheet date were netted with the corresponding insolvency protection amount. We refer to our statements in note 24. Interest payable from interest return of liabilities for profit-oriented employee compensation amounts to  $\notin$  947k (2009:  $\notin$  1,758k) in the annual period and is included in interest expenses in note 35c).

Other personnel liabilities substantially consist of employee bonuses and holiday entitlements.

Due to the disposal of RGS Development BV, no claimed contributions exist at Dec. 31, 2010.

# **61. 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).

#### **62. INCOME TAX LIABILITIES**

The item includes corporation and trade tax assessed by the tax authorities and calculated or estimated by the group companies as well as corresponding foreign taxes resulting from tax laws, including those amounts that will probably result from tax field audits performed.

With regard to potentially generated future taxable profits of SOLARWORLD INDUSTRIES AMERICA LP, SOLARWORLD Group is additionally burdened with German corporation tax plus solidarity surcharge irrespective of American taxation. This might make for future tax payments in a maximum amount of € 19,244k (2009: € 19,244k) for so-LARWORLD Group. Current or deferred tax liabilities had to be recognized only to a marginal extent in this respect as these tax payments only marginally concern the current period or previous periods and do not result from temporary differences.

# 198 OTHER COMMENTS

# **63. OTHER FINANCIAL OBLIGATIONS**

in m€	Dec. 31, 2010	Dec. 31, 2009
Purchase commitments from raw materials and licence agreements		
- within one year	322	343
- between 1 and 5 years	1,348	1,228
- more than 5 years	682	1,046
Commitments from investments in property, plant and equipment		
- within one year	100	158
- between 1 and 5 years	0	0
- more than 5 years	0	0
Obligations from perennial rent agreements		
- within one year	3	4
- between 1 and 5 years	6	7
- more than 5 years	3	3
Total	2,464	2,789

#### 64. CONTINGENCIES AND EVENTS AFTER BALANCE SHEET DATE

A comprehensive presentation of corporate risks and events after the 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.

# **Takeover Solarparc AG**

On Nov. 15, 2010, SOLARWORLD AG decided to offer to the shareholders of SOLARPARC AG to acquire all registered shares of SOLARPARC AG by way of a voluntary public takeover bid by granting one registered share of SOLARWORLD AG in exchange for each SOLARPARC AG share. The respective tender document as authorized by the Federal Financial Supervisory Authority (BaFin) was published on Dec. 31, 2010.

Until the expiration of the additional acceptance term on Feb. 17, 2011, midnight, 3,914,116 shares were handed in for exchange. Thus, SOLARWORLD AG's voting rights in SOLARPARC AG amount to some 93.71 percent after the share exchange. The entity is therewith fully consolidated in 1st quarter 2011. Feb. 25, 2011 is deemed acquisition and, thus, first-time consolidation date. The effective fair value of the consideration at the time of acquisition amounts to some  $\in$  31 m. Due to the exchange of shares, Dr.-Ing. E.h. Frank Asbeck's indirect and direct investment in SOLARWORLD AG increased from 25.06 percent to 27.8 percent.

SOLARPARC AG is the parent company of SOLARPARC Group and responsible for both strategy and operations. SO-LARPARC AG plans, constructs, operates and sells renewable energy power plants and so far divided its operations into two strategic business units: Power generation and industrial plants. Through management and the operation of the group-owned renewable energy power plant, the sustainably generated power is fed into the network for consideration in accordance with the Renewable Energy Act. In addition, SOLARPARC AG assumes technical and commercial management of renewable energy plants as a service for its customers. Major renewable energy plants are sold to institutional and private investors either individually or bundled as a fund project. In general, the power plants originate from SOLARPARC AG's own planning. With the take-over of SOLARPARC AG its expertise will be fully integrated into SOLARWORLD group. Thereby, the strengths of SOLARPARC AG in connection with project planning and management of major energy plants can be used by SOLARWORLD group in order to intensify its business in the area of international solar projects.

Integration of SOLARPARC AG into SOLARWORLD Group will, amongst others, go hand in hand with SOLARPARC AG's full retreat from the stock exchange and with the entity's transformation into a limited liability company.

Since the time of acquisition of SOLARPARC AG is before the authorization for disclosure of the financial statements, the first-time recognition of the business combination, however, is not fully effected at the time of authorization of the disclosure of the financial statements, SOLARWORLD AG uses the facilitation of IFRS 3.B66. Especially the disclosures regarding acquired receivables, amounts recognized as of the acquisition date for each major class of assets acquired and liabilities assumed, contingent liabilities, total amount of goodwill expected to be deductible for tax purposes, transactions that need to be accounted for separate from the acquisition of the assets and assumption of liabilities and the business combination achieved in stages cannot be made for lack of valid data at the time of acquisition.

At Dec. 31, 2010, assets and liabilities of SOLARPARC Group on the basis of a preliminary consolidated balance sheet are as follows:

	in k€
Intangible assets and property, plant and equipment	134,475
Other non-current assets	4,729
Trade receivables	5,487
Other receivables and assets	1,973
Liquid funds	16,285
Other current assets	179
Assets	163,128
Equity	25,129
Minority shares	8,033
Financial liabilities	104,898
Provisions	1,938
Trade payables	8,288
Current and deferred tax liabilities	5,576
Other current liabilities	9,266
Equity and liabilities	163,128

#### **65. FINANCIAL INSTRUMENTS**

## a) Capital management

A comprehensive presentation of the principles and objectives regarding the Group's capital management is included in the group management report that, in accordance with German laws and regulations, is to be prepared and published at the same time as these consolidated financial statements. The details are given in the scope of the group's financial position.

### b) Principles and objectives of financial risk management

In its capacity as an internationally operating group, SOLARWORLD AG is exposed to market, default 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 executive board and with the 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 executive board 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, SOLARWORLD Group aims at attaining a rate of return slightly exceeding the money market level. Thus, SOLARWORLD Group basically invests free liquid funds in financial investment products in the form of sight deposits (fixed-term deposits as well as day-to-day money) with financial institutes, investment funds, assignable loans and investment certificates. To limit the risks from changes in market prices, the investments are limited to financial investment products whose risk structure can be allotted to the money or debt securities market. Moreover, central management and broad diversification of the investments with regard to debtors works against the establishment of risk concentrations. To minimize default risks, assignable loans and investment certificates are purchased only from leading financial institutions that have a credit rating in the investment grade area.

# 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.

# 200

#### **Currency risks**

SOLARWORLD Group's currency risks mainly result from financing measures and 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.

In the financing sector, foreign currency risks result from the issuance of senior notes (US Private Placement) in US\$ that, however, were fully hedged by application of an interest/currency swap.

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 long-term contracts for 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 either denominated in functional currency or are translated into functional currency through the use of derivatives. Hence, exchange rate changes basically influence the result only with regard to these foreign currency items. Interest receivable and payable from financial instruments are also either directly recognized at functional currency or transferred to functional currency by way of using derivatives. Thus, only irrelevant effects on the result can arise in this regard.

However, upon utilization of hedging instruments that are involved in effective cash flow hedge relationships for hedging currency risks, changes in exchange rates have consequences on the hedging reserve recognized in equity.

If the Euro revalues (devalues) towards the US\$ by 10 percent, this will make for a negative (positive) effect on earnings before tax of  $\in$  984k (2009:  $\in$  2,579k). If taxes were not taken into account, the hedging reserve in equity would, in the event of a respective revaluation or devaluation, be  $\in$  2,352k (2009:  $\in$  1,906k) higher or  $\in$  1,925k (2009:  $\in$  1,559k) lower, respectively. With regard to all other currencies, the group's currency risk is irrelevant.

#### Interest risks

On the borrowing side, the Group steers its interest risk via a portfolio of fixed and variably interest-bearing borrowings adjusted to the market environment. For this purpose, SOLARWORLD Group concludes interest rate swaps that are subject to exchanging fixed interest and variable interest-bearing amounts with contract partners. In consideration of existing interest rate swaps, some 99 percent (2009: 84 percent) of the Group's borrowings were subject to fixed interest rates at balance sheet date. Due to the high level of liquidity, SOLARWORLD Group is also subject to interest risks on the deposit side, as uncommitted liquid funds are mostly invested for the short-term. Furthermore, the group is confronted with interest rate risks in connection with an interest rate limit transaction in form of a maximum rate agreement (cap) which is not integrated in a hedging relationship.

If the market interest rate level increases by 50 basis points, the positive effect on earnings before tax amounted to  $\notin$  3,249k (2009:  $\notin$  1,550k). If taxes were not taken into account, the hedging reserve in equity would, in the event of a respective increase, be  $\notin$  59k (2009:  $\notin$  270k) higher. If the market interest rate level decreases by 50 basis points, the negative effect on earnings before tax amounted to  $\notin$  4,914k (2009:  $\notin$  1,550k). Without consideration of taxes the hedging reserve in equity would, in the event of a respective reduction, be  $\notin$  141k (2009:  $\notin$  277k) lower.

# Other price risks

202

SOLARWORLD Group owns securities that are subject to various price change risks. The securities are mainly accounted for at fair value. Thus, changes in market prices directly affect profit or loss or equity.

If the market price level of the securities included in the portfolio increased (decreased) by a total of 5 percent, the positive (negative) effect on earnings before tax would amount to  $\in$  1,225k (2009:  $\in$  2,365k) while the AfS reserve in equity would be  $\in$  0k (2009:  $\in$  252k) higher (lower) without taking taxes into account.

Furthermore, SOLARWORLD group has concluded commodity derivatives for purposes of hedging the risk of an increasing silver price: The derivatives are integrated in an effective hedging relationship so that changes in value of the derivatives do not affect income before taxes with regard to the effective part. However, there will be an impact on the hedging reserve in equity. If the silver price level increased from 30 US\$/kg to 50 US\$/kg or decreased to 17 US\$/kg, the hedging reserve in equity would be higher by  $\notin$  19,535k or lower by  $\notin$ 12,804k.

## d) Default risks

At balance sheet date, SOLARWORLD Group has certificated receivables from financial institutions in a nominal amount of  $\in$  25m. The credit ratings of these financial institutions range at Aa3 (source: Moody's). For the rest, SOLARWORLD Group invested most of its free liquidity in sight deposits at German financial institutions. Thus, we estimate that the default risk is rather marginal.

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.

To further limit default risks, receivables from non-group module sales are mostly hedged via credit insurances. Hence, the respective default risk is regarded rather remote.

With respect to receivables from wafer sales that mainly originate from long-term contracts, bad debt 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 default risk is economically provided for.

For the rest, the maximum default risk equals 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. Cash pooling agreements exist for the German fiscal unity. Central cash management determines the group-wide financial resources requirements on the basis of business planning. Due to available liquidity and existing credit lines, SOLARWORLD Group is not exposed to significant liquidity risks.

Contracts in connection with borrowed capital amounting to € 581m contain regulations that will grant creditors the right to demand early redemption of the loans if certain financial ratios (covenants) are not met. The respective relevant key data is constantly monitored and reported to the Executive Board. The financial ratios mainly concern key data regarding the level of indebtedness and equity. In the course of the business year, these ratios were continuously exceeded and there are no indications at hand that suggest they might not be met in the future. In addition, creditors are entitled to request the premature repayment of the loans if a change of control takes place at SOLARWORLD AG. This right is explained in detail in the report on § 315 para. 4 HGB.

The following chart shows the future undiscounted cash flows of financial liabilities that affect the future liquidity status of SOLARWORLD Group.

Interest and redemption payments are taken into account. Interest and redemption payments are based on the contractually stipulated interest and redemption payments. The interest rates last specified prior to Dec. 31, 2010 were used with regard to financial instruments subject to variable rates. As far as cash flows in foreign currency are concerned, the currency rate at balance sheet date is used for the future.

Undiscounted cash flows per Dec. 31, 2010 in k€	Total	2011	2012	2013	2014	2015	2016ff.
Bonds	557,019	33,090	24,500	24,500	24,500	24,500	425,929
Issued assignable loans	470,291	19,931	19,931	19,931	195,738	10,577	204,183
Issued senior notes (US Private Placement)	161,306	7,248	7,248	91,068	2,311	2,311	51,120
respective derivative financial instrument	954	-480	-480	872	165	165	712
Bank loans	134,111	18,907	18,176	9,817	78,221	804	8,186
respective derivative financial instrument	992	533	326	133	0	0	0
Trade payables	113,270	113,270	0	0	0	0	0
Derivative financial instruments with no relation to financial liabilities	6,905	6,905	0	0	0	0	0
Other liabilities	92,774	79,799	2,636	7,349	850	852	1,288
Total	1,537,622	279,203	72,337	153,670	301,785	39,209	691,418
Undiscounted cash flows per Dec. 31, 2009 in k€	Total	2010	2011	2012	2013	2014	2015ff.
Bonds	9,386	601	8,785	0	0	0	0
Issued assignable loans	526,791	21,371	21,371	21,371	21,371	197,178	244,129
Issued senior notes							

7,224

- 456

26,464

83,943

2,232

16,477

158,783

927

7,224

-456

576

0

0

1,585

86,079

46,994

7,224

-456

57,687

352

0

0

4,884

91,062

84,970

6,970

48,080

144

0

0

357

161,892

2,645

-169

77,877

0

0

0

0

277,531

50,562

3,746

1,953

0

0

0

0

300,390

159,849

259,055

9,179

1,999

83,943

2,232

23,303

1,075,737

(US Private Placement)

respective derivative

financial instrument

respective derivative financial instrument

Derivative financial instruments with no relation to financial

Bank loans

Trade payables

Other liabilities

liabilities

Total

# 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 balance sheet items.

in k€	Meas	Measurement category IAS 39				
	Designated as at fair value through profit or loss	Held for trading	Loans and receivables	Available for sale		
Trade receivables			140,883			
Other receivables and assets			512			
Other financial assets	24,506	15,003	51,228			
Liquid funds			612,451	1,022		
Total	24,506	15,003	805,074	1,022		

# Assets Dec. 31, 2010

204

#### Assets Dec. 31, 2009

	M	Measurement category IAS 39				
in k€	Designated as at fair value through profit or loss	Held for trading	Loans and receivables	Available for sale		
Trade receivables			211,401			
Other receivables and assets			169			
Other financial assets	47,396		28,928	5,022		
Liquid funds			428,089			
Total	47,396	0	668,587	5,022		

# Liabilities Dec. 31, 2010

	Measurement categ	Measurement category IAS 39		
in k€	Financial liabilities recognized at amortized cost	Financial liabilities designated as at fair value	Purchase price liability from a business combination	Total carrying amounts
Financial liabilities	1,117,734	8,607	15,290	1,141,631
Trade payables	113,270			113,270
Other liabilities	18,639			18,639
Total	1,249,643	8,607	15,290	1,273,540

# Liabilities Dec. 31, 2009

	Measurement catego			
in k€	Financial liabilities recognized at amortized cost	Financial liabilities designated as at fair value	Purchase price liability from a business combination	Total carrying amounts
Financial liabilities	777,210	12,289		789,499
Trade payables	83,943			83,943
Other liabilities	8,951			8,951
Total	870,104	12,289	0	882,393

# 205

Total fair values	Total carrying amounts	Derivatives in hedging relationships
140,883	140,883	
512	512	
101,811	99,032	8,295
613,473	613,473	
856,679	853,900	8,295
fair values           140,883           512           101,811           613,473	amounts 140,883 512 99,032 613,473	carrying

Derivatives in hedging relationships	Total carrying amounts	Total fair values	IFRS 7 not applicable	Total carrying amounts
	211,401	211,401		211,401
	169	169	12,818	12,987
	81,346	84,046	1,105	82,451
	428,089	428,089		428,089
0	721,005	723,705	13,923	734,928

# Residual terms

Total fair values	IFRS 7 not applicable	Total carrying amounts	up to 1 year	between 1 and 5 years	exceeding 5 years
1,128,807		1,141,631	129,776	366,133	645,722
113,270		113,270	113,270		
18,639	277,347	295,986	80,069	149,780	66,137
1,260,716	277,347	1,550,887	323,115	515,913	711,859

		_	Residual terms		
Total fair values	IFRS 7 not applicable	Total carrying amounts	up to 1 year	between 1 and 5 years	exceeding 5 years
804,746		789,499	38,915	485,289	265,295
83,943		83,943	83,943		
8,951	320,386	329,337	78,675	141,899	108,763
897,640	320,386	1,202,779	201,533	627,188	374,058

Trade receivables include receivables from construction contracts in an amount of  $\in$  7,487k (2009:  $\in$  0k). Trade payables include liabilities from construction contracts in an amount of  $\in$  515k (2009:  $\in$  193k).

The fair value of financial assets and financial liabilities needs to be presented in the amount that could be generated if the respective instrument 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 balance sheet 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 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.
- Other financial assets include shares in an investment fund that are classified as designated as at fair value. For this fund, payment of the return value as well as its determination and announcement at balance sheet date and until the date of preparation are momentarily broken off. At preparation date, there was no active market for the majority of the securities included in the fund portfolio either. No valid market data was available for measuring the fund shares in application of the discounted-cash flow method either. The fair value of this fund is therefore based on an indicative measurement determined by the fund management company. This measurement in turn is based on the individual prices determined by the lead managers of the respective securities included in the portfolio, individual prices by third parties (brokers) and accepted model calculations. For validation of this value, we acknowledged the development of the indicative value of the fund management company after balance sheet date. In consideration of these analyses, the fund shares were measured at  $\in 24,506k$  (2009:  $\in 21,888k$ ) at balance sheet date. This equals the indicative measurement of the fund management company.
- The fair value of unlisted debt securities, bonds and bank loans is estimated in accordance with discounting of future cash flows in application of interest rates for borrowings currently comparable in condition, credit risk and residual terms. A credit spread of 200 (2009: 220) basis points was continuously assumed with regard to SOLAR-WORLD AG's credit risk.
- 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 and foreign exchange spot and forward rates as well as volatilities. The fair value of liabilities from terminable external interests in a fully consolidated partnership has been determined by updating the acquisition cost with the proportionate net income as no factors have appeared with material effect on value.

Financial instruments accounted for at fair value per balance sheet 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.

	Dec. 31, 2010			Dec. 31, 2009				
in k€	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Financial assets measured at fair value								
designated as such	24,506			24,506	47,396		25,508	21,888
held for trading	15,003		15,003					
derivatives in hedging relationships	8,295		8,295					
available for sale	1,022	1,022			5,022	5,022		
Financial liabilites measured at fair value								
held for trading	-6,905		-6,905		-2,232			-2,232
derivatives in hedging relationships	-732		-732		-10,057		-10,057	
from terminable partner- ship interests	-970			-970				
Total	40,219	1,022	15,661	23,536	40,129	5,022	15,451	19,656

The following chart shows the development of financial instruments included in stage 3 over the course of the business year:

in k€	2010	2009
As per Jan. 1	19,656	24,538
Addition	-1,104	0
Profits recognized in other financial result	7,442	6,161
Disposal	0	-5,037
Distributions	-2,458	-6,006
As per Dec. 31	23,536	19,656

The financial instruments still held at balance sheet date, which were assigned to stage 3, make in balance for a profit of  $\notin 4,943k$  (2009:  $\notin 2,423k$ ) in 2010. This profit is included in the other financial result.

# g) Net gains and losses by measurement category

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" can be taken from other financial result in note 35 as long as they can be allocated to financing or investment activities. In addition to results from fair value measurement, they also include interest, dividend and currency effects. Furthermore, net gains and losses from "financial assets held for trading" that have to be allocated to the operating business have to be taken into account. In total the net gain from "financial assets held for trading" amounts to  $\in$  5,942k (2009:  $\in$  29k).

In addition to losses from exchange effects mentioned below, net gains and losses of the measurement category "loans and receivables" mainly contain allowances in an amount of  $\in$  4,614k (2009:  $\in$  2,523k). 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 also include losses from currency effects, which were not allocated to the individual categories for reasons because of cost and benefit consideration. The balance made for gains from currency effects amounting to  $\in$  3,182k (prior year losses from currency effects in an amount of  $\in$  1,237k). These are recognized in other operating income and other operating expenses.

In addition to part of the mentioned losses from currency effects, gains from repayment of financial liabilities in an amount of  $\notin 2,340$ k are considered in the net results of "financial liabilities measured at amortized cost". These are included in "other financial result". We refer to note 35.

Thus, net gains from the measurement categories "loans and receivables" and "financial liabilities measured at amortized cost" in total amount to  $\in$  908k (prior year net loss of  $\in$  3,760k).

With regard to "financial assets available for sale", neither interest income (2009:  $\in$  27k) nor AfS reserve additions (2009:  $\in$  0k) were recognized in the reporting year.

### h) Hedging

SOLARWORLD Group concluded an interest rate swap ("static pay – variable receipt") with a current nominal volume of  $\in$  18,000k (2009:  $\in$  29,000k) for hedging the cash flow risk of a variable interest loan, the term of the swap expiring at the end of 2013. The variable interest bank loan was designated hedged item. This hedging is aimed at transforming the variable interest bank loan in fixed interest financial liabilities. The fair value of the interest rate swap amounts to  $\in$  732k (2009:  $\in$  -1,168k) at balance sheet date.

For hedging existing currency risks from senior notes denominated in US\$, SOLARWORLD Group has five cross currency swaps ("static pay in  $\in$  – static receipt of US\$"), the nominal volume of which amounts to a total of US\$ 175,000k. The senior notes denominated in US\$ were designated hedged items. The hedging is aimed at transforming the US\$ liabilities regarding the nominal amount as well as the open interest payments to financial liabilities in  $\in$ . The fair values of the swaps amounted to a total of  $\in$  4,081k (2009:  $\in$  –8,889k) at balance sheet date.

For hedging of the requirements of silver paste for solar cell production, SOLARWORLD Group concluded raw material swaps on silver in the annual period ("static pay – variable receipt"). Not yet balance-sheet effective anticipated purchases of silver paste is designated as hedged item. The nominal volume amounts to US\$ 35,784k. The hedging is aimed at eliminating the risk induced by silver paste purchases. In total, the fair values of the raw material swaps amount to  $\notin$  4,214k at balance sheet date.

Proof of prospective effectiveness is provided –if possible – by way of the critical terms match method , otherwise with appropriate sensitivity analyses. The retrospective effectiveness is regularly provided by means of the hypothetical derivative method. The results of the retrospective effectiveness tests ranged within a scope of 80 to 125 percent. Thus, highly effective hedging can be assumed. An unrealized gain of  $\in$  6,607k (2009:  $\in$  849k) was therefore recognized in equity per balance sheet date.

# 66. COMMENTS ON THE CASH FLOW STATEMENT

# Cash flow from discontinued activities

The cash flow statement shows cash flows including those of discontinued operations. The following cash flow proportions fall upon discontinued operations:

in k€	2010	2009
Cash flow from operating activities	0	0
Cash flow from investing activities	0	5,775
Cash flow from financing activities	0	0
Net changes in cash and cash equivalents	0	5,775

# Cashflow 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 earnings and expenses that are not cash-effective. This makes for the cash flow from operating results. Cash flow from operating activities takes the changes of net current assets into account.

Income of the business year not shown through profit or loss recognized in the cash flow statement concern income from the reversal of advances received. We refer to our comments in note 29.

Customer advances and prepayments particularly concern non-current selling agreements regarding silicon wafers and non-current purchase agreements regarding elemental silicon concluded in a timely connection. The following chart illustrates the cash inflows and outflows resulting therefrom:

in k€	2010	2009
Increase (+) / decrease (–) of customer advances	-3,759	5,371
Increase (–) / decrease (+) of prepayments	27,578	4,777
Changes in cash flow	23,819	10,148

Interest paid and interest received is included in cash flow from financing activities and cash flow from operating activities, respectively.

# Cash flow from investing activities

Cash flow from investing activities includes payments for asset investments as well as investment grants received for this purpose. In addition, cash receipts from the disposal of fixed assets and financial investments are included. The cash payments from the acquisition of consolidated entities concern the acquisition of AUERMÜHLE and SOLAR-PARC VERWALTUNGS GMBH and SOLARPARC ZIEGELSCHEUNE GMBH & CO. KG. For further details, we refer to note 7. In the prior year, the item mainly included cash receipts resulting from a residual purchase price payment from the disposal of the former subsidiary Eco Supplies Solar AB (formerly Gällivare PhotoVoltaic AB), Gällivare/Sweden.

#### Cash flow from financing activities

210

Cash flow from financing activities takes into account the increased financial debts. Material components in 2010 are the placement of a bond of  $\in$  400m and utilization of the second part of the syndicated credit line of  $\in$  100m. The full syndicated loan of  $\in$  200m was redeemed in the annual period 2010. In addition, treasury shares of  $\in$  41,830k were purchased on the basis of the authorization of the shareholders' meeting of May 20, 2009 and May 20, 2010. Dividend payments to the shareholders of SOLARWORLD AG in an amount of  $\in$  17,649k are included in the cash flow from financing activities as cash payments. Interest paid is included as well. Contributions of external shareholders concern contributions and withdrawals of the shareholders of AUERMÜHLE.

# Cash and cash equivalents

At balance sheet date, cash and cash equivalents consist of liquid funds in an amount of  $\in$  613,473k, which are reduced by an overdraft of  $\in$  6,919k. Thus, cash and cash equivalents amount to  $\in$  606,554k (2009:  $\in$  428,089k).

### **67. CONTINGENT LIABILITIES**

SOLARWORLD AG issued an absolute guarantee in an amount of € 12,667k for SOLARPARC AG to Deutsche Bank AG.

For the rest, no contingent liabilities exists.

#### **68. RELATED PARTY DISCLOSURES**

In the reporting year 2010, the following material transactions involving related parties were carried out:

Administration and commercial property in Bonn was leased from Dr.-Ing. E.h. Frank Asbeck, the annual rent amounting to  $\in$  1m (2009:  $\in$  1m). Thereof, no liabilities have been unsettled (2009:  $\in$  0k) at balance sheet date.

Project services and module deliveries in an amount of  $\notin$  7,967k (2009:  $\notin$  145k) (excl. VAT) were rendered or supplied to Dr.-Ing. E.h. Frank Asbeck and his engineering office,  $\notin$  9,237k (2009:  $\notin$  129k) (incl. VAT) of which were still unsettled at balance sheet date as the largest part was brought to account or provided only at year-end.

At Dec. 31, 2010, Dr.-Ing. E.h. Frank Asbeck indirectly and directly owned 25.06 percent of the voting rights in SOLARWORLD AG.

Remaining amounts from security deposits owed by Solarparc Vilshofen GmbH amount to  $\in$  100k (2009:  $\in$  100k) at balance sheet date. In Jan. 2009, SOLARPARC AG sold the entity to Solar Holding Beteiligungsgesellschaft mbH whose majority shareholder is Dr.-Ing. E.h. Frank Asbeck.

On April 30, 2010, 49 percent of the shares in AUERMÜHLE were acquired from Solar Holding Beteiligungsgesellschaft mbH, the purchase price amounting to  $\notin$  9,0m. In connection with the acquisition of the shares, SOLAR-WORLD AG and Solar Holding Beteiligungsgesellschaft were also granted the right to purchase or sell a further 45 percent of the shares in the entity. At the time of the acquisition, a purchase price obligation of  $\notin$  8.3m was accounted for that had increased to  $\notin$  15.3m at balance sheet date, mainly due to withdrawals and contributions of Solar Holding Beteiligungsgesellschaft mbH. Contributions to and withdrawals from AUERMÜHLE effected by Solar Holding Beteiligungsgesellschaft mbH amounted to  $\notin$  7,346k in the annual period 2010.

Per June 1, 2010, Solar Holding Beteiligungsgesellschaft mbH acquired 70,000 non-par-value shares of SOLARWORLD AG.

In the annual period, module supplies and project services of  $\notin 0.5m$  (2009:  $\notin 97.1m$ ) were rendered to Solarparc Group and credit notes of  $\notin 0.8m$  were issued. From module supplies and project services of the annual and prior period, receivables of  $\notin 7.3m$  (2009:  $\notin 95.8m$ ) are still unsettled. Moreover, SOLARWORLD Group received manage-

ment, planning and other services of  $\notin 0,5m$  (2009:  $\notin 0,3m$ ) from SOLARPARC AG. Liabilities of  $\notin 249k$  (2009:  $\notin 6k$ ) are still open at balance sheet date. In the annual period 2010, SOLARWORLD group rendered other services in amount of  $\notin 32k$  (2009:  $\notin 37k$ ) to Solarparc group. Thereof, receivables in amount of  $\notin 3k$  (2009:  $\notin 1k$ ) have been unsettled as of balance sheet date.

In the beginning of Nov. 2010, Solarparc Group sold the solar parks Solarpark (formerly: Solarparc) Albersreuth GmbH & Co. KG, Solarpark (formerly: Solarparc) Attenkirchen GmbH & Co. KG and Solarpark (formerly: Solarparc) Vestenbergsgreuth GmbH & Co. KG to third party investors. The total order volume of Solarworld ag with these companies which was mainly provided before the sale amounted to  $\in$  16.4m (2009:  $\in$  7.8m). In addition, Solarparc AG sold ZIEGELSCHEUNE GMBH & Co. KG to DEUTSCHE SOLAR GMBH in Dec. 2010. Hence, SolarParc ZIEGELSCHEUNE GMBH & CO. KG up to the point of sale amounted to  $\in$  12.4m and were accounted for in accordance with the POC method.

For interim financing of a project, SOLARWORLD AG issued an absolute guarantee in an amount of € 12,667k (2009: € 12,667k) for SOLARPARC AG to Deutsche Bank AG, for which it received € 128k (2009: 128k) in commission on bank guarantees in the annual period. In addition, SOLARWORLD AG gave out loans in a total amount of € 27.5m (2009: € 6m) to SOLARPARC AG in 2010, € 8m (2009: € 3m) of which were still unsettled at Dec. 31, 2010. In this connection, interest income of € 308k (2009: € 61k) accrued. At balance sheet date, receivables of € 129k (2009: € 0k) exist from commissions on bank guarantees and interest.

In the annual period 2010, SOLARWORLD AG received dividend payments of € 854k (2009: € 171k) from SOLARPARC AG.

At balance sheet date, Dr.-Ing. E.h. Frank Asbeck indirectly and directly holds 50.93 percent in SOLARPARC AG and therewith controls the entity. Furthermore, he is the chief executive officer of SOLARPARC AG.

In April 2010, SOLARWORLD AG acquired a 29 percent investment in newly founded QATAR SOLAR TECHNOLOGIES Q.S.C. domiciled in the Emirate Qatar and already made capital contributions of € 25.6m in this regard. In the shareholder agreement as of April 1, 2010 SOLARWORLD AG has committed itself to capital contributions of US\$ 53m in total.

SOLARWORLD Group sold or rendered goods, fixed assets and other services in a volume of  $\notin$  45.5m (2009:  $\notin$  11m) to joint ventures. At balance sheet date, receivables from these transactions amount to  $\notin$  5,201k (2009:  $\notin$  2,398k).

Goods, fixed assets, toll manufacturing services and other services in a total amount of  $\in$  138,048k (2009:  $\in$  76,554k) were purchased from joint ventures. In consideration of the accounting for supply and purchase agreements that economically constitute toll manufacturing relationships (compare note 56), total liabilities amount to  $\in$  36,676k (2009:  $\in$  8,815k) and no advances have been paid (2009:  $\in$  955k) at balance sheet date. Under civil law, total liabilities and receivables from these transactions amount to  $\in$  49,937k (2009:  $\in$  18,885k) and  $\in$  14,339k (2009:  $\in$  16,194k), respectively. Moreover, claims under civil law from advances paid in an amount of  $\in$  1,968k (2009:  $\in$  15,165k) are unsettled at balance sheet date.

In addition, SOLARWORLD Group granted a loan of  $\notin$  16m (2009:  $\notin$  0k) to SOLARWORLD KOREA LTD.,  $\notin$  13.2m are still unredeemed at balance sheet date. In this context, interest income of  $\notin$  759k (2009:  $\notin$  0k) accrued. At balance sheet date, receivables of  $\notin$  229k (2009:  $\notin$  0k) exist in this regard.

In the annual period 2010, solarworld ag received dividend payments of  $\in$  2,539k (2009:  $\in$  0k) from solarworld korea LTD.

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 – is concerned with SOLARWORLD Group's legal issues. Upon approval of the Supervisory Board, a total fee amount of  $\in 0.7m$  (2009:  $\in 0.7m$ ) was rewarded for these services in 2010.

Furthermore, the chairman of the Supervisory Board, Dr. Claus Recktenwald acquired 5.000 shares amounting to  $\notin$  40.750 as of May 21, 2010.

Remuneration and share ownership of members of the executive and Supervisory Board is listed in note 70 or presented in the remuneration report in the management report.

All transactions were carried out at arm's length.

# **69. EMPLOYEES**

The average number of employees amounted to 2,140 (2009: 1,858) and falls upon the company's areas of operation or segments as follows:

Headcount	2010	2009
Production Germany	1,082	1,007
Production USA	730	603
Trade	258	187
Other	70	61
Total	2,140	1,858

Per Dec. 31, 2010, the number of employees amounted to 2,376 (2009: 2,000), including 87 trainees (2009: 86).

## 70. EXECUTIVE BOARD AND SUPERVISORY BOARD

For assuming their duties in both parent company and subsidiaries in 2010, the members of the executive board received a total remuneration of  $\in$  2,996k (2009:  $\in$  2,719k), which includes variable remuneration of  $\in$  2,083k (2009:  $\in$  1,882k).

For assuming their duties in both parent company and subsidiaries in 2010, the members of the advisory board received remuneration including reimbursements in a total amount of  $\in$  319k (2009:  $\in$  297k), each plus statutory VAT. The total includes variable remuneration of net  $\in$  135k (2009:  $\in$  119k).

Individualized disclosures regarding the remuneration of the Executive Board are included in the company's management report.

As in the prior year, the appointed executive board members are:

- Dr.-Ing. E.h. Frank Asbeck (Chief Executive Officer)
- Dipl.-Ing. Boris Klebensberger (Chief Operations Officer)
- Dipl.-Kfm. tech. Philipp Koecke (Chief Financial Officer)
- Dipl.-Wirtschaftsing. Frank Henn (Chief Sales Officer)

At balance sheet date, the Chairman of the Executive Board, Dr.-Ing E.h. Frank Asbeck, indirectly and directly held 25.06 percent (2009: 25.00 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 (Vice chairman), attorney-at-law/ corporate legal counsel of Deutsche Post AG, Bonn
- Dr. Alexander von Bossel, LL.M (Edinb.), attorney-at-law and partner with CMS Hasche Sigle, Cologne

The chairman of the Executive Board Dr.-Ing. E.h. Frank Asbeck was chairman of the Supervisory Board of DEUTSCHE SOLAR AG (until Jan. 13, 2011) and SUNICON AG (until Jan. 13, 2011).

Chairman of the Supervisory Board Dr. Claus Recktenwald is respectively was chairman of the Supervisory Board of SOLARPARC AG, vice-chairman of the Supervisory Board of DEUTSCHE SOLAR AG (until Jan. 13, 2010), vice-chairman of the Supervisory Board of SUNICON AG (until Jan. 13, 2010), member of the Supervisory Board of VEMAG Verlags- und Medien Aktiengesellschaft, Cologne, and member of the advisory board of Grünenthal GmbH and Grünenthal GmbH & Co. KG, Aachen (since January 1, 2010).

Vice chairman of the Supervisory Board Dr. Georg Gansen is respectively was also vice chairman of the Supervisory Boards of Solarparc AG, deutsche solar AG (until Jan. 13, 2010) and SUNICON AG (until Jan. 13, 2010).

Member of the Supervisory Board Dr. Alexander von Bossel is also a member of the Supervisory Board of Solarparc AG.

# 71. AUDITOR'S FEES

In 2010, total fees for the auditor of the consolidated financial statements, BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg/Bonn, including reimbursement of costs, amount to:

- a) Year-end audit € 502k (2009: € 563k)
- b) Other certification services  $\in 6k$  (2009:  $\in 6k$ )
- c) Tax consultancy services  $\in 29k$  (2009:  $\in 2k$ )
- d) Other services  $\in 40k$  (2009:  $\in 117k$ )

# 72. CORPORATE GOVERNANCE

On Aug. 9, 2010, Supervisory Board and executive board, respectively, 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. The statement is published on SOLARWORLD AG's website (a) <u>www.solarworld.de/investorrelations/entsprechenserklaerung</u>.

Bonn, March 11, 2011

Dr.-Ing. E.h. Frank Asbeck Chief Excecutive Officer

Dipl.-Kfm. tech. Philipp Koecke Chief Financial Officer

**Dipl.-Wirtschaftsing. Frank Henn** Chief Sales Officer

**Dipl.-Ing. Boris Klebensberger** Chief Operations Officer

# AUDITOR'S REPORT

We have audited the consolidated financial statements prepared by the SOLARWORLD AG, Bonn, comprising the statement of financial position, the statement of comprehensive income, statement of changes in equity, statement of cash flows and the notes to the consolidated financial statements, together with the group management report for the business year from January 1, 2010 to December 31, 2010. The preparation of the consolidated financial statements and the group management report in accordance with IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to sec. 315a para. 1 HGB and supplementary provisions of the articles of incorporation are the responsibility of the parent company's management. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with sec. 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer IInstitute of Public Auditors in Germanyl (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the group management report 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 effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and the group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRSs as adopted by the EU, the additional requirements of German commercial law pursuant to sec. 315a para. 1 HGB and supplementary provisions of the articles of incorporation and give a true and fair view of the net assets, financial position and results of operations of the group in accordance with these requirements. The group management report is consistent with the consolidated financial statements and as a whole provides a suitable view of the group's position and suitably presents the opportunities and risks of future development.

Bonn, March 11, 2011

BDO AG Wirtschaftsprüfungsgesellschaft

Dr. Gorny **V** Wirtschaftsprüfer (German Public Auditor)

ppa. Ahrend Wirtschaftsprüfer (German Public Auditor)

# 216 **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 11, 2011

SOLARWORLD AG Board of Management

**Dr.-Ing. E.h. Frank Asbeck** Chief Excecutive Officer

Dipl.-Kfm. tech. Philipp Koecke Chief Financial Officer

**Dipl.-Wirtschaftsing. Frank Henn** Chief Sales Officer

**Dipl.-Ing. Boris Klebensberger** Chief Operations Officer





# SUSTAINABLE CORPORATE MANAGEMENT

#### DETAILS ON SUSTAINABILITY PERFORMANCE – NOW IN A NEW FORMAT!

You can order the details on sustainability performance of SolarWorld AG or get all the information on the Internet: @ <u>konzernbericht2010.solarworld.de/sustainability</u> //





# "Sustainability is no abstract concept to us, but something we try to make alive every day. A sustainable technology has to be produced in a sustainable way."



Ang & Trutte

----- BRYAN TROTTER // HEALTH, SAFETY AND ENVIRONMENTAL MANAGER, HILLSBORO/USA

Γ



Г

<sup>FACTSHEET /</sup> ® SUSTAINABILITY – THE QUICK OVERVIEW

# **SUSTAINABLE CORPORATE MANAGEMENT**

— We are building the solar world! With our products, we cut down on the use of resources, protect the climate and make possible regional, socially equitable development because solar energy can be employed in a decentralized way without access to the national grid. Sustainable alignment is thus part of the core of SolarWorld and has constituted our very identity since our inception in 1998.

Companies make a valuable contribution to the wellbeing of society – as long as they pursue their economic activities comprehensively and responsibly. This is why our commitment does not end with our products; on the contrary, it rather begins there. We are not just active in a "green" industry but we push ahead the sustainability debate. For years, we have documented our economic, ecological and societal performance for our stakeholders and have set standards in doing so. We use concrete examples to show how sustainability contributes to corporate success and creates added value for society.

— Reporting on our sustainability performance is organized according to the framework of the Global Reporting Initiative (GRI). As a member of the Global Compact of the United Nations, SolarWorld also publishes an annual Communication on Progress (COP) which is contained in the details on sustainability performance. Furthermore, SolarWorld also reports along the lines of the KPIs for ESG of EFFAS/DVFA.



1

٦

L

/ PAGE 221

ENVIRONMENTAL PROTECTION	NAME AND DESCRIPTION	2009	2010	2011
GRI: EN3+EN4; ESG: E01-01 (Scope I)	Energy: Total energy consumption (in MWh)	368,166 e	467,429e	ſ
	As in the previous year, growth (under-proportionate to production increase) is expected. // Strong production increase ③ <i>Groupwide, nominal year-end capacities</i> <u>– expansion 2010 // in MWp</u> * p. 068// production figures are not disclosed.			
GRI: EN8; ESG: E28-01 (Scope II)	Water: total water withdrawal (in m <sup>3</sup> )	1,115,009 e	1,429,148 e	1
GRI: EN21; ESG: E28-04 (Scope III)	Water: waste water injection (in m <sup>3</sup> )	902,912 e	1.345,832 e	↑
GRI: EN16; ESG: E02-01 (Scope I)	Emissions: total GHG emissions in (tCO <sub>2eq.</sub> )	139,285 e	179,137 e	↑
	Estimate // with strong production increase ③ Groupwide, nominal year-end capacities – expansion 2010 // in MWp + p. 068//			
GRI: EN20	<b>Emissions:</b> NO <sub>x</sub> , SO <sub>x</sub> and other air emissions (in tonnes)	16	29	1
	Estimate // with strong production increase ③ Groupwide, nominal year-end capacities – expansion 2010 // in MWp • p. 068//			
GRI: EN22	Waste: total production waste (in tonnes)	13,010 e	20,724 e	<b>↑</b>
	Estimate // only in absolute figures as production figures are not disclosed (strong production increase). (a) Groupwide, nominal year-end capacities – expansion 2010 // in MWp * p. 068//			
SOLARWORLD; GRI EN26	Soil sealing: sealed area (in m <sup>2</sup> )	n.s.	141,663	↑
	Only US sites; including solarworld korea ltd			
ESG: E33-01 (Scope II)	<b>Environmental compatibility:</b> share of ISO 14001 certified locations (weighted by average capacity)	64 %	100 %	$\leftrightarrow$
	Indicator dropped in year 2009 due to U.S. sites not yet having been certified, at the same time increased production there.			
GRI: EN27	Packaging: material in tonnes	860	996,16	<b>↑</b>
GRI: EN28	Environmental violations: sanctions due to environmental violations	0	0	0

٦



#### FACTSHEET / ļ /

#### (In the sustainability – The quick overview (Continued)

Γ	

EMPLOYEES	NAME AND DESCRIPTION	2009	2010	2011
GRI: LA1	Employment type: share of temporary employees	26.7 %	29.2 %	$\leftrightarrow$
GRI: LA 2; ESG: S01-01 (Scope I)	Employee turnover: share of employees leaving the company per year	9.3%	8.2 %	Ļ
	So far no differentiation between full time and part time			
GRI: LA4	Collective agreements: share of employees covered by collective agreements	59 %	53 %	$\leftrightarrow$
GRI: LA10; ESG: S02-02 (Scope I)	Training and professional development/upskilling & qualification: average training expenditure per employee (in €)	356.89	312.21	Ŷ
	Expenditures for training by external providers have so far not been included. A split between temporary staff and employees is not possible for U.S. data.			
GRI: LA13; ESG: S03-01 (Scope I)	Age structure of workforce: in ten-year steps Not measured per FTE	≤30: 21 % 30-40: 30 % 40-50: 30 % >50: 19 %	≤30: 28 % 30-40: 29 % 40-50: 28 % >50: 16 %	$\leftrightarrow$
GRI: LA7	Absenteeism: total missed worktime due to sick leave/ total planned worktime	3.4 %	3.0%	Ļ
GRI: LA7	Accident rate (in ‰): number of accidents/number of hours worked (i.e. per 1,000 employees incl. temporary employees)	14.3	15.2	Ļ
ESG: S11-01 (Scope II)	<b>Relocation of jobs due to restructuring:</b> total costs (in k€) including compensation payments, severance pay, outplacement, recruitments, training, consulting	427	507	$\leftrightarrow$
	These data are not yet collected in this aggregate form, but there are figures from the U.S. (incl. severance pay, outplacement, extended health insurance). The rise from 2009 to 2010 is due to recruitments in the course of the ramp-up of the 500 MW cell production as well as the 300 MW module production in Hillsboro.			
GRI: LA13	Diversity: Share of women in total workforce	22 %	23 %	$\leftrightarrow$
	Women's rate dropped between 2007 and 2008 due to shift of wafer and cell pro- duction in the U.S. from Camarillo (solar and semiconductor market with a high share of women) to Hillsboro (solar and semiconductor market with low share of women) // by now groupwide share of women back to almost the level of 2007.			
GRI: LA13	Diversity: share of women in management positions	13 %	15 %	$\leftrightarrow$
ESG: S08-01 (Scope I)	Pay: total amount of all bonus payments (in m€)	9.8	17.4	1
	We do not grant stock options, but we pay a profit-oriented participation model (GOMAB). Futher data on this indicator are so far not available.			
GRI: HR4	Discrimination: number of documented incidents	0	0	0

/ PAGE 223

COMPLIANCE AND SOCIETY	NAME AND DESCRIPTION	2009	2010	2011
ESG: V10-03 (Scope II)	<b>Effect of subsidies:</b> share of business activity in markets with feed-in tariffs or regulated pricing	100 %	100 %	$\downarrow$
	The shipment 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			
GRI: EC4	Finanzielle Zuwendungen der öffentlichen Hand (Investitions- zuschüsse und Forschungszuschüsse)	12,274	16,727	$\leftrightarrow$
ESG: G01-01 (Scope II)	Donations to political parties in (k€)	40	0	0
GRI: EC1	Other donations in (k€)	264	392	$\leftrightarrow$
SOLARWORLD	Regional development: Solar2World project scope (in kWp)	114	161	1
ESG: V01-01 (Scope I)	Litigation risk: expenditures and fines for lawsuits and court cases regarding anti-competitive behavior, Anti-Trust, monopoly behavior	0	0	$\leftrightarrow$
GRI: SO2, ESG: V02-01 (Scope I)	<b>Corruption:</b> share of business activity in regions with corruption index of below 6.0	29 %	31 %	Ŷ
GRI: SO4	Ascertained corruption incidents	0	1	Ļ
	In the reporting period, a corruption incident was ascertained for the first time. The incident did not occur inside the SolarWorld Group but at a joint venture. According to our zero tolerance principle, we immediately drew personnel conse- quences and initiated a criminal prosecution.			
GRI: SO8	Sanctions due to violation of legal provisions	0	0	0

CUSTOMERS AND PRODUCTS	NAME AND DESCRIPTION	2009	2010	2011
GRI: PR5, ESG: V06-01 (Scope II)	Customer satisfaction: share of satisfied customers among respondents	85.4 %	85.8 %	$\leftrightarrow$
	Aggregate number (trade: wholesalers, specialist partners): The satisfaction analy- sis (wafers: cell producers) should have come to hand in the summer but will now be performed in 2011.			
ESG: V03-02 (Scope I)	Earnings from new products: with a life cycle below 12 months	35 %	30 %	$\leftrightarrow$
	These data refer only to SOLARWORLD AG. They are not yet available for the entire group.			
GRI: PR1	Health and safety aspects of the products: share of product recalls for safety or health reasons in total number of products sold	0	0	$\leftrightarrow$
	Hardly lost any customers in the past but rather gained some continuously; in the market for 12 years			
ESG: V05-01 (Scope III)	Customer loyalty: share of new customers (specialist partners)	20 %	7%	$\leftrightarrow$
	End of 2010: 506 specialist partners			
ESG: V05-03 (Scope III)	Customer loyalty: market share (total)	5 % e	5%e	$\leftrightarrow$
GRI: PR9	Sanctions due to product and service conditions	0	0	0



FACTSHEET /

### 66 SUSTAINABILITY - THE QUICK OVERVIEW (CONTINUED)

Г	-		
Ι.			
		-	_

-				_
SUPPLY CHAIN	NAME AND DESCRIPTION	2009	2010	2011
SOLARWORLD	Certification: ISO 9001 certification of suppliers	70 % e	90 % e	$\leftrightarrow$
SOLARWORLD	Certification: ISO 14001 certification of suppliers	30 % e	40 % e	$\leftrightarrow$
ESG: E23-01 (Scope III)	<b>Production loss:</b> difference between planned and actual production due to material bottlenecks (in %)	0	0	0
ESG: E23-02 (Scope II)	<b>Production loss:</b> monetary effects of production loss due to material bottlenecks (in $\in$ )	0	0	0

INNOVATION	NAME AND DESCRIPTION	2009	2010	2011
ESG: V04-01 (Scope I)	Innovation: total R&D expenditure (in m€)	12.0	19.2	$\leftrightarrow$
ESG: V04-12 (Scope I)	Innovation: total investment in research on ESG relevant aspects	100 %	100 %	100 %
	Our entire business (solar energy) is ESG relevant.			
SOLARWORLD	Patents: Number of inventions filed in the last 12 months	28	51	<u> </u>

**Legend:** e: Data marked with an "e" in the reporting are estimates.

n.s.: not specified

GRI: Indicators of the Global Reporting Initiative ESG: Key Performance Indicators or Key Performance Narratives for Environment, Society and Governance der EFFAS/DVFA

SOLARWORLD: Additional indicators selected by SOLARWORLD

# **INDEX OF CHARTS AND TABLES**

#### MARKET CHARTS AND TABLES

(1) FUNDING PROGRAMS 2010 IN THE FIVE MAIN SALES MARKETS OF SOLARWORLD	
@ ECONOMIC DEVELOPMENT IN THE MAJOR SOLARWORLD SALES MARKETSSOLARWORLD	
(2) INVESTMENTS IN RENEWABLE ENERGIES	
2 NEW INSTALLATIONS IN GERMANY IN THE YEARS 2009/2010	
(2) HISTORIC DEVELOPMENT OF OUR SALES MARKETS	
1 SOLAR MARKETS 2011+	
EXPECTED DEVELOPMENT OF THE GLOBAL ELECTRICITY DEMAND	
③ EXPECTED DEVELOPMENT OF THE GLOBAL SOLAR MARKET	
1 ACHIEVING GRID PARITY IN THE KEY SOLAR MARKETS	
@ EXPECTED ECONOMIC DEVELOPMENT IN SOLARWORLD'S KEY SALES MARKETS	
(?) EXPECTED DEVELOPMENT OF THE SOLAR MARKET BY REGION	

#### STOCK CHARTS AND TABLES

IB DEVELOPMENT OF THE SOLARWORLD STOCK IN COMPARISON WITH THE DAX AND TECDAX	056
12 DIVIDEND AND DISTRIBUTION	056
(1) SHAREHOLDER STRUCTURE AS AT DECEMBER 31, 2010	056
(1) INDICES IN WHICH SOLARWORLD WAS LISTED IN 2010	056
SHAREHOLDER STRUCTURE AS AT FEBRUARY 25, 2011	107

### CORPORATE DATA

(III) SELECTED INDICATORS	004
@ VALUE ADDED CREATION	005
(ii) DISTRIBUTION OF VALUE ADDED	005
QUARTERLY COMPARISON OF THE CONSOLIDATED INCOME STATEMENTS	006
69 REVENUE BY REGION	
© DEVELOPMENT OF KEY DATA IN FIVE-YEAR-COMPARISON	007
@ TARGET ACHIEVEMENT 2009 AND 2010 AND TARGETS FOR 2011+	022
12 MANAGEMENT BOARD REMUNERATION	046
(1) SUPERVISORY BOARD REMUNERATION	050
@ SOLARWORLD AND MARKETS 2010	
(15) MAJOR BUSINESS EVENTS 2010	054
® REGIONAL DISTRIBUTION OF SHIPMENTS IN THE "TRADE" SEGMENT IN 2010	071
30 ADDED VALUE FROM LINEAR PERFORMANCE GUARANTEE	078
3) ENERGY AMORTIZATION TIME	
@ CLIMATE PROTECTION	081
3 SHIPMENTS DIVIDED INTO DOMESTIC AND FOREIGN SALES	089
@ REVENUE DIVIDED BY SEGMENTS	090
DEVELOPMENT OF MATERIAL INCOME STATEMENT ITEMS	092
49 FIVE-YEAR COMPARISON OF THE INCOME SITUATION	092
Indicators (income situation)	093
🐵 FIVE-YEAR COMPARISON OF THE FINANCIAL SITUATION	094
INDICATORS (FINANCIAL SITUATION)	095
(4) DEVELOPMENT OF INVESTMENTS	096

🛞 CASH FLOW RECONCILIATION	
(8) FIVE-YEAR COMPARISON OF FINANCIAL STANDING	
(a) INDICATORS (FINANCIAL STANDING)	
(2) BUSINESS POLICY OF THE SOLARWORLD GROUP 2011+	
® INCOME STATEMENT	
STATEMENT OF COMPREHENSIVE INCOME	
BALANCE SHEET PER DECEMBER 31, 2010	
STATEMENT OF CHANGES IN EQUITY	
CASH FLOW STATEMENT PER DECEMBER 31, 2010	

#### **GROUP ORGANIZATION**

🐵 GROUP STRATEGY	
GROUP CONTROL AND SUSTAINABILITY MANAGEMENT	
10) SEGMENT STRUCTURE AND STAGES OF THE VALUE CHAIN	
49 SUPPLIER SELECTION IN THE SOLARWORLD GROUP	
39 SOLARWORLD INNOVATIONS – ORGANIZATION "SCIENCE2TECHNOLOGY"	
5 INTEGRATION OF THE OPPORTUNITY AND RISK MANAGEMENT SYSTEM INTO THE GROUP	110
🚳 SOLARWORLD GROUP AS OF DECEMBER 31, 2010	

#### **RESEARCH & DEVELOPMENT**

🛞 DEVELOPMENT OF OUR R&D HEADCOUNT	
3 INNOVATION TARGETS AND PRIORITIES 2010+	
36 DEVELOPMENT OF INVENTIONS AND IP RIGHTS	
3 DEVELOPMENT OF R&D EXPENSES*	
3 RESEARCH RATIO AND RESEARCH INTENSITY	

#### **EMPLOYEES**

99 HEADCOUNT DEVELOPMENT	
SUNDER OF APPRENTICES/TRAINEES IN THE SOLARWORLD GROUP	
© EMPLOYEE FLUCTUATION	
3 DEVELOPMENT OF PROFIT-ORIENTED PARTICIPATION MODEL	

#### CAPACITIES

🛞 GROUPWIDE, NOMINAL YEAR-END CAPACITIES – EXPANSION 2010	.068
🕲 GROUPWIDE, NOMINAL YEAR-END CAPACITIES – EXPANSION 2011	136

#### **BRAND SOLARWORLD**

29 UNAIDED BRAND AWARENESS OF SOLARWORLD	
8 AIDED BRAND AWARENESS OF SOLARWORLD	
(2) NUMBER OF REPORTS ON GERMAN TV IN PRINT AND IN ONLINE MEDIA	

#### **OPPORTUNITIES AND AND RISKS**

66 MACRO-ECONOMIC RISKS	
POLITICAL AND REGULATORY RISKS	
® RISKS FROM TOUGHER COMPETITION	
RISKS ARISING FROM ALTERNATIVE SOLAR POWER TECHNOLOGIES	
® PROCUREMENT RISKS	
® CORPORATE STRATEGY RISKS	
© DEFAULT RISKS	
® SALES AND PRICE RISKS	
😣 HUMAN RESOURCES RISKS	
6) IT RISKS	
66 LIQUIDITY RISKS	
© OTHER FINANCIAL RISKS	
® LEGAL RISKS	
® WARRANTY AND OTHER LIABILITY RISKS	
® ENVIRONMENTAL AND OTHER RISKS	
RISKS ENDANGERING THE CONTINUED EXISTENCE OF THE COMPANY	

# <sup>228</sup> GLOSSARY

(A) ACCRUALS AND DEFERRALS • Accruals and deferrals are expenditure and income items that have been incurred before the financial statements (balance sheet date) but are not due until after the time of the annual financial statements.

ACCRUALS/PROVISIONS • Balance sheet items in which amounts are accrued for uncertain liabilities that can, however, already be estimated at the present time (e.g. pension payments, taxes).

ADVERTISING TRACKING • Process of measuring advertising success. At regular intervals after the airing of a commercial, samples are taken and analyzed of the consumer's advertising recall and attitude towards the advertised product/brand

AIDED BRAND AWARENESS • Brand awareness measured on the basis of several brands being mentioned. → Unaided brand awareness

AT EQUITY SHAREHOLDING • Shareholdings in associated companies and joint venture companies of more than 20 percent.

- (B) BENCHMARKING Yardstick used to compare performance features of several objects or processes in order to improve them.
- **(C)** <u>CAPITAL STOCK</u> Total of the par value of all stocks issued by a company.

**CARBON DISCLOSURE PROJECT [CDP]** • Global cooperation of more than 551 institutional investors with investment capital of more than US\$ 71 trillion. Its goal is to disclose  $\rightarrow$  greenhouse gas emissions by companies and their respective strategies concerning climate change and its implications. The CDP constitutes the world's largest, freely available emissions inventory for corporate  $\rightarrow CO_2$ emissions. The 5th German CDP Report was published in October 2010. SOLARWORLD has been regularly participating in this project since 2006.

**CASHFLOW** • Cash surplus generated from ordinary business activities, an indicator of a company's self-financing strength.

<u>CELL</u> • With the solar cells interconnected in a solar power  $\rightarrow$  module, sunlight can be turned into electricity with the help of the photovoltaic effect. The cell consists of two layers that are deliberately polluted (doped). At the interface of the two layers, an electric field is formed. If a light beam hits an electron in the upper layer it can move freely and migrates to the outside. This causes an electrical voltage that can be tapped by way of external contacts.

**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.

 $CO_2 EMISSIONS \cdot \rightarrow greenhouse gas emissions$ 

<u>CO<sub>2</sub> EQUIVALENTS (CO<sub>200</sub>)</u> • Contribution of a  $\rightarrow$  greenhouse gas to the greenhouse gas effect: The greenhouse gas potential of a  $\rightarrow$  carbon dioxide is used as a comparative value to describe the earth warming effect of different greenhouse gases uniformly over a certain period of time.

**<u>COMPLIANCE</u>** • Observation of laws, guidelines and voluntary codes by companies.

<u>COMPLIANCE OFFICER</u> • Officer in charge of a company's consistent implementation of and compliance with the  $\rightarrow$  *German Corporate Governance Code*.

**CONSOLIDATED COMPANIES** • The group of consolidated companies comprises the companies included in the consolidated financial statements. As a matter of principle, all subsidiaries have to be included, besides the parent company.

<u>CORPORATE COMMUNICATIONS</u> • Comprehensive strategically structured corporate communications internally and externally that are derived from the corporate vision and the corporate objectives.

**CORPORATE CULTURE** • The fundamental convictions, 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, the way they deal with one another and with employees. (Source: German Federal Agency for Civic Education).

 $\frac{\texttt{CORPORATE GOVERNANCE}}{Code} \bullet \rightarrow German \ Corporate \ Governance$ 

**COST OF MATERIAL, RATE OF** • Share of the cost of material in the overall output of a company.

<u>CRYSTAL GROWING</u> • Process during which liquids or molten materials (e.g. silicon chunks molten at high temperatures) cool down slowly and under specific conditions and solidify in the form of crystals.

**CUSTOMER RELATIONSHIP MANAGEMENT (CRM)** • Describes the totality of customer care measures from acquisition via communication all the way to checking customer satisfaction using software systems. In this way, the overall process can be designed more systematically.

(D) <u>DAX</u> • The German share index represents the 30 highestselling stock corporations in Germany and is listed at the Frankfurt stock exchange.

**DAXGLOBAL ALTENATIVE ENERGY INDEX** • Shows the performance of the world's 15 largest companies operating in the alternative energies sector. The companies have to generate the bulk of their sales in natural gas, solar, wind, ethanol or geothermal energy.

DAXGLOBAL SARASIN SUSTAINABILITY INDEX • Bank Sarasin has developed a process, the so-called Sarasin Sustainability Matrix, to be able to assess not only the financial analysis but also the environmental and social analysis of companies. The index computed by Deutsche Börse represents the 100 largest and most liquid German companies that meet the criterion of sustainability according to the matrix. The SOLARWORLD stock has been listed in the index since its start in 2007.

**DAXPLUS FAMILY** • Performance of German and international companies from the  $\rightarrow$  *Prime Standard* of the Frankfurt Stock Exchange in which the founder family holds at least 25 percent of the voting stock or is represented on the Management Board or the Supervisory Board with a share of the voting stock of five percent. At the moment the index contains 113 companies. The SOLARWORLD stock has been listed in the index since its start in January of the year 2010.

**DECLARATION OF COMPLIANCE** • Declaration by the Management Board and the Supervisory Board pursuant to § 161 German Stock Corporation Act on the implementation of the recommendations of the Government Commission on the  $\rightarrow$  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 provisions. DEPRECIATION (FOR WEAR AND TEAR) • Gradual reduction in the value of a fixed asset or investment through the systematic write-down of the costs over an extended period of time.

<u>**DIRECTORS' DEALINGS**</u> • Securities transactions by managers or persons/companies close to them involving shares of 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.

**DOWJONES INDUSTRIAL INDEX** • Contains the 30 highestpriced U.S. stocks and is listed at the New York Stock Exchange.

(E) <u>EARNINGS PER SHARE</u> • Group earnings divided by the weighted number of shares.

**EBIT** • Operating Earnings Before Interest and Taxes, usually used in evaluating the earnings situation of a company, in particular for international comparisons. **EBITDA** • Earnings Before Interest, Taxes, Depreciation and Amortization. This indicator facilitates international comparisons as it does not include national taxes.

**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. **ECONOMIES OF SCALE** • Size/volume advantages resulting from mass production are reflected in a reduction in unit costs. **<u>EEG</u>** • Acronym for the German Erneuerbare-Energien-Gesetz  $\rightarrow$  *Renewable Energy Sources Act* 

**EFFICIENCY, DEGREE OF** • Indicates the ratio between the electrical output and the solar irradiation received by the solar  $\rightarrow$  module or the solar  $\rightarrow$  cell; a higher degree of efficiency leads to more output from the same surface. **EINSTEINAWARD** • Award presented by SOLARWORLD since 2005 to personalities who have acquired special merits regarding the use of solar energy. In addition, young scientists have been awarded the SOLARWORLD Junior Einstein Award since 2006 for their scientific work in specialist areas around photovoltaic technology.

**EMPLOYEE PROFIT-SHARING MODEL (GOMAB)** • Profit-oriented employee profit-sharing model by the SOLARWORLD Group, establishing a distribution factor for the employees' pay structure. This factor is based on earnings by the individual company and the group.

**ENERGY ROOF** • Involves special type of assembly by which frameless modules are inserted into a profile system so that no additional roof tiling is required. This TÜV-certified roof integration system is particularly suitable for new buildings or roof rehabilitations.

**ENVIRONMENTAL MANAGEMENT [EM]** • Attempt by companies to systematically reduce the environmental damage caused by them. The corporate strategy should balance economic growth and ecological compatibility. The reduction of harmful emissions, waste avoidance and use of  $\rightarrow$  renewable energies are combined into a set of environmental measures to be implemented, comprising the corporate environmental policy, environmental audits and standards such as  $\rightarrow$  *ISO 14001*.

#### ENVIRONMENTAL OPPORTUNITIES ALL-SHARE • $\rightarrow$ FTSE

**EQUITY CAPITAL** • Balance sheet item consisting of the capital stock, reserves and accumulated results that are available to the company for investments (among other things).

**EQUIVALENTADVERTISING VALUE** • Represents the value of all editorial contributions published about SOLARWORLD expressed in advertising space

**EQUITY RATIO** • Indicator depicting equity as a proportion of the total capital stock. Used to assess the stability of a company.

**EUROPEAN PHOTOVOLTAIC INDUSTRY ASSOCIATION (EPIA)** • Largest worldwide association for companies in the photovoltaic industry.

**EUROPEAN RENEWABLE ENERGY INDEX (ERIX)** • Covers companies that generate their sales mainly in the areas of solar, wind, water, biomass, geothermal energy and tidal energy. The SOLARWORLD stock has been listed in the index since 2005.

(F) FEED-INCOMPENSATION • This means that the local utility is obliged to buy electricity from renewable sources and pay for it according to a current rate. In Germany, this is laid down in the → Renewable Energy Sources Act, for example. **FLOW-OF-FUNDS ANALYSIS** • 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.

**FTSE INDEX** • The FTSE Environmental Opportunities Index Series measures the performance of worldwide groups of companies that are primarily active in the ecology sector. SOLARWORLD stock has been listed in the index since its start in 2008.

**FULL INTEGRATION** • Combining upstream and downstream production stages of a product under uniform corporate management. SOLARWORLD covers the entire  $\rightarrow$  *supply chain*, all the way from raw material extraction to finished  $\rightarrow$  *modules*.

**(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 in the management of German companies. SOLARWORLD has been complying with the code since 2002.

**GERMAN ENTREPRENEURIAL INDEX (GEX)** • Index for ownermanaged companies listed in the  $\rightarrow$  *Prime Standard* whose IPO does not date back more than ten years. The SOLARWORLD stock has been listed on the index since its start in 2005.

<u>GERMAN RENEWABLE ENERGY SOURCES ACT</u> •  $\rightarrow$  *EEG* GIGAWATT (GW) • Equals 1,000,000,000  $\rightarrow$  *Watt* 

**GLOBAL CHALLENGES INDEX (GCI)** • Includes companies that actively and responsibly face seven global challenges such as climate change, for example. The index contains 50 stocks of companies with worldwide operations. The SOLARWORLD stock has been listed in the index since its start in the year 2007.

**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  $\rightarrow$  *benchmarking* and a transparent presentation of the development over time.

**GLOBAL SOLAR ENERGY INDEX (MAC)** • Includes worldwide strongly growing companies of the solar industry. SOLAR-WORLD has been listed since start of the index 2008. **GOMAB** •  $\rightarrow$  *Profit-oriented participation model* 

**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** • Price parity between solar power and domestic current; is achieved when solar power has the same purchase price as normal household electricity from the wall socket.

**GROSS DOMESTIC PRODUCT (GDP)** • Measure of the entire economic performance of an economy. The GDP is the total of all consumer expenditure, capital expenditure, government expenditure on purchases of goods and export proceeds minus import expenditure.

**GROUP PROFIT/LOSS FOR THE YEAR** • Period-related comparison of the incomes and expenditures of a company.

() **INCOME STATEMENT** • Summary of the revenues and expenses of a company during an accounting period.

**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 ELECTROTECHNICAL COMMISSION (IEC)** • International standard-setting body fixing standards in the electrotechnical and electronics areas.

**INTERNATIONAL ACCOUNTING STANDARD BOARD (IASB)** • Internationally manned independent body of accounting experts that develops the  $\rightarrow$  *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 an insufficient interpretation of the standards  $\rightarrow$  *IAS* and  $\rightarrow$  *IFRS*; furthermore, it deals with new sets of conditions that have not yet been covered by IAS/IFRS.

**INTELLECTUAL PROPERTY MANAGEMENT (IPMANAGEMENT)** • Covers all measures to administer intellectual property, i.e. protected knowledge in the form of commercial property rights; IP is also referred to as intangible property law. **INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)** • Collection of standards and interpretations that lists the rules guiding the external reporting of capital-market oriented companies.

**INVERTER** • Converts the direct current generated by a solar  $\rightarrow$  *cell* into the alternating current required by the grid and monitors the grid connection.

**ISO9001** • 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

**ISO CERTIFICATION** • Certification is a process by which adherence to certain requirements on a management sys-

tem (company) is verified. Certifications are granted for a limited period of time by independent certification bodies such as TÜV, DEKRA, Bureau Veritas, who independently examine adherence to the relevant standards.

- (J) <u>JOINT VENTURE</u> Economic cooperation between companies aimed at taking better advantage of each party's know-how and resources.
- (**K**) KILOWATT (KW) Equals  $1,000 \rightarrow Watt$
- (LabTOFAB Abbreviation of "Laboratory to Fabrication", i.e. from Research & Development into production LARGE-SCALE PLANT • Large → solar power plant mostly installed in open-air sites. Primarily, these are plants with a rated output of more than 100 kilowatt.

**LINEAR PERFORMANCE GUARANTEE** • Warranty under which the guaranteed performance declines by a certain percentage per year and is not reduced step by step.

MARGIN • Difference or market margin between producer (production) price and sales (consumer) price of a tradable product. The margin can cover the overhead costs included in production and distribution.

**MARKET CAPITALISATION** • Measurement referring to the number of shares times the stock price.

MEGAWATT (MW) • Equals  $1,000,000 \rightarrow Watt$ 

**MERRILL LYNCH RENEWABLE ENERGY** • The index covers 31 companies that are active in the sector of  $\rightarrow$  renewable energies. SOLARWORLD has been listed in this index since its start in 2007.

**MODULE** • Consists of interconnected solar  $\rightarrow$  *cells*; sealing with silicon in an aluminum frame and behind glass makes it weather-resistant, sometimes called solar panel.

**MONO-CRYSTALLINE** • Conditions prevailing during  $\rightarrow$  crystal growing result in the solidification of the  $\rightarrow$  solar-grade silicon in a single large and homogeneous cylindrical crystal.

**MULTI-CRYSTALLINE** • The conditions prevailing during  $\rightarrow$  *crystal growing* cause the  $\rightarrow$  *solar-grade silicon* to solidify in a silicon block consisting of several small crystals which overall does not show a completely homogeneous arrangement of atoms.

- (N) NATUR-AKTIEN-INDEX (NAI) Includes 30 international, ecologically acting companies that are selected as successful eco-pioneers according to particularly stringent standards. SOLARWORLD has been listed since 2003.
- (0) OECD (ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOP-MENT) • Alliance of currently 34 governments (established in 1961) with the objective of identifying "Best Practice" concerning sustainable economic development, employment, living standards and financial stability and to draw up appropriate guidelines. In addition, a contribution is to be made to the growth of world trade.

**OFF-GRID (RURAL ELECTRIFICATION)** • Solar systems not directly connected to the power grid; the power generated is directly consumed or stored locally (so-called stand-alone system).

**ON-GRID** • Solar 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 take electricity out of the grid if necessary.

<u>ÖKODAX</u> • Represents the value development of the ten most liquid German companies from the Prime IG Renewable Energy Index. It covers companies from the  $\rightarrow$ *renewable energies* industry.

PERFORMANCE DRIVERS • Process-oriented parameter. An improved performance in the leading indicators influences the future development of the lagging indicators in a positive manner. The leading indicators thus have an early warning character concerning the achievement of key strategic goals.

**PHOTON PHOTOVOLTAIK AKTIEN INDEX (PPVX, PHOTON PHOTOVOL-TAIC SHARE INDEX)** • Worldwide index of the Photon trade journal listing the companies that generated more than 50 percent of the previous year's revenues with products or services directly or indirectly associated with the installation or use of photovoltaic systems. SOLARWORLD AG has been listed in this index since its start in 2001. **PLUS SORTING** • The output of every solar power  $\rightarrow$  module is measured in the SOLARWORLD production. The module

is then allocated to a performance class that at least corresponds to the nameplate output or is higher.

 $\underline{\texttt{POLY-CRYSTALLINE}} \bullet \rightarrow multi-crystalline$ 

**PREPAID EXPENSES/DEFERRED INCOME** • Balance sheet item carrying expenses incurred or income received before the closing date (balance sheet date) but allocatable to periods after the balance sheet date.

**PRICE-EARNINGS RATIO (PER)** • Indicates the multiple of the earnings per share with which the stock is currently valued at the stock exchange

**PRIMARY ENERGY CONSUMPTION** • In the energy industry, primary energy describes that energy which is available in the naturally occurring energy forms or energy sources, such as coal, gas, solar radiation or wind. Primary energy consumption is the result of the final energy consumption and the losses incurred in generating the final energy from primary energy.

**PRIME STANDARD** • Listing segment of the Frankfurt stock exchange for companies meeting particularly stringent international transparency standards. Precondition for admission to  $\rightarrow DAX$ ,  $\rightarrow TecDAX$ , MDAX or SDAX.

**QUALITYMANAGEMENT (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**) **RATING** • Ratings serve to assess the future ability of a company to meet its payment obligations punctually and completely and result from the analysis of quantitative and qualitative factors.

**[RE]-ASSURANCE** • Confirmation of facts within the framework of the internal control system (IKS); defined processes are thus verified both in terms of their compliance and also in terms of whether they make sense.

**RECYCLING** • Returning used materials into the economic cycle and processing them into new products. Recycling offers the advantages of a reduction in waste volumes as well as the conservation of raw materials.

**RENEWABLE ENERGIES** • Energies from non-depleting sources including sun, water, wind, geothermal and biomass sources.

**RENEWABLE ENERGY INDUSTRIAL INDEX (RENIXX)** • Index of the 30 most important worldwide stocks of companies active in wind energy, solar energy, hydropower, bio-energy, geothermal energy and fuel cells. SOLARWORLD has been listed in this index since its start in 2006.

**RENEWABLE ENERGY SOURCES ACT [EEG]** • Law to give priority to  $\rightarrow$  renewable energies in Germany; the EEG regulates the preferred purchase, transmission and compensation of electricity from renewable sources. The feed-in tariffs are fixed for 20 years, which makes for planning safety and secure returns.

**<u>RISK MANAGEMENT</u>** • Procedure for the identification, measurement and avoidance/reduction of risks or the implementation of corresponding measures.

(S) SELF-CONSUMPTION • Self-generated power can be consumed directly, the rest can be fed into the public grid. In both cases, the feed-in compensation 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 will be the return on investment of a solar power plant. The share of self-consumed electricity can be boosted to more than 60 percent with intelligent products for consumption control. Self-consumers are more independent of increasing electricity prices. At the same time, the strain on the German grid is reduced since solar power generation and consumption are balanced out in the same building.

<u>SHAREHOLDER</u> • Owner of shares in a company (also stockholder).  $\rightarrow$  Stakeholder

SPECIALIST PARTNER NET/SHOP • Internet platform that informs the specialist partners about current dates, news and press releases of the photovoltaic industry. It also contains marketing material and media support.

**SOCIAL MEDIA** • Social networks and network communities that serve as platforms for the exchange of opinions, impressions and experience.

**SOLAR ENERGY INDUSTRY ASSOCIATION (SEIA)** • National industry association of the U.S. solar industry.

**SOLARWORLD SCORECARD** • Based on the Balanced Scorecard concept by Kaplan/Norton (1992) and constitutes an indicator-based control tool that takes economic, ecological and social factors into consideration; the basic structure of the scorecard in addition to the financial perspective includes the customer perspective, the process perspective as well as the innovation, potential and/ or employee perspective; the SOLARWORLD Scorecard also has a societal perspective. The instrument portrays cause-and-effect relationships by way of control variables and the appropriate  $\rightarrow performance drivers$  and is designed to provide structural early indicators.

**S&P GLOBAL CLEAN ENERGY INDEX** • The index covers 30 "Clean Energy Companies" worldwide. SOLARWORLD has been listed in this index since its start in 2007.

**SOLAR-GRADE SILICON** • Describe silicon crystals with a high degree of purity sufficient for solar applications. The chemical element of silicon is a semiconductor that forms crystals with a stable diamond structure. After oxygen silicon is the second most frequent element in the earth crust. For the processing in the solar field the raw silicon has to be purified into solar-grade silicon and is cast into blocks for cutting into  $\rightarrow$  *wafers*.

**SOLAR POWER PLANT** • Complete system of solar modules generating direct current through the photovoltaic effect direct current to be fed into the power grid is converted into alternating current by an  $\rightarrow$  *inverter*.

**SOLAR2WORLD** • Under the umbrella "Solar2World", the SOLARWORLD group pools its ethical activities to promote solar power, in particular in threshold and developing countries.

**SOLEX** •  $\rightarrow$  World Solar Energy Index

SOLSIX<sup>®</sup> • SolarWorld wafer brand.

**SPOT MARKET** • General term for markets in which the purchase price is paid immediately upon delivery.

<u>SPREAD</u> • Describes the difference between two uniform entities that are compared with one another.

**STAKEHOLDER** • Groups or individuals that may influence the goals achieved by a company or are affected by these goals. The key stakeholder groups include employees, shareholders, investors, suppliers, customers, consumers, authorities and non-governmental organizations.

**STANDARD TEST CONDITIONS** • Conditions under which the current and voltage indicators of a  $\rightarrow$  *cell* and/or a  $\rightarrow$  *module* are measured (1,000 W/m<sup>2</sup>, 25°C cell temperature, solar spectrum AM 1.5).

SUNFIX® PLUS • Assembly system for inclined and flat roofs as well as free field systems that includes all components from bolts to support racks that are necessary for the installation of a solar power system

<u>SUNKITS®</u> • Complete construction kits that contain all components including documentation needed for the installation of a solar power plant. In addition, SOLARWORLD offers a special insurance for two years and free connection to the online portal  $\rightarrow$  SUNTROL® with the purchase of its solar sun kits.

SUNMODULE® PLUS • Innovative module concept of Solar-World with  $\rightarrow$  Plus sorting.

<u>SUNSIL®</u> • SOLARWORLD brand name for high purity  $\rightarrow$  solar-grade silicon produced by JSSi GmbH according to a proprietary process.

SUNTOOL® • Planning software for installers, architects, wholesalers and planners; with this software solar power plants with a maximum output of about 150 kWp can be planned. A yield forecast helps to plan the financing of the solar power plant.

SUNTRACK® • Assembly system for solar modules that enables modules to track the sun on two axes in order to generate an extra yield.

SUNTROL® • Intelligent monitoring system enabling the operator of a solar power plant to track and compare the yields produced. The SUNTROL® product range includes the SUNTROL display, the SUNTROL data logger, the SUNTROL Internet portal and the SUNTROL Application for the iPod touch.

SUNTUB<sup>®</sup> • Assembly system for flat roofs with an inclination of up to 6°.

SUNBRICKS<sup>®</sup> • Developed and produced by the SUNICON subsidiary; the products are produced by pressing powdery → SUNSIL<sup>®</sup> into shape according to a self-developed process. The silicon becomes meltable and can thus be further processed into wafers. Alternative products are SUNBALLS<sup>®</sup> and SUNPEARLS<sup>®</sup>.

**SUNCARPORT®** • Carport with a solar roof. The solar power of the carport can be fed into the grid in Germany at the same compensation rates as roof systems according to the  $\rightarrow$  Renewable Energy Sources Act. The Carport can also be used as a "power filling station" for electric or hybrid vehicles.

SUPPLIERCAPITAL • Intangible assets such as, for example, licences or contracts with suppliers that constitute a certain value.

**SUPPLY CHAIN** • Term used to designate the value added of a product on every stage of production processes. The stages of SOLARWORLD's supply chain range from silicon to  $\rightarrow$  modules.

SUSTAINABILITY • 1) lasting; it describes a system lasting in the long term; 2) scientific concept concerning the objective limits to the use of environmental resources; 3) ethical normative concept hinging upon the question of justice and a balance between value added and ecological damage added.

SUSTAINABILITY MANAGEMENT • Control of ecological, social and economic effects in order to achieve a sustainable corporate and business development and ensure a positive contribution made by the company to the sustainable development of society at large.

**SYNERGY** • An effect designed to express the fact that the total resulting from an optimum combination of individual elements is more than the sum of the individual elements.

(T) TAKE-OR-PAY OBLIGATION • This is a contract in which the seller undertakes to supply a certain quantity and the buyer undertakes to pay for the contracted amount irrespective of whether he takes delivery of this quantity or not.

**TECDAX** • Index of medium-sized German companies from the technology industry; in addition to the  $\rightarrow DAX$ , the MDAX and the SDAX the TecDAX belongs to the  $\rightarrow Prime$ *Standard* of Deutsche Börse AG. The SOLARWORLD stock has been listed in this index since 2004.

**TESTIMONIAL** • Advertising term describing the concrete message delivered by a person well-known to the target group to increase the credibility of an advertising claim, e.g. for a product. For SOLARWORLD, especially Larry Hagman, Lukas Podolski and Jean Pütz were active in this way as partners in 2010.

**TOTAL ASSETS** • Total of all assets and liabilities in a balance sheet.

**TOTAL PRODUCTIVE MANAGEMENT (TPM)** • This concept originates from  $\rightarrow$  *quality management (QM)*. The overriding objectives are the increase of plant availability, the minimization of losses, the integration of employees and the avoidance of redundancies.

- (U) UNAIDED BRAND AWARENESS In a survey on brand awareness, no multiple answers are given when unaided recall is measured. The respondents have to remember the brand names without help.
- VALUE ADJUSTMENT Adjustment item to cover the impairment of a fixed or current asset item carried under assets in the balance sheet, for example accounts receivable.
- **WAFERS** Thin discs made of  $\rightarrow$  solar-grade silicon, used to produce solar  $\rightarrow$  cells. They could be  $\rightarrow$  mono- as well as  $\rightarrow$  multi-crystalline.

**WATT** • International measuring unit for output, named after James Watt, standard sign "W"

WHOLESALE NET/SHOP •  $\rightarrow$  Specialist Partner Net/Shop; for the wholesale trade

WILDERHILL NEWENERGY GLOBAL INNOVATION INDEX [NEX] • Contains worldwide companies whose technologies and services take into consideration future generations and that promote the use of clean and  $\rightarrow$  renewable energies. The SOLARWORLD stock has been listed in this index since its start in 2006.

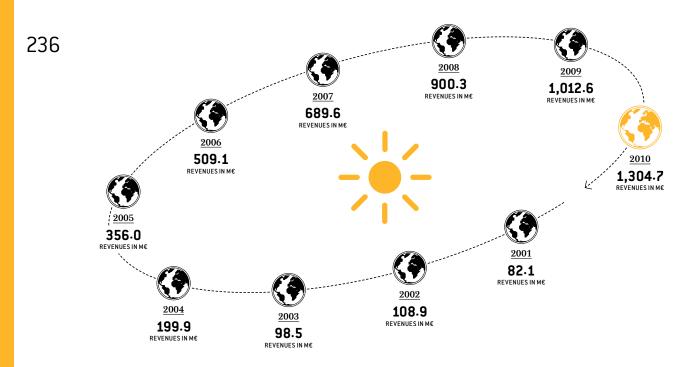
**WORLD SOLAR ENERGY INDEX (SOLEX)** • The index contains the ten largest companies worldwide in the solar industry. The SOLARWORLD stock has been listed in this index since its start in 2006.

**WORKING CAPITAL** • Current assets minus current liabilities, i.e. the portion of current assets financed with long-term schemes. It provides information about the company's financial stability and flexibility.

# LIST OF ACRONYMS AND ABBREVIATIONS

$\bigcirc$		
( <b>A</b> )	AG	
		German Stock Corporation Act
	ARUG	German Act on Implementation
		of Shareholders' Rights Directive
<b>(B</b> )	BAFIN	
Ŭ	BGB	German Civil Code
<b>(C</b> )	CDP	Carbon Disclosure Project
Ŭ	CEO	Chief Executive Officer
	CF0	
	COO	Chief Operating Officer
	CRM	Customer Relationship Management
	CSO	
	D&0	Directors and Officers
		Analysis and Asset Management $\rightarrow$ EFFAS
<b>(F</b> )	EBIT	
		Earnings before Interests and Takes
		Depreciation and Amortization
	FRT	Earnings before Taxes
		European Federation of Financial
	LI I AJ	Analysts Societies $\rightarrow$ DVFA
	FIA	
	FM	Environmental Management
		European Photovoltaic Industry Association
	200	Environmental, Social, Governance
G	GC	Global Compact
		German Corporate Governance Code
	GRI	Global Reporting Initiative
	GW	Gigawatt
$\bigcirc$		
H	HGB	German Commercial Code
		International Accounting Standards
	IASB	International Accounting Standard Board
	ICS	Internal Control System
	IEA	International Energy Agency
	IFRIC	International Financial Reporting
		Interpretations Committee
	IFRS	International Financial Reporting Standards
		Intellectual Property
	ISO In	nternational Organization for Standardization
	IT	Information Technology

( <b>K</b> ) kpi	
ΚW	
КW	HKilowatt per hour
KW	PKilowatt-peak
	_
L LLC	Limited Liability Company
LTD	)Limited Company
_	
(M) MW	Megawatt
MW	IPMegawatt-peak
<b>(0</b> ) <b>DE</b> (	CD Organization for Economic
U	Cooperation and Development
OPE	EC
	Exporting Countries
	1 5
(P) PV	Photovoltaic
( <b>P</b> ) PV	Photovoltaic
_	
_	PhotovoltaicQuality Management
() OM	Quality Management
() OM	
() OM () R&	DResearch & Development
() OM () R&	Quality Management
() () () () () () () () () () () () () (	D
() () () () () () () () () () () () () (	DResearch & Development
<ul> <li>() OM</li> <li>(R) R&amp;</li> <li>(S) SLA</li> <li>(T) TPN</li> </ul>	Quality Management DResearch & Development AService Level Agreement MTotal Productive Management
<ul> <li>() OM</li> <li>(R) R&amp;</li> <li>(S) SLA</li> <li>(T) TPN</li> </ul>	Quality Management D
<ul> <li>() OM</li> <li>(R) R&amp;</li> <li>(S) SLA</li> <li>(T) TPN</li> </ul>	Quality Management DResearch & Development AService Level Agreement MTotal Productive Management
(1) OM (R) R& (S) SL/ (T) TPN (V) VOF	Quality Management D



#### CAPITAL INCREASE BY 450,000 SHARES – WITH CAPITAL STOCK GOING UP TO € 4.95 MILLION // THE CAPITAL RESOURCES WERE FURTHER STRENGTHENED FOR FUTURE EXPANSION

The foundation of SOLAR FACTORY in Freiberg, Germany, marks our entry into module production.

#### 2002

#### CAPITAL INCREASE BY 825,000 SHARES // THE CAPITAL STOCK NOW AMOUNTS TO € 5.775 MILLION

Inauguration of DEUTSCHE CELL and thus entry into the group's own cell production – SOLARWORLD thus operates Europe's largest integrated solar cell factory in Freiberg, Germany. // First-time signature of the Corporate Governance Code // Joint venture with Evonik Degussa GmbH – pioneering step in the area of generating solar-grade silicon.

#### 2003

### INCLUSION OF SOLARWORLD SHARE IN THE PRIME STANDARD OF DEUTSCHE BÖRSE // THE SHARE IS WELL ESTABLISHED AND IS SOON REPRESENTED IN OTHER INDICES AS WELL

Commissioning of the pilot plant SolarMaterial for solar recycling and wafer recovery in Freiberg, Germany. // Inauguration of a fully automatic production line for solar modules at the Freiberg, Germany // the complete solar value chain is at the highest technological standard.

#### 2004

#### SOLARWORLD MANAGES TO ENTER THE TECDAX VIA THE SO-CALLED "FAST ENTRY RULE" // CAPITAL INCREASE BY ANOTHER 575,000 SHARES // CAPITAL STOCK AT € 6.35 MILLION // FLOATING OF A CORPORATE BOND: THE SOLARWORLD BEARER BOND

SOLARWORLD is awarded certification according to ISO 9001, thus documenting its quality orientation right across all business processes. // Group strategy and consistent course of expansion generate successes: Two years after foundation, DEUTSCHE CELL joins the top 10 of worldwide solar cell manufacturers. DEUTSCHE SOLAR advances into the league of the largest European manufacturers of silicon wafers.

#### 1:1 ISSUE OF BONUS SHARES DOUBLES CAPITAL STOCK TO € 12.7 MILLION // TOP SHARE OF THE YEAR 2005

SOLARWORLD Einstein Award presented for the first time. The award goes to personalities who have acquired special merits in promoting the use of solar energy. // With the foundation of the sales subsidiaries SOLARWORLD CALIFORNIA (today: SOLARWORLD AMERICAS) and SOLARWORLD IBÉRICA the group starts the expansion of its international business. // Raw materials activities enhanced: Prototype plant for solar-grade silicon generation of JOINT SOLAR SILICON (today: JSSI GMBH) produces the first quantity of silicon.

#### 2006

### FURTHER CAPITAL INCREASE BY 1.265 MILLION SHARES // € 13.965 MILLION OF CAPITAL STOCK RENEWED ISSUE OF BONUS SHARES 1:3 // THE CAPITAL STOCK RISES TO € 55.86 MILLION

Acquisition of the crystalline solar activities of Shell in Germany and the U.S. – basis for the future production in the U.S. and rise to be among the leading top 3 solar power providers worldwide // Entry into solar motor racing – development of a solar racing car SOLARWORLD NO.1 together with Bochum University of Applied Sciences, Germany

#### 2007

#### 1:1 ISSUE OF BONUS SHARES // DOUBLING THE CAPITAL STOCK TO € 111.72 MILLION

Acquisition of a new production facility in Hillsboro in the U.S. State of Oregon – milestone for the further expansion of U.S. manufacturing activities in only 18 months // Strategic expansion of the areas of Research & Development as well as Raw Materials by establishing the subsidiaries SOLARWORLD INNOVATIONS and SUNICON in Freiberg, Germany // Under the umbrella of SOLAR2WORLD the group pools its not-for-profit activities and contributes to the regional development in developing countries with its projects of rural solar power solutions.

#### 2008

#### RECEIVED THE GERMAN SUSTAINABILITY AWARD FOR THE MOST SUSTAINABLE PRODUCTION

Opening of the SOLARWORLD solar factory in Hillsboro – America's largest production facility for crystalline wafers and cells making SOLARWORLD the largest fully integrated solar group with production activities in the U.S. // Expansion of the growth potential in the Asian market – establishment of solar module production in South Korea as part of the SOLARWORLD KOREA joint venture // Breaking ground for the construction of a further wafer factory in Freiberg, Germany – the largest expansion project to date // Beginning of a group's own silicon production within the framework of our joint venture with Evonik Degussa GmbH (JSSI GMBH).

#### 2009

#### BILLION EURO REVENUE EXCEEDED FOR FIRST TIME // TEN YEAR STOCK EXCHANGE ANNIVERSARY

Since the IPO in 1999 the stock price increased by 1,683 percent. Thus, the SOLARWORLD stock shows the best performance of all German listed companies in the Prime and General Standard in the last ten years. // Further expansion of the worldwide production network with locations in Germany, the U.S. and South Korea (joint venture). The group has thus strengthened its presence in the world's largest growth and future markets. // SOLARWORLD is the best known solar brand in Germany – strategic investments in brand awareness are increased by a factor of five. // Innovative power is increased significantly – build-up of a new, international research campus with development labs for wafers, cells and modules // AGM of SOLARWORLD AG approves the capping of Management Board salaries to twenty times the gross average income in the group, thus sending out a signal for the appropriate amount of management salaries in Germany.

#### 2010

#### BILLION REVENUE MARK SUSTAINABLY EXCEEDED - FOREIGN BUSINESS SUCCESSFULLY EXPANDED

SOLARWORLD continues to expand its revenue substantially: increase by 29 percent to € 1.3 billion. The foreign quota from shipments rises to 59 percent. // With the establishment of the joint venture QATAR SOLAR TECHNOLOGIES Q.S.C., SOLARWORLD secures another supply source for solar-grade silicon as of 2012/2013. // Inauguration of the Technology Center of SOLARWORLD INNOVATIONS GMBH in Freiberg/Germany. With the Research & Development architecture on a pilot scale close to actual production conditions SOLARWORLD substantiates its competitive strength. // Take-over offer for Solarparc submitted: The objective is to get a stronger foothold in the international project business.

237

FINANCIAL AND EVENT CALENDAR 2	011
FINANCIALENDAN	
EVENICA	Intersolution Gent, Gent (Belgium) www.intersolution.be
E	
	Intersolution Gent, en www.intersolution.be Salon des Energies Renouvelables, Lyon (France) www.energie-ren.com/2011/index.php/english/Accueil.html
JANUARY 27 - 29, 2011	www.ma
	calon des Energies Rom 2011/index.php
FEBRUARY 15-18, 2011	W W W
FEBRUARY 15-10,	Ener(IV Sure instead
	World Future Eliced Arab Emirated Abu Dhabi (United Arab Emirated) www.worldfutureenergysummit.com
FEBRUARY 17 - 20, 2011	Abu Dhavenergy sur
FEBROAR	Ecobuild ExCel, London (England)
	Ecobuild ExCel, London (Eng
MARCH 1 - 3, 2011	www.ecoba
MARCI	(c-rmany)
- 10 2011	ISH, Frankfurt (German) www.ish.messefrankfurt.com
MARCH 15 – 19, 2011	WWW.ISH.meda +
	Publication of Group Report 2010 Annual Business Press Conference on financial Statements
MARCH 24, 2011	Annual Busiliess 1 - Accounts
· · · ·	Annual Business Fress Conject Analysts' Conference Accounts annualgroupreport2010.solarworld.de
	International Analysts' Conference Call Annual Group Report 2010
MARCH 25, 2011	International Analysis Conference
	Ecotec, Athen (Greece)
APRIL 7 – 10, 2011	www.ecotec-exhibition.gr
• MAY 4 – 6, 2011	Solarexpo, Verona (Italy)
	www.solarexpo.com
<u> </u>	Publication of consolidated interim Report 1st Quarter 2011
	Analysts' Conference Call www.solarworld.de/financial-reports
	www.solalwolla.ae/jilaliciai-reports
MAY 24, 2011	Annual Commentation
	<b>Annual General Meeting, Bonn (Germany)</b> www.solarworld.de/hv2011
MAY 25, 2011	
1	Dividend Payment* for fiscal year 2010
JUNE 8 – 10, 2011	
	<b>Intersolar Europe, Munich (Germany)</b> www.intersolar.de
JULY 12 – 14, 2011	
- 14,2011	Intersolar North Areas
	Intersolar North America, San Francisco (U.S.) www.intersolar.us
AUGUST 11, 2011	D-1 1
	Analysis of consolidated in the
- CEP-	Publication of consolidated interim Report 1st half 2011 Analysts' Conference Call <sup>WWW.Solarworld.de/financial.rom</sup>
SEPTEMBER 5 – 8, 2011	ui i chorte
	PV SPA
OCTOBER 18 – 20, 2011	WWW.photovoltaio
	<i>WWW.photovoltaic-conference.com/exhibition.html</i> <i>SolarPower, Dallas (U.S.)</i>
NOVEMBER 14, 2011	
	Publication a
	Analysts' Conference in the consolidated :
/	Audication of consolidated interim Report 3rd and Analysts' Conference Call WWW.solarWorld.de/finore
/	Publication of consolidated interim Report 3rd quater 2011 Analysts' Conference Call www.solarworld.de/financial-reports
1	۰ - ۰ دن ۲۰

THE ANNUAL GROUP REPORT IS ALSO AVAILABLE IN GERMAN. ONLINE VERSIONS IN GERMAN AND ENGLISH CAN BE FOUND ON OUR HOMEPAGE AT <u>ANNUALGROUPREPORT2010.SOLARWORLD.DE</u>. ON THE WEB, YOU HAVE ACCESS TO A BARRIER-FREE PDF-FILE OF OUR REPORT.

#### CONTACT OUR TEAM:

SolarWorld AG Investor Relations / Corporate Communication Martin-Luther-King-Str. 24 53175 Bonn, Germany

www.solarworld.com placement@solarworld.de

Phone: +49228/55920-470 Fax: +49228/55920-9470