



# DEIF

## CSR/Sustainability Report

### 2021



# LETTER TO OUR STAKEHOLDERS

2021 has been yet another turbulent year due to the continued pandemic, disruptions in global supply chains, component shortages and rising inflation. Navigating the short-term challenges has therefore been a top priority at DEIF in the past year, while never losing sight of the long-term threats of climate change, resource scarcity and inequality.

At DEIF we have made a strong commitment to contributing to global, sustainable development by the products and solutions we offer and by limiting the footprint of our activities. We aim for profitable and sustainable growth towards 2030 with two thirds of our revenue coming from products and solutions that have a positive climate impact. We pursue this target through different strategies.

For years to come, fossil fuels still have a significant role to play in power generation. We know that our power management solutions can make a positive difference to these systems by improving the energy efficiency, and hence save fuel and CO2. At the same time, the demand for our hybrid solutions integrating renewables in combination with energy storage is steadily increasing, and we continuously add new, advanced control solutions to our portfolio.

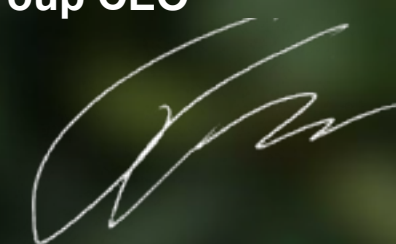
As regards the footprint of our own activities, we aim to be carbon neutral by 2025, and by 2030 we aim to reduce the

total emissions upstream and downstream in our supply chain by two thirds. One of the most important projects in the coming year will be the construction of a new CO2-neutral factory located at the DEIF headquarters in Skive. At the same time, we increasingly move from global to local sourcing in order to reduce environmental impacts from shipping and storage.

DEIF has a strong heritage of social responsibility. We want to be a fantastic place to work no matter if you work in Denmark or in DEIF subsidiaries around the world. We want to strengthen our spirit of winning together, stressing close collaboration, ambition, opportunities for development and a safe working environment.

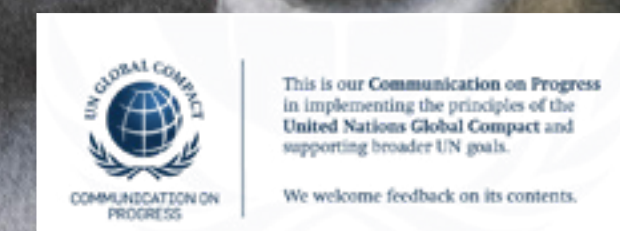
In September 2021, I took over the role as CEO of DEIF after Toke Foss. I am proud to be trusted with the leadership of DEIF and the fulfilment of the long-term strategy of profitable, sustainable growth. Based on ethics and responsibility towards employees, business partners, local communities and the planet, we continue the journey to make a real difference in the world.

**Christian Nielsen, Group CEO**



**Toke Foss**  
Chairman of the Board

**Christian Nielsen**  
Group CEO





# ABOUT DEIF

DEIF develops and manufactures green, safe and reliable control solutions and products for decentralised power production – on land and at sea.

At DEIF, we take lead in the green transition of the energy sector by offering control systems that improve the energy efficiency of all types of applications. Electrification plays an important part in the greening of energy systems. Hence, hybrid solutions that integrate traditional fuels with wind and solar systems including storage facilities play an increasingly important role in our product offering.

## OUR APPROACH

DEIF is a truly global company that serves customers all over the world. With a widespread network of subsidiaries, we can deliver best-in-class power management solutions whenever and wherever they are needed. This global presence also means that we have to navigate different cultures, practices, ethics and moral standards. Across the world, we act as ONE company with shared values and in compliance with the DEIF Code of Conduct.

Since the foundation of the company in 1933, DEIF has been a family-owned, value-based company that takes a long-term approach to value creation. We protect this heritage and want to be recognised for our social responsibility, honesty and integrity towards our employees, business partners and the society as a whole.

## OUR AMBITION

We have an ambition of profitable and sustainable growth. By leveraging the potential of our products and solutions to increase energy efficiency, we have set sail to play a leading role in clean and green power management. More specifically, we want to double our turnover before 2030, and two thirds of this turnover must come from products and solutions that have a positive climate impact.

Our ambition is to be one step ahead with the most climate friendly solutions through our global presence. We want to be the go-to partner for products that boost energy efficiency, support electrification and integrate renewables. At the same time, we aim to reduce the total carbon footprint of our activities (scope 1-3) by two thirds by 2030.



**Founded in 1933**  
and headquartered in  
Denmark

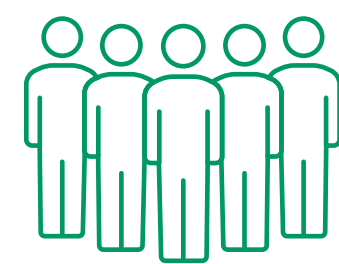


**13**  
sales offices globally

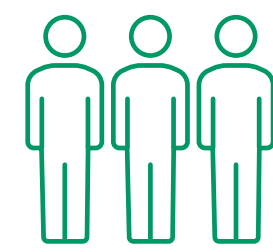


# DEIF 2021 AT A GLANCE

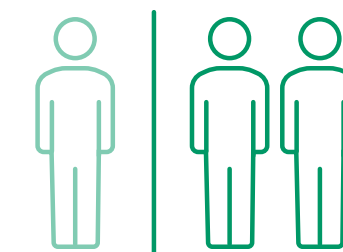
## OUR PEOPLE



**500**  
Employees\*



**110**  
R&D



**63%** Headquarters  
**37%** International subsidiaries

## OUR FINANCES



**5.3** mEUR  
EBIT



**74.1** mEUR  
revenue

## OUR CUSTOMERS



**67**  
NPS (Net Promoter Score)\*\*



**99%**  
Delivery performance\*\*\*

## TURNOVER/REGIONS

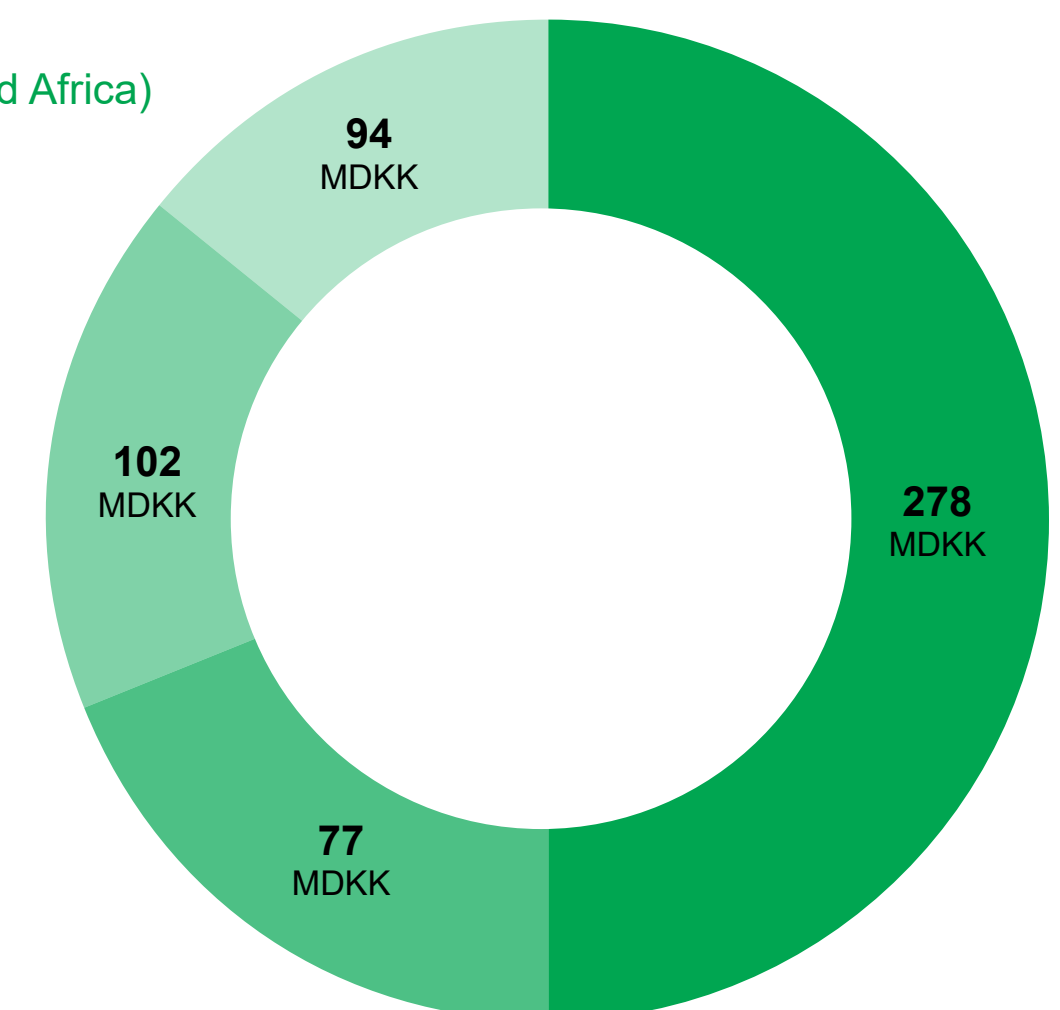


ENEA (Europe, Near East and Africa)

Americas

China

Asia



\* Number of employees per 31 Dec. 2021, excluding WPT China.

\*\*Net Promoter Score: A measure for customer loyalty and satisfaction. Ranging from -100 to +100.

\*\*\*Delivery Performance: Percentage of orders delivered as first confirmed to the customer.



# CSR AND SUSTAINABILITY AT DEIF

## A long-term commitment to be a responsible company

### HOW WE WORK WITH CSR AND SUSTAINABILITY

Since 2016, DEIF has been a member of the UN Global Compact, and we base our CSR work on the ten principles of the Global Compact. The mainstay of our CSR activities is the DEIF Code of Conduct, which reflects the ten principles of the Global Compact and guides leaders and employees in daily decisions, actions and behaviour.

We expect suppliers and their sub-suppliers and other cooperation partners to live up to our principles of ethical business practices and to help us deliver sustainable solutions. This means that our suppliers have either signed the DEIF Code of Conduct or DEIF has approved the company's own Code of Conduct.

All DEIF employees have been introduced to the DEIF Code of Conduct. We conduct regular training sessions, where teams and individuals can practice how to handle difficult situations, covering topics like corruption, discrimination, safety and environmental issues. The DEIF Code of Conduct is part of the onboarding programme for all new employees.



**Anna Pattis,**  
Sustainability Manager

### NEW POSITION AS SUSTAINABILITY MANAGER

In 2021, we decided to employ a Sustainability Manager. The new manager, who started in DEIF on March 1, 2022, will be dedicated to driving, coordinating and further strengthening the CSR and sustainability work across DEIF to meet the strategic ambitions by 2030.

### OUR CONTRIBUTION TO THE UN SUSTAINABLE DEVELOPMENT GOALS

*In 2021, the Executive Management Team of DEIF finalized a long-term strategy for the development of DEIF towards 2030, including a screening of the UN Sustainable Development Goals. In the process, it was decided to primarily focus the effort to support Goal no. 7 (affordable and clean energy) and Goal no. 13 (climate action), areas where DEIF can make the biggest difference in-house and with the solutions we offer to our customers. We also work to support the other goals for sustainable development, which is illustrated through the content and cases of this report.*



### ORGANISATION OF THE CSR WORK

The CSR work at DEIF is governed by the CEO, while a cross-functional CSR Steering Committee advises on ambitions, coordinates activities and follows up on progress. Ad hoc work groups are set up for specific tasks. The Health, Safety, Environment (HSE) organisation is deeply involved in the CSR work, and all managers are responsible for continuous follow-up and improvements within their areas of responsibility to make sure that the CSR mindset is embedded and kept alive in all parts of the organisation. At the end of 2021, we started the recruitment of a Sustainability Manager, who is dedicated to driving, coordinating and further strengthening the CSR/sustainability work across DEIF. As a new initiative we have established a sustainability focus group with members from the Board of Directors and the Management. The primary purpose is to share knowledge and establish adequate decision support to the Board of Directors.





# CSR and sustainability at DEIF:

## MANAGEMENT

In 2021, roll-out of the 2030 Strategy was high on the leadership agenda. It was important to get all employees on board the 2030 Strategy, which charts the path of sustainable and profitable growth and development of DEIF. At the same time, management remained focused on getting all employees safely through the pandemic, while ensuring momentum on the more immediate CSR targets and initiatives planned for the year.



*“We have worked with sustainability for many years – both in our own operations and in our product offering. What’s new is the fact that we now have overall targets and priorities in place, which means that we can accelerate our efforts in areas, where we can make the biggest difference.*

*It is no walk in the park to transform the business, and we realise that everybody has to pitch in and work hard to make the required changes. Fortunately, the organisation has confirmed that they know the strategy and are ready to make it happen.”*

Christian Nielsen, Group CEO

## ACTIVITIES AND RESULTS IN 2021

### IMPLEMENTATION OF STRATEGY 2030

- Communication and involvement of all employees in the implementation of Strategy 2030. The strategy outlines direction and specific targets for sustainable business growth and supports the UN Sustainable Development Goals number 7 (affordable and clean energy) and number 13 (climate impact). Among others, the strategy targets a revenue stream, where two thirds of the turnover come from climate-friendly and energy efficient solutions. At the same time, the carbon footprint of DEIF’s activities (scope 1 and 2) must be CO2 neutral in 2025.
- During 2021, the overall 2030 Strategy has been translated into prioritized strategies and plans towards 2025 as well as specific action plans for all functions and regions/subsidiaries.

### CSR ASSESSMENTS

- In 2021, we have conducted CSR assessments of the DEIF companies in Denmark, China, Singapore, Brazil, India and Korea. The assessments were carried out according to the Global Compact Self-Assessment Tool published by the UN. The assessments documented that the global organisation complies with the DEIF Code of Conduct and that CSR is an integral part of the business across the global organisation.

### CSR SCREENING OF NEW SUPPLIERS

- All new suppliers that DEIF entered into cooperation with in 2021 have been CSR-screened, i.e. they have either signed the DEIF Supplier Code of Conduct or the company’s own Code of Conduct has been approved by DEIF. All screenings were performed as desk research, since on-site visits and audits were not possible due to corona restrictions.

### THE PLAN FOR REALIZING THE 2030 AMBITIONS





# CSR and sustainability at DEIF:

## NEXT STEPS IN 2022



### STRATEGY 2030

- Execute the functional and regional 2-year plans in order to create the results required to realise the strategy's ambitions of profitable and sustainable growth.
- Prepare overall roadmap for meeting the long-term sustainability and climate ambitions of Strategy 2030 for discussion with the Board of Directors.

### CARBON-NEUTRAL HEADQUARTERS

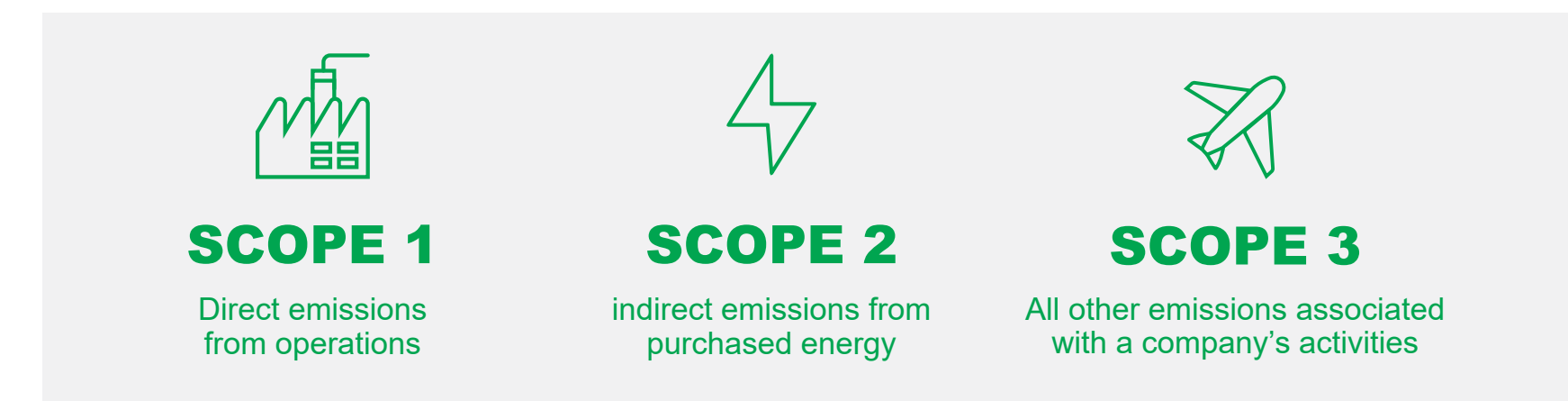
- By 2025, DEIF has to be carbon neutral within our own production and facilities. At our headquarters, the goal is met by replacing natural gas by green power produced on site. The planning of the transition to green power is well underway. In 2022, a highly efficient heat pump will be installed and in 2023, solar PV will be mounted. Until the green solution is fully implemented, the purchase of certified green power from external supplier continues.

### RESPONSIBLE SOURCING

- Implement a new supplier assessment tool, which was prepared in 2021 and adds a stronger focus on the UN Sustainable Development Goals.
- Make agreement with local, certified auditors, who can conduct local screenings and audits on behalf of DEIF.
- Define joint sustainability targets and projects with strategic partners.

### CLIMATE ACCOUNTING

- Improve our system for climate accounting, scope 1 and 2, for DEIF's global activities and start preparing to include scope 3 at a later stage.
- In 2022, DEIF joins the programme 'Climate-ready Production Companies' run by the Confederation of Danish Industry. The programme provides know-how and tools to map the carbon footprint and ideas on how to reduce emissions. As one out of 15 companies, DEIF will receive guidance and support by consultants, who will help lay the foundations for the future climate accounting system.



### COMPETENCE DEVELOPMENT WITHIN CSR/ SUSTAINABILITY

- As one out of 14 companies, DEIF has been selected to take part in a competence development programme, which will support DEIF's strategy of contributing to the green transition and creating a common understanding of CSR/Sustainability within DEIF. The programme is financed by the European Regional Development Fund and the European Social Fund. The programme takes place in Denmark and therefore primarily focus on managers in the Danish part of the organisation.




CSR and sustainability at DEIF:


# THE ENTIRE ORGANISATION PULLS TOGETHER TO REALISE DEIF’S 2030 AMBITIONS

2021 saw mobilisation of the whole organisation behind the 2030 Strategy through workshops and strategic planning in all corporate functions and subsidiaries. The ambitions of profitable and sustainable growth resounded with the organisation and united everybody under the slogan Winning Together.


## THE 2030 AMBITIONS




Sound financials




Positive climate impact



Accelerated upgrade business



Reduced climate footprint



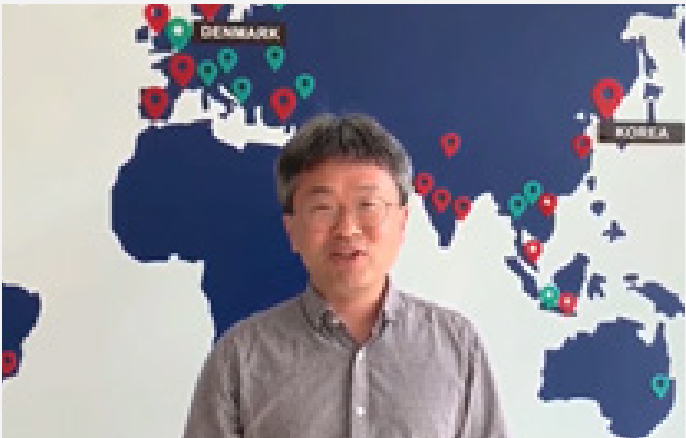
Digital frontrunner



“We had a very successful workshop regarding DEIF Strategy 2030.”  
**Julius Cheng, Customer Solution Department Manager, China**



“I totally buy the dream expressed in the strategy, and there is a lot of work to be done. It is going to be interesting.”  
**Lisbeth Lauritsen, HR partner, Denmark**



“Now I understand the big picture of where DEIF wants to go and what to accomplish. Let’s make DEIF bigger and better and let’s do it together.”  
**Soowon Moon, Finance & Operations Manager, Korea**



“One dream. One DEIF. Our dream will come true.”  
**Wan Yuxia, Department Manager Customer Care, China**



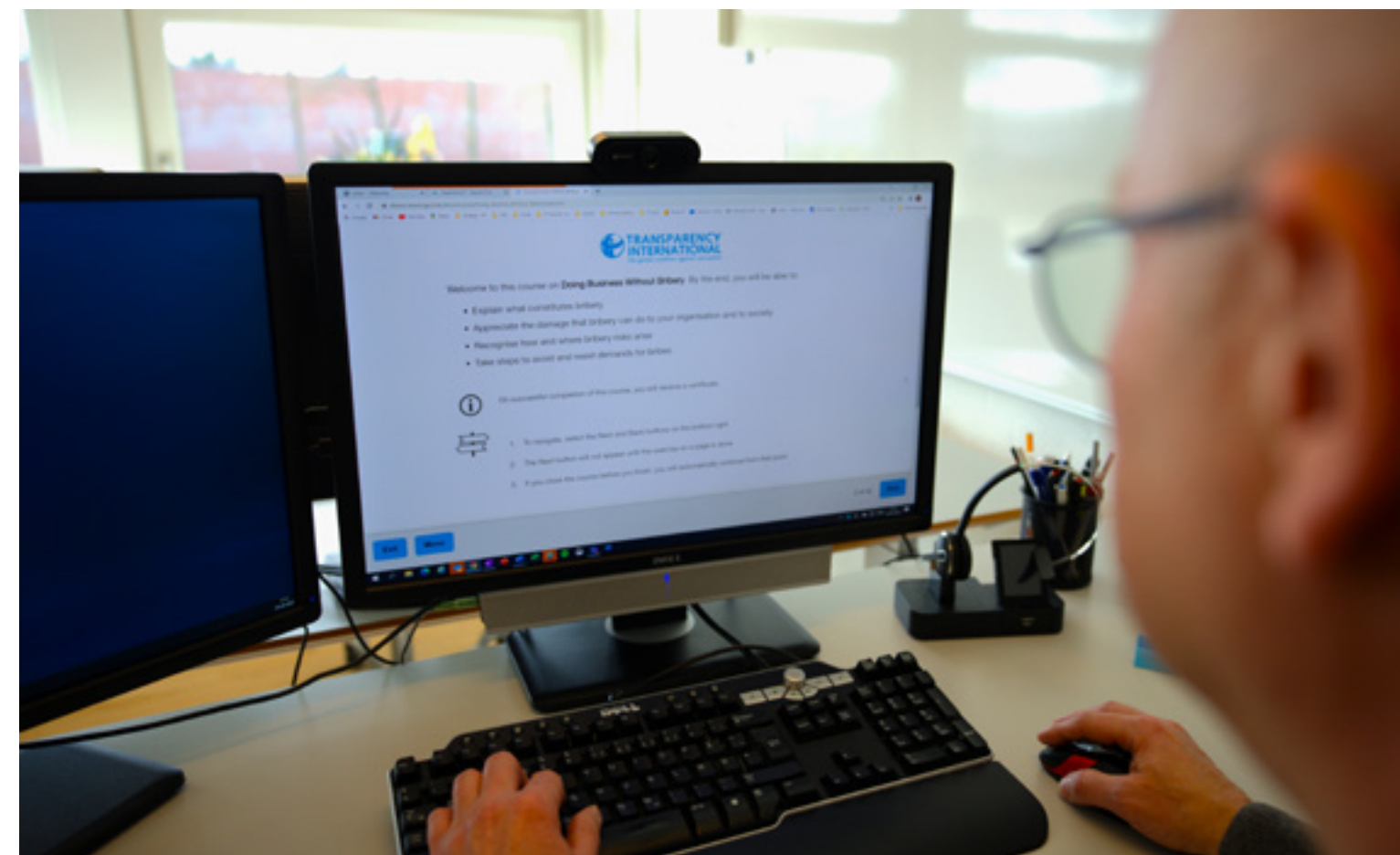
“It was very nice to see the green strategy, that we continue full speed and that we are all part of it. We are all one big DEIF family.”  
**Pia M. Kalms, Warehouse Employee and Staff Representative on the Works Council in Denmark**



# | ZERO TOLERANCE FOR CORRUPTION

DEIF has zero tolerance for corruption, bribery, extortion and use of other methods that may create conflicts of interest related to our business. DEIF employees can only accept minor gifts and attend meetings or events within the scope of normal business practice.

Any decisions, actions or behaviour compromising DEIF's stance on anti-corruption will have consequences for the employee(s) involved. Our contracts are always prepared in accordance with existing laws and regulation, and we take care to make sure that our contracts with suppliers, consultants and other cooperation partners include sections on anti-corruption.



## ACTIVITIES AND RESULTS IN 2021

### WHISTLEBLOWER

- 2021 was the second year of the internal whistleblower system at DEIF. No reports were received during the year.

### SCREENING OF RISK OF CORRUPTION

- All DEIF companies made an anti-corruption screening of partners and suppliers during 2021. No risks were identified.
- During the year all projects (569 in total) were screened for risk of corruption. No risks were identified.

### ANTI-CORRUPTION TRAINING

- All managers in Denmark completed a new, online anti-corruption training session.
- The onboarding programme for new employees was updated with anti-corruption training, targeting sales, support and service engineers, technical and application specialists, category managers and managers in general.

### PARTNER AUDITS

- In 2021, the compliance of DEIF agents, dealers, service partners, and consultants with DEIF's Code of Conduct was evaluated by the Subsidiary Managers of all DEIF companies. Their rating showed that our more than 40 representatives and consultants comply with DEIF's Code of Conduct, none of them scoring a rating below 4 (highest score is 5, which means that the DEIF partners fully complies with our Code of Conduct).

## NEXT STEPS IN 2022

### ANTI-CORRUPTION COMPLIANCE

- Continue risk screening and partner audits.
- Implement an updated anti-corruption compliance programme in the global organisation.



# OUR PEOPLE, OUR CULTURE

## A motivating and inclusive place to work

We support and respect the protection of internationally proclaimed human rights and make sure that we do not in any way contribute to the violation of these rights.

We strive to secure equal rights and commit to group-wide targets to increase the number of women at all management levels and to provide job opportunities for marginalized groups and people with reduced ability to work.

We want to offer a safe and inspiring work environment with opportunities for personal and professional development to all our employees.



**Marjanne Grønhøj**, SVP Human Resource, Communication and Sustainability

*“Our 2030 Strategy requires a change of mindset and culture, which we have labelled ‘Winning Together’. By adding a mindset of winning to our strong culture of collaboration, we believe that we have a strong formula for success.”*

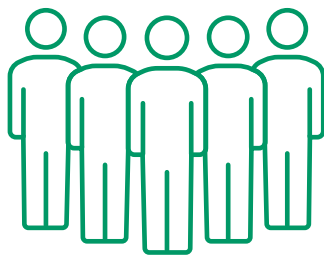




Our people, our culture:

# EMPLOYEE DEMOGRAPHICS 2021

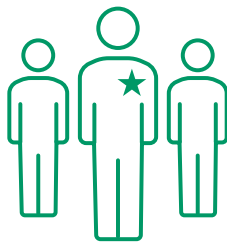
## OUR PEOPLE



**500**  
Total no. of employees\*



**70%** Male  
**30%** Female



**9 years**  
Average seniority



**44 years**  
Average age



**10%**  
Staff turnover



**17**  
Languages spoken at the headquarters in Denmark



\* Number of employees per 31 Dec. 2021, excluding WPT China.



Our people, our culture:

# ACTIVITIES AND RESULTS IN 2021

## CORONA VIRUS AND NEW WORK-FROM-HOME INITIATIVE

- 2021 saw many employees working from home for long periods due to the risk of corona. In May 2021, we carried out a survey among the employees at the Danish headquarters in order to gain insights into motivation and satisfaction when working from home. The survey showed that the majority of employees maintained a high level of motivation, productivity and work satisfaction, while working from home. Based on the conclusions of the survey, we have introduced a new, hybrid work model in Denmark, where Friday is a permanent work-from-home day for all staff. As a pilot, Monday is an optional work-from-home day until the summer of 2022, when the pilot will be evaluated and we will decide whether to continue with the extra work-from-home day.

How will you rate your own motivation during lock-down



## TRAINEESHIPS, INTERNSHIPS AND APPRENTICESHIPS

- DEIF wants to support young people in getting an education. We have a target of minimum 4% of our workforce being employed as either trainees, interns or apprentices. In 2021, 5.8 percent were employed in this kind of job compared to 6.8% in 2020. The drop was due to the fact that many employees worked from home due to corona, which made it difficult to start up new training positions and to provide the necessary support.

Trainees and interns in 2020 vs. 2021



## SOCIAL RESPONSIBILITY

- In 2021, DEIF employed five people in so-called 'flex jobs', meaning that they work a reduced number of working hours and with special work conditions. This corresponds to 1% of the workforce.

## DIVERSITY IN RECRUITMENT

- In 2021, we have adopted a new recruitment strategy, which will help ensure diversity at DEIF as regards gender, age, nationality, etc. Among others, we piloted an innovative recruitment process that ensures 100% anonymity to prevent unconscious bias in the selection process.
- Furthermore, we have implemented online training programmes for candidates, who want to apply for a job at DEIF and for candidates, who are invited for a job interview. The aim of the training sessions is to improve the candidates' chances of succeeding and to make sure that the applicants have a positive experience in their meeting with DEIF no matter if they get the job or not. 24% of applicants for 14 specific jobs used the application training, corresponding to 82 candidates.

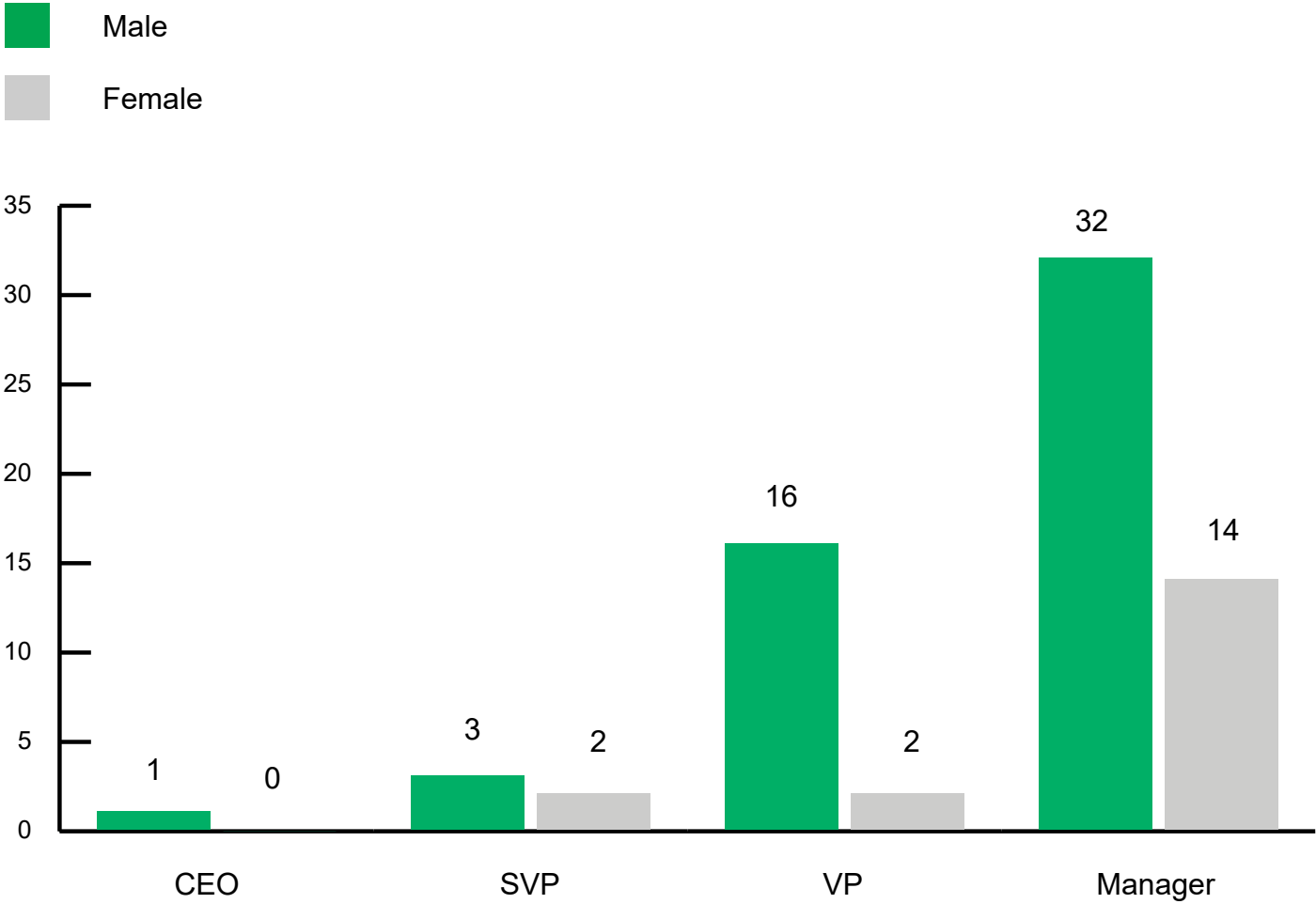


Our people, our culture:

# WOMEN IN MANAGEMENT

- In 2021, 26% of the managers in the organisation were women, an increase of 6 percentage points compared to 2020.
- The number of women on the Board of Directors increased to two out of six external members.
- In 2021, DEIF employed 57 new employees. 26% of our new colleagues were women compared to 18% in 2020.

NUMBER OF FEMALE/MALE MANAGERS IN 2021



“We are glad to see the ratio of women employed at DEIF is growing. Many of our recruitments take place in the field of science, technology, engineering and mathematics, where only about 9% of the graduates are women in Denmark.”

Anne Rahn, HR consultant





Our people, our culture:

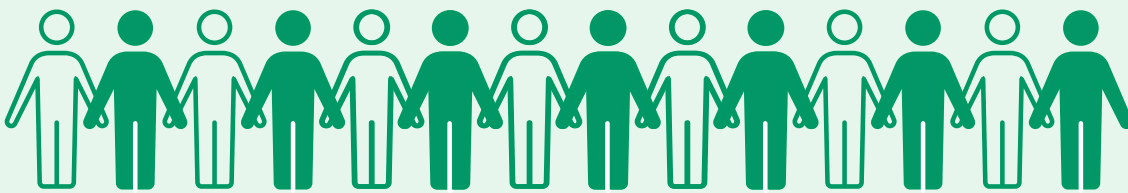
# NEXT STEPS IN 2022

## WOMEN IN MANAGEMENT

- We continue to pursue the target of increasing the number of women in management towards 2025. Part of this is to help increase the number of women that enter the STEM professions, i.e. Science, Technology, Engineering and Mathematics.

## ATTRACT AND RETAIN TALENT

- We intend to strengthen the branding of DEIF as a great place to work in order to attract talents from all parts of Denmark and from abroad. In order to retain our talents, we introduce a mentoring programme, where internal mentors help colleagues realise their full potential, while improving motivation and job satisfaction.



## SOCIAL RESPONSIBILITY

- 2022 will see new targets for social responsibility and a systematic approach to giving marginalised people a chance to get a job at DEIF.

## A CULTURE OF WINNING TOGETHER

- In order to achieve the 2030 ambitions we need to further develop our organizational culture, where all DEIF employees share the same values and ambitions, perform at their best and where everybody is energised and knows how to act to create value and contribute to the common goals. We call this ‘Winning Together’. The spirit of Winning Together resounded in the organisation and led to showcasing of numerous examples of how teams work together to win and contribute to the common goals.

## GLOBAL EMPLOYEE SATISFACTION SURVEY

- Every second year, DEIF carries out a global employee satisfaction survey. The next survey takes place in 2022 with special focus on job satisfaction, motivation, leadership, work conditions, development opportunities, salaries, etc. The survey provides internal and external benchmarks and identifies specific areas for improvement at company level and in departments/subsidiaries.





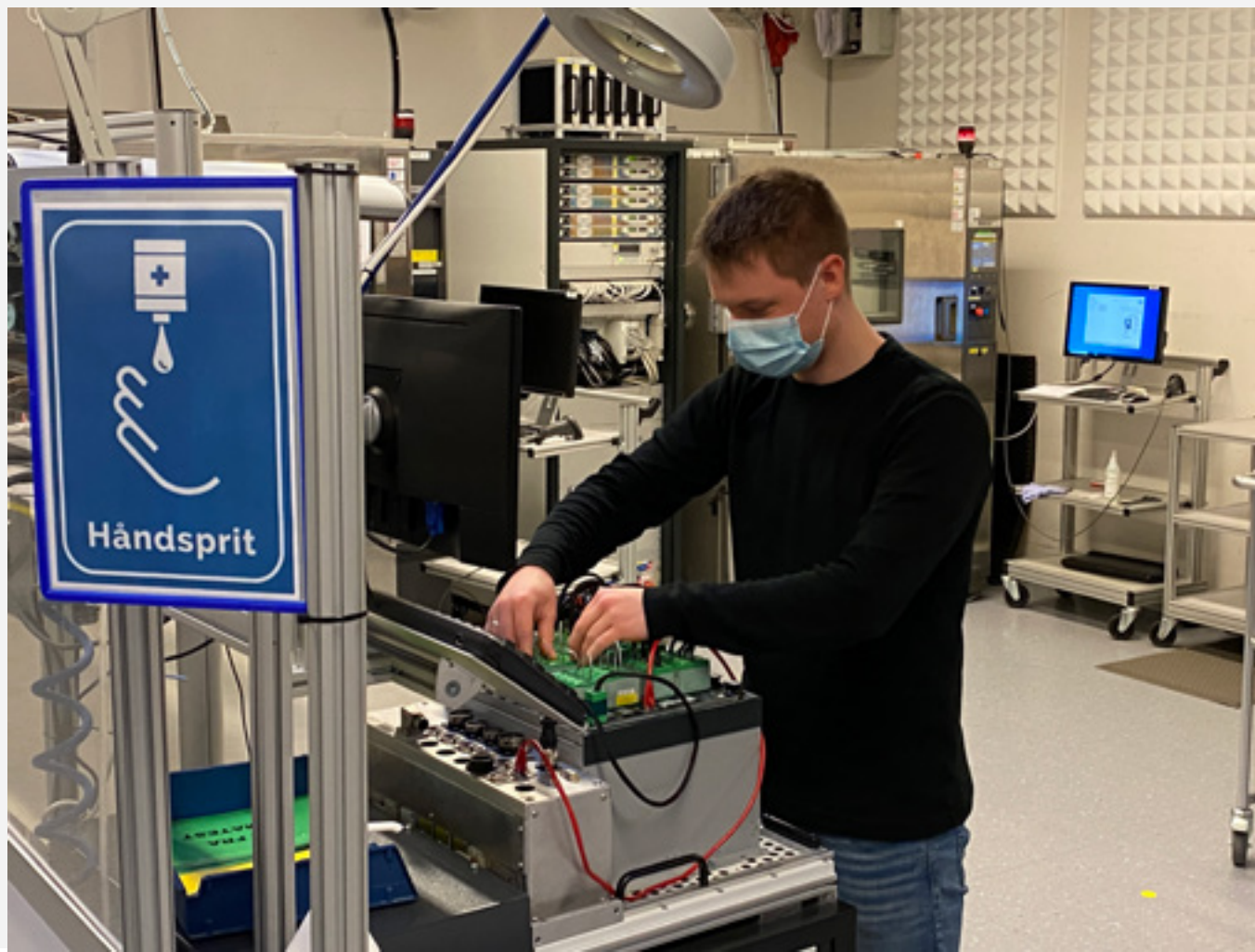
# SAFETY FIRST

## A safe place to work

At DEIF, we put our people's safety first, and we aim for zero work-related accidents. We demand the same from our suppliers and other cooperation partners.

When working at project sites, we work together with our customers to provide a safe work environment that prevents accidents and does not expose our employees to health and safety risks. We provide safety training, instruction and supervision for all colleagues and we only allow people who have been instructed in safety measures to carry out the work.

All DEIF service engineers are trained to make on-site health & safety assessments, and it is the duty of every employee to refuse any work that may compromise safety. We carry out annual audits to make sure that we comply with our safety policy at all times.



## ACTIVITIES AND RESULTS IN 2021

### COVID-19 AND WORKING FROM HOME

- All DEIF sites have introduced measures to protect the health and safety of employees throughout the pandemic. In production and for onsite tasks, employees have followed special procedures and used protective equipment. The majority of office workers have worked from home for long periods in 2021. Ergonomics in the home office has been a special focus area with guidelines for optimum working conditions and breaks with exercises.

### HEALTH AND SAFETY

- Our safety vision is zero work-related accidents. In 2021, no accidents resulting in absence were recorded. Seven near-miss accidents were reported, which led to investigation and precautionary measures.
- The safety of colleagues doing on-site service received special attention in 2021. Among others, we conducted a workshop for our service and solution engineers. By use of dilemma cases, the service and solution engineers discussed specific challenges and gave each other advice on how to tackle safety issues.

### SICK LEAVE

- The total sick leave in 2021 was 2.4%, unchanged compared to 2020.



Energizing sports day with different activities in Korea





Safety first:

# NEXT STEPS IN 2022

## SAFETY MEASURES FOR ON-SITE SERVICE ENGINEERS

- Prepare an updated version of the safety handbook using the input from the workshops with service and solution engineers conducted in 2021.

## APV<sup>1</sup> 2022 WITH SPECIAL FOCUS ON WORKING FROM HOME

- In Denmark, APV is a mandatory assessment of the working conditions of the individual employee. The next APV takes place in 2022 with special focus on ergonomics when working from home.

## EMPLOYEE HEALTH

- Hearing loss is a taboo and often diagnosed and treated too late. For employees the lack of diagnosis may result in withdrawal from social contact with colleagues and worst case in stress and depression. DEIF has decided to offer employees a chance to get a hearing test in the work place and subsequently help to mitigate potential hearing losses. The test is conducted by external specialists in hearing loss, and the pilot screening performed at DEIF in Denmark will be used to compile a general hearing health guideline for companies.

<sup>1</sup>APV = Workplace assesment



# GREEN AT HEART

## Towards a carbon-free energy sector

**The DEIF 2030 Strategy introduces an unrelenting focus on clean and green products and solutions in our product portfolio. By 2030, two thirds of our products and solutions must provide a positive climate impact.**

The greening of the power sector is accelerating, but nevertheless the transition from fossil fuels to renewables and low-carbon alternatives takes time. In a foreseeable future, diesel oil will remain a widely used fuel in key applications for DEIF such as ships and gensets for critical power.

In these applications, DEIF's products have the potential to make a difference by increasing the energy efficiency and hence reducing carbon emissions. We want to be the preferred partner in helping our customers decarbonize by getting more out of every liter of fuel and by taking energy control to the next level.

DEIF's high-end controllers have built-in intelligent power management, which can help reduce energy consumption and thereby carbon emissions during operation. The automatic power management function ensures that no energy goes to waste. In-house estimates of the efficiency gains show that the built-in power management feature creates fuel savings of 2-3%. With controllers sold to around 3,000 electricity generating plants every year, the savings potential for all plants – if the systems are used correctly – are up to 20-30 million liters<sup>1</sup> diesel fuel per year, corresponding to CO<sub>2</sub> saving of app. 54.000 – 81.000 tons<sup>2</sup> CO<sub>2</sub>e per year

<sup>1</sup>The example is based on the below assumptions:

- 2MW plant with 4 generators.
- Approximate use of diesel: 424 liters of diesel per hour.
- Estimated running time of 3.200 hours per year.
- Fuel consumption of 339.200 liters/ p.a

<sup>2</sup>Calculations based on CO<sub>2</sub>e coefficients from EPA (US Environmental Protection Agency)

### CONTROL FOR HYBRID SYSTEMS IN HIGH DEMAND

The market for hybrid power generation within both marine and land applications sees substantial growth. As the prices for energy storage and batteries are dropping and fuel prices are rising, the market is set to see significant growth in the coming years. In order to support hybrid technologies that may cut carbon emissions, DEIF offers a range of controllers for hybrid solutions. In 2022, we take the next step by offering a new product for small and medium sized, land-based applications to even better support the potential of hybrid solutions.

*“At DEIF, we have developed the optimum algorithm for controlling fuel consumption in complex systems, and for the last 20 years we have sold products that reduce the fuel consumption. The potential for energy savings by intelligent control is significant – in existing systems as well as in innovative hybrid and renewable solutions. It is our obligation to the world to share this technology even wider than today.”*

**Christian Nielsen, Group CEO**

### RETROFIT AND UPGRADE OF EXISTING RENEWABLE ASSETS

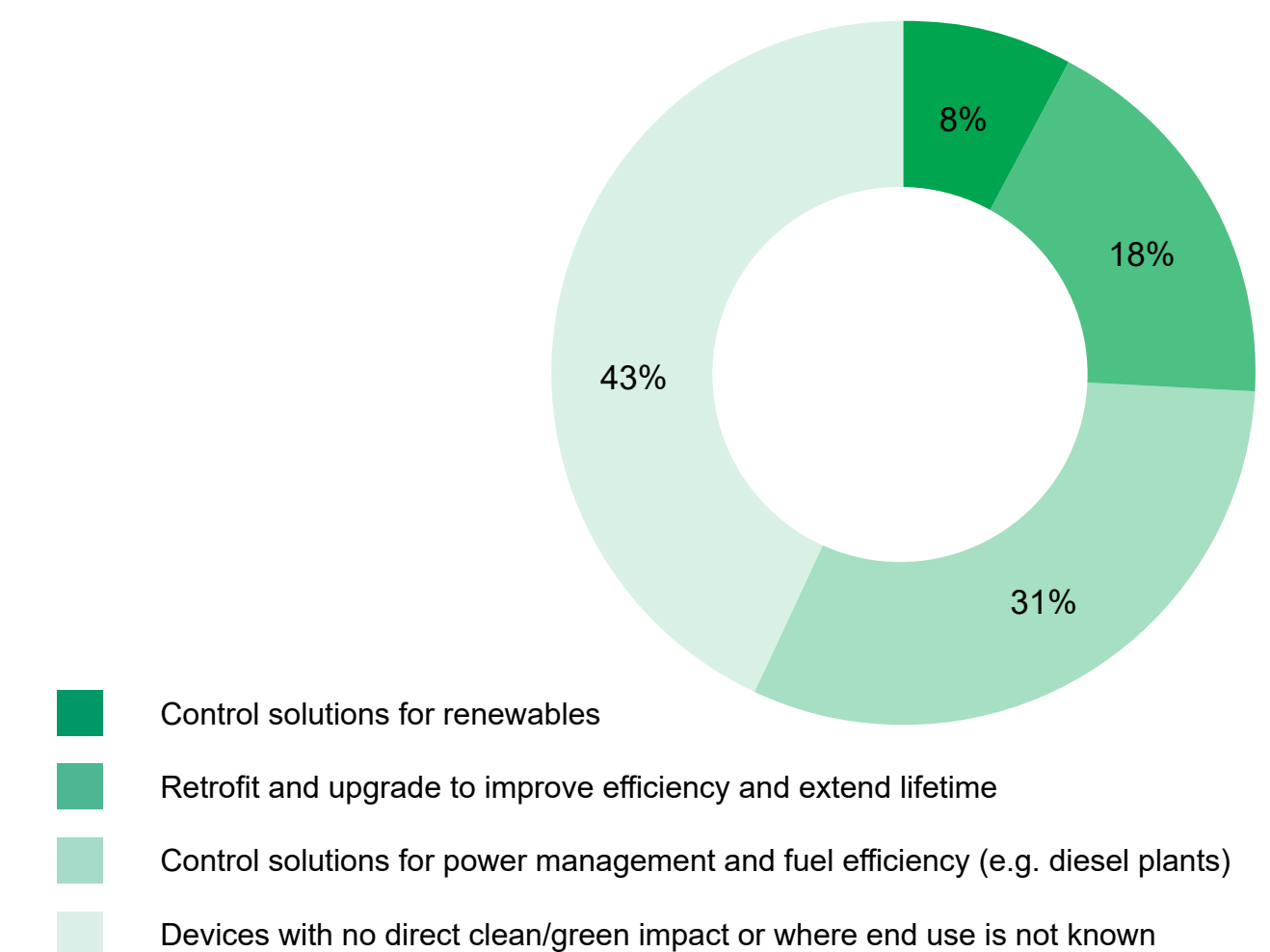
Wind turbines constructed in the late 1990s typically have a mechanical lifetime of up to 40 years, whereas the control system is likely to be outdated long before. Upgrading the control system may improve the turbine efficiency significantly and hence, enhance the productivity and lifetime of the plant. DEIF specializes in wind power retrofits with new control systems. With our control strategies, our software can typically increase the green energy production of the wind parks by 2-4%, enabling asset owners to operate some of the most effective green energy solutions globally and save cost and efforts on service at the same time. In 2021, we carried out several new wind power upgrade/retrofit projects, i.e. the largest wind park owners have started to renovate their fleet with DEIF solutions.

## ACTIVITIES AND RESULTS IN 2021

### EXTENDING LIFETIME OF CONTROLLERS

- We aim to deliver circular solutions with a long service life. In 2021, we took more than 1400 controllers back for service and repair. This saved almost 2,500 kg of electric and plastic waste plus materials and energy that would go into manufacture of replacement controllers.

### TURNOVER SPLIT ON DIFFERENT PRODUCT TYPES





Green at heart:

# NEXT STEPS IN 2022

## CLEAN AND GREEN SOLUTIONS

- Our focus in 2022 is to sell more of existing DEIF solutions with built-in, intelligent power management that allow customers to improve the energy efficiency, save fuel and thereby reduce their carbon footprint.

## INCREASE FOCUS ON TRAINING

- We will expand our training offerings to our customers to make sure that the DEIF controllers contribute to maximum energy efficiency in daily operation.

## NEW HYBRID CONTROL SOLUTION

- We will develop a new control solution for small and medium sized hybrid land systems.

## SOLUTIONS FOR EFFICIENCY UPGRADES

- Continue development and sales of upgrade/retrofit solutions that offer clean technology, fuel savings and life-time extensions, especially for wind turbines, critical power and marine/offshore.



*“DEIF’s strength is the worldwide collaboration with small and medium sized enterprises that allows us to implement optimised power management solutions across the world. We are proud to empower our partners with advanced solutions that help improve power efficiency in every nook and corner of the world.”*

**Badrinarayanan Suresh, Vice President at DEIF**

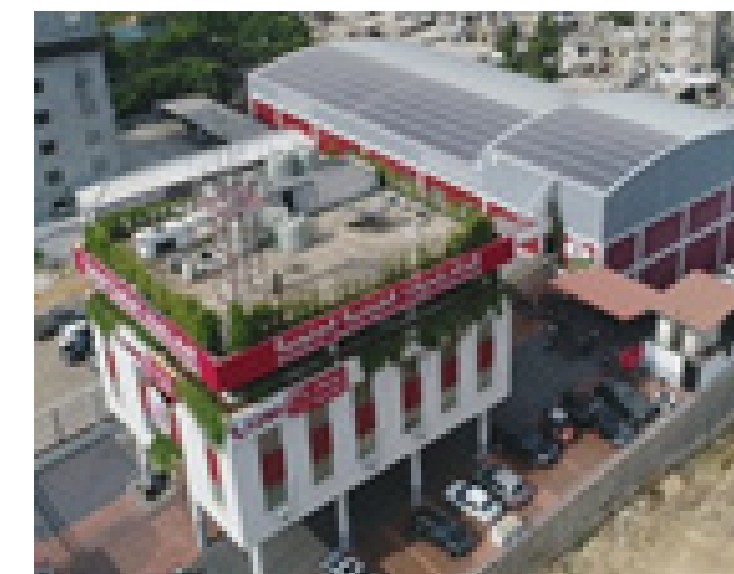
# EXAMPLES OF HYBRID AND RENEWABLE SOLUTIONS IMPLEMENTED IN 2021

At DEIF, we have extensive experience in designing solutions that reduce climate impact by lowering fuel consumption and emissions, and by integrating renewables in any power setup without sacrificing reliability. Below DEIF has selected worldwide case stories of intelligent power management systems and solutions.



## CONTROL SOLUTION FOR AGRIBUSINESS IN BRAZIL

DEIF Brazil supplied a power management solution for a hybrid genset solution, which combines diesel generators with a photovoltaic plant in order to save fuel. The Solar addition saves 5,000 litres of fuel or 13 tons CO<sub>2</sub>e per day<sup>1</sup>, and with availability of sunlight 200 days a year the potential reduction in CO<sub>2</sub>e emissions is 2,600 tons.



## CONTROL SYSTEM FOR INTEGRATION OF SOLAR PANELS, BEIRUT, LEBANON

DEIF Mediterranean supplied control solution that added solar panels to diesel gensets, allowing the customer to decommission one generator and save 35,000 liter fuel per year, corresponding to CO<sub>2</sub> saving of app. 94 tons CO<sub>2</sub>e per year.

<sup>1</sup>All calculations are based on CO<sub>2</sub> coefficients from EPA (US Environmental Protection Agency)



Green at heart:

# EXAMPLES OF HYBRID AND RENEWABLE SOLUTIONS IMPLEMENTED IN 2021



## CONTROL SYSTEM FOR HYBRID POWER SOLUTION AT NAMPALA GOLD MINE IN AFRICA

DEIF India supplied the advanced control solution for the new solar PV and battery installation at the Nampala Gold Mine. The use of solar power is expected to save around 60,000 tons of CO<sub>2</sub>e over 10 years.



## CONTROL SYSTEM FOR HYBRID POWER PLANT IN SOMALIA

DEIF China supplied control solution for new power plant in Somalia operating three diesel generators and three solar units in a hybrid solution that takes advantage of the many days with sunshine in the area. The estimated fuel savings are 2,160 ton diesel per year, corresponding to about 6,728 ton of CO<sub>2</sub>e.



## NEW ELECTRIC FERRY, DENMARK

DEIF supplied the power and energy management system Delomatic 4 for a new electric ferry. The services included project support in the design and specification phase.



## CONTROL SYSTEM FOR DIESEL + BATTERY GENSET IN CHINA

DEIF China supplied the control system for a containerized genset solution that saves energy by using a battery to cover low load periods, where the diesel engine can be cut off. The combined diesel and storage solution returns fuel savings of 20-30% compared to a diesel-only solution. The plant saves 120 liter fuel or 324 KG of CO<sub>2</sub>e per day, and with a 200 day operation per year the expected reduction in CO<sub>2</sub>e is 64,8 tons.



## WIND TURBINE RETROFIT, SCOTLAND

The retrofit doubles the lifetime of the wind turbines operated by Eurowind. As part of the retrofit, the wind turbines were fitted with DEIF AWC 500 controllers with software and control strategy for the 2 MW turbines.



## CONTROL SYSTEM FOR POWER PLANT WITH BATTERY STORAGE IN GREENLAND

DEIF ENEA supplied the power management solution for an emergency power plant in Greenland. The built-in power management function allows the customer to optimize the energy consumption.



# GREEN AT HOME

## Reduce carbon footprint and protect the environment

At DEIF, we are committed to protecting the local as well as the global environment and to reducing the energy consumption and carbon footprint of our own activities. We work to ensure that DEIF's scope 1 and 2 activities are carbon-neutral by 2025, while our total footprint, including scope 3, is reduced by two thirds by 2030.

Through systematic energy and environmental management, we continuously reduce the footprint in our own operations, i.e. save on energy and other resources, recycle waste and protect the environment. Our certified management systems for quality, environment and energy coupled with our high ambitions help us ensure a keen focus on these aspects of running a responsible business.



*"In 2021, the external auditors once again verified that our quality, environmental and energy management systems comply with the ISO standards 9001, 14001 and 50001. Our systems are mature, and there is a high environmental awareness among our employees. Our next big step in 2022-23 is to plan and build entirely new and CO2 neutral production facilities."*

Chanette N. Oksborg Pedersen, SVP Global Operation

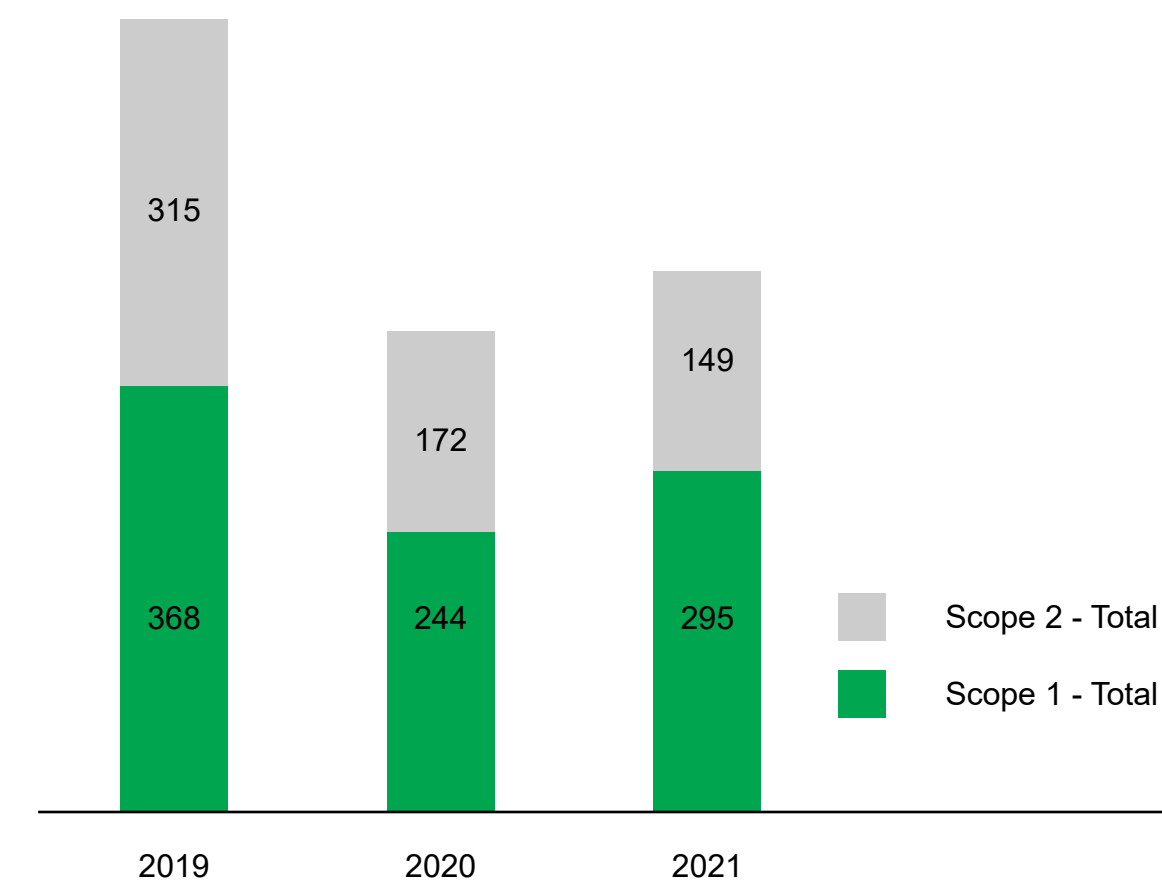
Green at home:

## ACTIVITIES AND RESULTS IN 2021

### THE CARBON FOOTPRINT OF OUR ACTIVITIES

- 2021 saw a small rise in CO2 emissions in scope 1 and 2 from DEIF's global activities. The scope 1 and 2 emissions rose by 7% from 2020 to 2021 due to a higher gas consumption for heating at the headquarters. The extra consumption of gas was caused by temporary technical challenges with our carbon-neutral Aqua Thermal Storage System for cooling and heating. In 2022, a high capacity heat pump will be installed as an important step towards zero gas consumption.

### SCOPE 1 & 2 EMISSIONS FROM DEIF'S GLOBAL ACTIVITIES (TCO2e)



### MOVE SOURCING CLOSER TO HOME

- In order to reduce the climate impact and other risk factors in connection with the sourcing of components and materials, we have initiated a new initiative to move sourcing closer to production. Among others, this means localizing sourcing of heavy and large items, which will reduce the environmental impact incurred during shipping and storage.

### DECARBONIZE THE VALUE CHAIN

- In 2021, we carried out a pilot project for calculation of scope 3 carbon emissions, i.e. in the upstream processes for ten of our major suppliers. The pilot project serves as a first step in preparing an actual scope 3 calculation of major suppliers.
- In 2021, we implemented a system for remote support of our customers in order to save time, cost and carbon emissions related to travelling to customer sites. The system is also used for remote system upgrades and commissioning.

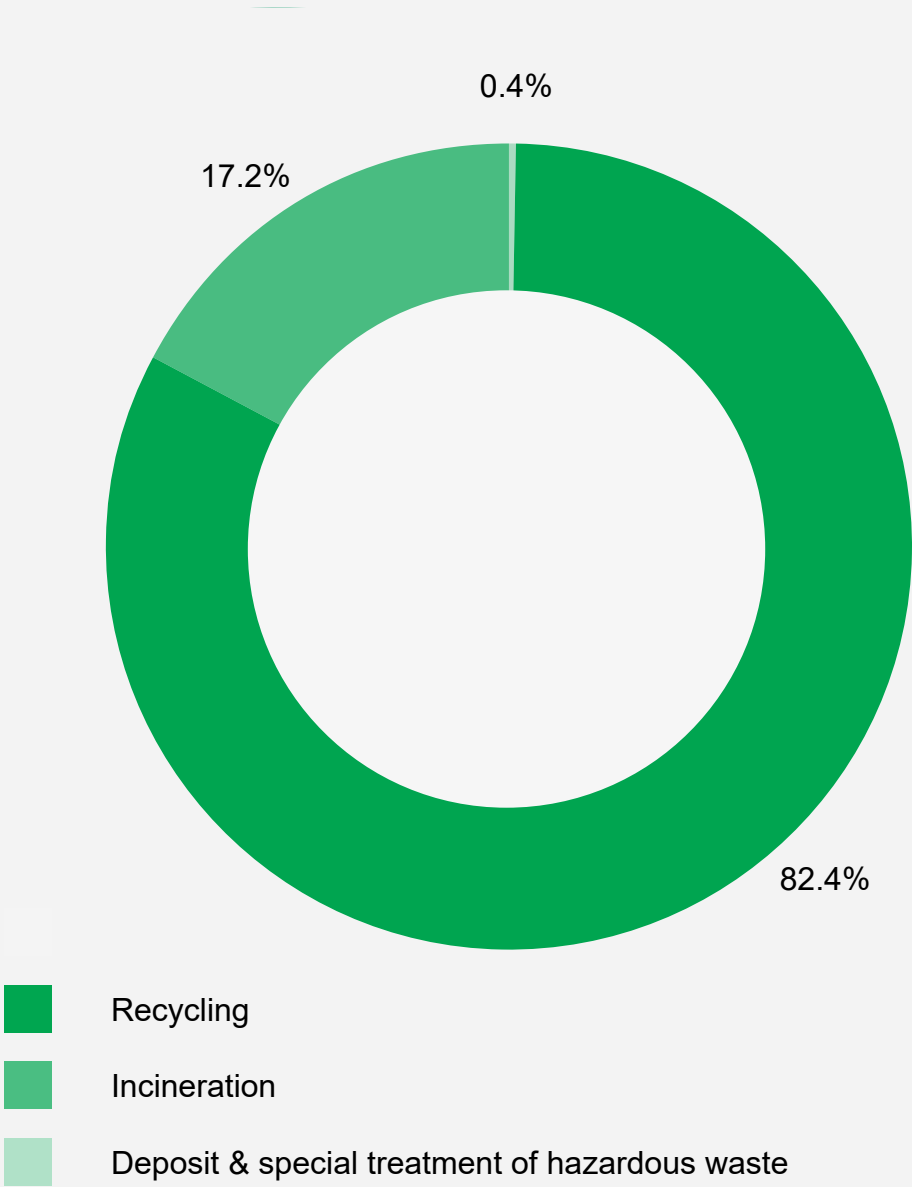


Green at home:

# ACTIVITIES AND RESULTS IN 2021

## Recycling

In 2021, we had a goal of increasing recycling from 69% to 75%. The degree of recycling reached 82% thanks to a dedicated effort to recycle as much waste as possible in the production. Among the initiatives were for instance a waste analysis, involvement of colleagues, new waste categories and individual sorting instructions for all work stations.



## USE OF CHEMICALS

- In 2021, we implemented a new chemical management system, which led to delisting or substitution of nine chemicals.

## PACKAGING

- In close cooperation with suppliers, we have replaced styrofoam/polystyrene packaging by recycled carton. The change also allowed a higher degree of reuse of packaging.



Green at home:

# NEXT STEPS IN 2022

## CONTINUE TO REDUCE THE CARBON FOOTPRINT OF DEIF’S ACTIVITIES

- Continue planning and implementation of activities that enable carbon neutrality of DEIF’s scope 1 and 2 emissions in 2025. In 2022, we plan to phase out natural gas at the headquarters in Skive by installing a high capacity heat pump and by adding solar cells to our buildings in 2023.
- Map scope 3 emissions in order to be able to plan for achieving the 2030 target of reducing the current total carbon footprint by two thirds.
- Continue implementation of local sourcing strategy.

## Recycling

- Maintain recycling percentage above 80%.
- Continue introducing environmentally and climate friendly packaging both upstream and downstream.





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