

ANNUAL GROUP REPORT 2015





# WITH BOLDNESS AND DETERMINATION, ON TRACK FOR FUTURE SUCCESS

Record shipments of 1.1 gigawatts

continuing our path of growth

Innovations in high-performance cells

reinforcing technology leadership

Expansion of production capacities

laying foundation for higher economies of scale

Costs reduction measures

improving competitiveness

**That's what we stand for >>>** SolarWorld is a globally active manufacturer and provider of solar power solutions, which has more than 40 years of experience in solar technology development and production. With innovative high-performance products "made in Germany" and "made in the United States," we hold a leading role in the quality segment of the solar market. Through our broad sales network and long-standing international activities, we have developed trusting partnerships with customers around the world. With our commitment to innovations and our strong conviction, we define technology standards for the industry, creating REAL VALUE. Our products enable people throughout the world to generate electricity from the power of the sun. We give our customers a promise: We, as partners, assume responsibility for the quality and durability of our products, for the satisfaction of our customers and maintain an authentic focus on sustainability.

#### **ABOUT THIS REPORT**

#### FORWARD-LOOKING STATEMENTS

This report may contain forward-looking statements that are subject to risks and uncertainties, many of which relate to factors that are beyond SolarWorld AG's control or its ability to precisely estimate, such as future market and economic development, supply and demand, the behavior of other market participants, the ability to successfully achieve anticipated synergies and the actions of government regulators.

SolarWorld AG has based these forward-looking statements on its current views and assumptions with respect to future events and financial performance. Many factors could cause the actual results, performance or achievements of SolarWorld AG to be materially different from those that may be expressed or implied by such statements. Such factors include those discussed in the Opportunities and Risks Report.

Given these uncertainties, readers are cautioned not to place undue reliance on any forward-looking statements. We do not assume any obligation to update the forward-looking statements contained in this report.

#### **SUSTAINABILITY**

SolarWorld AG has a clear focus on sustainability. The Management Board supports the group's commitment to international standards such as the United Nations Global Compact. With the present report, the Management Board, above all the CEO of SolarWorld AG, declares its willingness to continue this engagement in the future.

The Annual Group Report 2015 describes both financial and non-financial performance (Global Reporting Initiative, G4 In Accordance Comprehensive, audit review by the BDO AG, Wirtschaftsprüfungsgesellschaft). Especially relevant economic, ecological and social topics are explained extensively in the group management report. Due to eco-efficiency, the section "Sustainability in detail 2015" is only available online at ► www.solarworld.de/sustainability

#### **FURTHER INFORMATION**

Rounding differences may occur in the Annual Group Report.





#### 006 LETTER BY THE CHAIRMAN

#### 009 KEY FIGURES AND FACTS\*

- 011 Selected indicators
- 012 Quarterly comparison of the consolidated income statements
- 012 Revenue by region
- 013 Development of key figures in five-year comparison
- 014 Sustainability performance

#### 017 GROUP MANAGEMENT REPORT\*

- 019 General information about the group
- 026 Business report 2015
- 062 Supplementary report

#### **063 GROUP MANAGEMENT REPORT FORECAST\***

- 065 Risk report
- 079 Opportunity report
- 081 Forecast report

#### **089 CORPORATE GOVERNANCE \***

- 091 Corporate Governance
- 106 Report by the Supervisory Board 2015

#### 111 CONSOLIDATED FINANCIAL STATEMENTS\*

- 113 Consolidated income statement
- 114 Statement of consolidated comprehensive result
- 115 Consolidated balance sheet
- 116 Consolidated statement of changes in equity
- 117 Consolidated cash flow statement
- 118 Consolidated notes
- 173 Audit opinion
- 174 Responsibility Statement

#### 175 SERVICE\*

- 177 Glossary
- 182 Acronyms and abbreviations
- 183 Financial and event calendar 2016



## THE CHAIRMAN

Management Board of SolarWorld AG (from left to right): Jürgen Stein (CPO): product management, product development, production, quality management, purchasing and supply chain management; Philipp Koecke (CFO): finance, controlling, accounting and investor relations; Dr.-Ing. E. h. Frank Asbeck (CEO): strategic group development, technology development as well as public relations including energy and environmental policy; Colette Rückert-Hennen (CIBPO): information technology, human resources, brand management, marketing and compliance; Frank Henn (CSO): international sales including the areas after sales service, technical support and customer service

## DEAR CUSTOMERS, SHAREHOLDERS, BOND HOLDERS, BUSINESS PARTNERS AND EMPLOYEES OF SOLARWORLD AG,

Boldness is the force that moves a company forward. This is particularly true for SolarWorld, since we are active in an attractive but also highly competitive market. That is why BOLD stands in broad letters on the title of this Annual Group Report and is the focus of the accompanying magazine, which I would like to warmly recommend.

## "OUR STRATEGY HAS SUCCEEDED."

We had set high targets for the 2015 fiscal year: Shipments and revenue were to grow by at least 25 percent. We have exceeded our own expectations and achieved a plus of 33 percent with record shipments of 1.1 gigawatts and consolidated revenue of € 763 million. Growth was primarily driven by international demand for our high-performance modules. We consistently focused on high-tech and high-power. This strategy has succeeded.

Our operational numbers have also significantly improved in 2015. SolarWorld increased earnings before interest, taxes, depreciation and amortization (EBITDA) from  $\mathop{\,\leqslant\,} 1.6$  million to  $\mathop{\,\leqslant\,} 41$  million. Earnings before interest and taxes (EBIT) improved from  $\mathop{\,\leqslant\,} -44$  million to  $\mathop{\,\leqslant\,} -4$  million. An enormous leap. Nevertheless, we narrowly missed our goal of a positive EBIT over the whole of 2015, largely due to the fact that the implementation of some measures to reduce costs and increase efficiency was delayed. However, in Q4 2015, we were able to achieve a positive EBIT. This showed that we are on the right track to returning to profitability in our operating business.

The implementation of an ambitious package of measures, combined with a sharp increase of production and shipments, made 2015 a very intense year for SolarWorld. Our employees at 11 sites in 9 countries took up the challenge with great dedication. On behalf of the entire Management Board, I would like to express my gratitude to the more than 3,800 people working for SolarWorld worldwide.

The expansion of our PERC capacities and additional investments in innovative technologies are preparing us for the future. I am especially proud of our bifacial solar power solutions "BISUN," which capture sunlight on the front and back and turn it into clean electricity. Bifaciality can increase the yield of a solar power system by up to 25 percent and decisively raise the economic viability for the customer. With BISUN, we are reinforcing our technological leadership role in the quality segment of solar power products.

With our high-performance module portfolio, we are well-equipped to again significantly boost our sales in 2016. We want to increase both shipments and revenue by more than 20 percent. Here, we will especially continue to profit from market growth in the United States and to expand our market share in Europe.

## "INVESTMENTS IN HIGH-TECH PREPARE US FOR THE FUTURE."

The measures already taken to reduce costs, combined with greater economies of scale resulting from our capacity expansion, will enable us to significantly increase EBITDA in

2016. We expect a positive EBIT in the lower double-digit million range for the full year.

## "BEING BOLD ALSO MEANS FACING CHALLENGES ACTIVELY."

SolarWorld will continue to seize its opportunities. Our company has survived the severe crisis in the international solar industry, but it is still exposed to risks. For me, being bold also means facing challenges actively. We show this with our vehement commitment to fair competition in the United States and in the European Union. In difficult situations, SolarWorld has proven again and again that it achieves good solutions with passion and tenacity.

"FOR US, ASSUMING SOCIAL RESPONSIBILITY GOES WITHOUT SAYING."

Boldness brings us forward as a company. It is something that all of society needs, particularly in times of political and humanitarian crises. It is part of our identity to commit ourselves to a better world and to shoulder social responsibility beyond our pursuit of economic success. This includes our 10-year commitment in developing countries with our

Solar2World program. This year, we are also supporting the integration of people who have fled areas of civil war and crisis and come to Germany. We are active in the integration initiative "WE TOGETHER" started by the German business community. With this, we want to provide refugees with an opportunity for work and vocational training. SolarWorld employees at our German sites in Saxony, Thuringia and North Rhine-Westphalia will support them as mentors in their first steps in the German working world. This commitment from our employees is encouraging. Thank you very much!

Bonn, March 16, 2016

Yours,

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

## AND FACTS

- 011 SELECTED INDICATORS
- 012 QUARTERLY COMPARISON OF THE CONSOLIDATED INCOME STATEMENTS
- **012 REVENUE BY REGION**
- 013 DEVELOPMENT OF KEY FIGURES IN FIVE-YEAR COMPARISON
- 014 SUSTAINABILITY PERFORMANCE
  - 014 Environmental protection
  - 014 Customer and product responsibility
  - 015 Employees
  - 015 Supply chain
  - 016 Compliance and society
  - 016 Innovation

## **KEY FIGURES AND FACTS**

#### **SELECTED INDICATORS**

Financial indicators in k€	Q4 2014	Q4 2015	Change
Revenue	164,464	231,675	67,211
EBITDA	517	26,278	25,761
EBIT	-14,370	14,117	28,487
Consolidated net result	-25,054	5,570	30,624
Financial indicators in k€	2014	2015	Change
Revenue	573,382	763,465	190,083
Foreign quota in % of revenue	83.1%	82.6%	-0.5 %-points
EBITDA	107,815	40,815	-67,000
EBIT	62,375	-4,151	-66,526
EBIT in % of revenue	10.9%	-0.5 %	-11.4%-points
Capital employed (key date)*	509,615	459,091	-50,524
Consolidated net result	464,164	-33,282	-497,446
Consolidated net result in % of revenue	81.0%	-4.4%	-85.4%-points
Total assets	915,341	868,708	-46,633
Equity	238,668	208,877	-29,791
Equity ratio in %	26.1%	24.0%	-2.1%-points
Cashflow from operating activities	-36,689	52,461	89,150
Net indebtedness **	272,782	217,207	-55,575
Investments in intangible assets and property, plant and equipment	89,021	50,722	-38,299
Employee indicators	2014	2015	Change
Employees (key date)	2,730	2,932	202
of which trainees (key date)	44	49	5
Personnel costs ratio in %	22.6%	20.0%	-2.6 %-points
Revenue per employee in k€	210	260	50
EBIT per employee in k€	23	-1	-24
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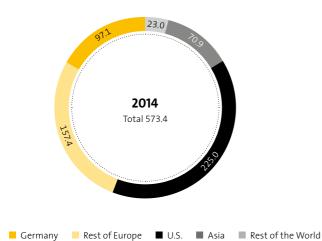
<sup>\*</sup> Intangible assets and property, plant and equipment less accrued investment grants plus net current assets except for current net liquidity

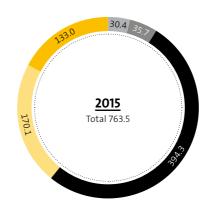
<sup>\*\*</sup> Financial liabilities less liquid funds

#### **QUARTERLY COMPARISON OF THE CONSOLIDATED INCOME STATEMENTS**

in k€	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q4 2014	Change
Revenue	149,083	170,888	211,819	231,675	164,464	67,211
Change in inventories of finished goods and work in progress	37,625	25,698	-9,820	-28,991	17,263	-46,254
Own work capitalized	419	1,029	1,083	1,321	629	692
Other operating income	25,111	16,519	20,837	40,107	30,687	9,420
Cost of materials	-129,691	-123,606	-129,474	-136,372	-126,846	-9,526
Personnel expenses	-41,082	-39,471	-40,066	-37,370	-36,192	-1,179
Amortization and depreciation	-10,941	-11,120	-10,744	-12,161	-14,887	2,726
Other operating expenses	-38,553	-44,099	-49,712	-44,092	-49,488	5,396
Operating result	-8,029	-4,162	-6,077	14,117	-14,370	28,487
Financial result	-10,179	-10,413	-9,664	-10,438	-9,210	-1,228
Result before taxes on income	-18,208	-14,575	-15,741	3,679	-23,580	27,259
Taxes on income	8,166	-840	2,346	1,891	-1,475	3,366
Consolidated net result	-10,042	-15,415	-13,395	5,570	-25,054	30,624
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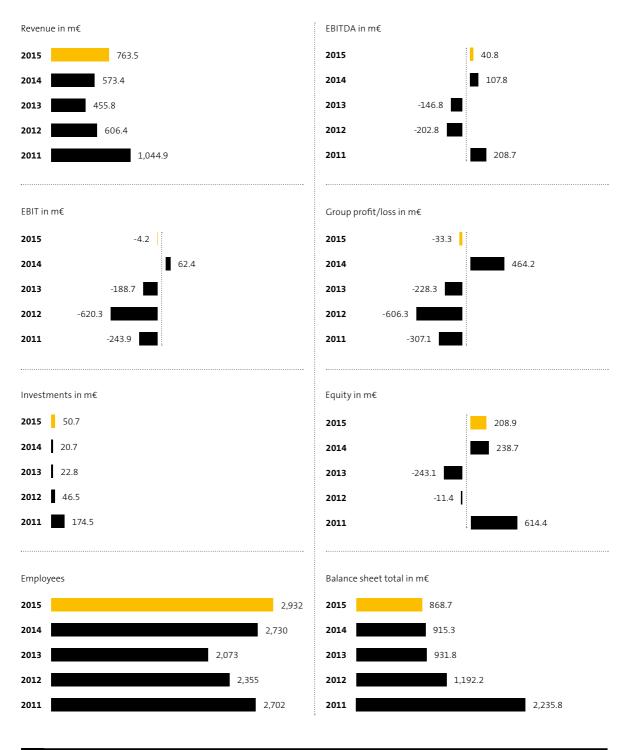
#### **REVENUE BY REGION** IN M €





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



G 02

## **SUSTAINABILITY PERFORMANCE**

#### **ENVIRONMENTAL PROTECTION**

2014 2015 2	e and description
3,084,137 4,427,860	ty: total energy consumption (in primary GJ)
1,538,953 1,981,634	r: total water take-out (in m³)
1,336,489 1,630,594	r: waste water discharge (in m³)
125,569 178,458	sions: total greenhouse gas emissions (in tCO <sub>2eq</sub> )
23,021 30,703	e: total production waste (in t)
	onmental compatibility: Share of ISO 14001 certified locations (weighted by average capaci 2014 without sales sites in Rest of the World (ROW)
2,325 <b>2,273</b>	nging: material (in t)
0 0 ←	onmental violations: sanctions due to environmental violations
0	onmental violations: sanctions due to environmental violations

#### **CUSTOMER AND PRODUCT RESPONSIBILITY**

Name and description	2014	2015	2016
Customer satisfaction with SolarWorld: share of satisfied customers among all respondents, aggregate number (trade: wholesalers, Certified partners)	86%	87.3%	
<b>Customer satisfaction with SolarWorld products:</b> share of satisfied customers among all respondents, aggregate number (trade: wholesalers, Certified partners)	99%	99.5%	$\leftrightarrow$
Earnings from new products with life cycles of less than 12 months	53%	67%	$\downarrow$
<b>Customer loyalty:</b> Share of new customers (module and system customers)	30 % (direct customers), 18 % (Certified partners)	28%	$\leftarrow \rightarrow$
Customer loyalty: market share	2%	2%	$\leftarrow \rightarrow$
Sanctions due to product and service conditions	0	0	$\leftarrow \rightarrow$
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#### **EMPLOYEES**

Name and description	2014	2015	2016
Employment type: share of temporary employees (full-time equivalents)	20%	22%	$\stackrel{\longleftarrow}{\longleftrightarrow}$
Attrition rate: share of employees leaving the company per year	10%	8%	$\leftarrow \rightarrow$
Collective bargaining agreements: share of employees covered by collective bargaining agreements	67%	62%	$\leftarrow \rightarrow$
Training and professional development/qualification: average training expenditure per employee (in €)	180.14	219.59	$\leftarrow \rightarrow$
Age structure of the workforce (persons)	< 30: 16 %, 31-40: 31 %, 41-50: 30 %, > 50: 23 %	< 30: 16%, 31–40: 30%, 41–50: 28%, > 50: 26%	$\leftrightarrow$
Absentee rate: total missed worktime due to sick leave/total planned working time in the calendar year	5.4%	6.0%	$\leftarrow \rightarrow$
Accident rate (per 1000 employees, incl. temporary workers)	13.2	17.4	$\downarrow$
<b>Relocation of work places due to restructuring:</b> total costs of relocation (in k€) including compensation payments, severance pay, outplacement, recruitments, training, consulting	294	164	<b>\</b>
<b>Diversity:</b> share of women in total workforce	25%	26%	$\leftarrow \rightarrow$
<b>Diversity:</b> share of women in management positions (without Management Board and managing directors)	17%	17%	<b>↑</b>
Compensation: total amount of all bonus payments (in m€). We do not grant stock options.	30	19	$\leftrightarrow$
Discrimination: number of documented incidents	1	1	$\downarrow$
T.06			

#### **SUPPLY CHAIN**

Name and description	2014	2015	2016
Certification: ISO 9001 certification of suppliers (direct material)	98%	98%	$\stackrel{-}{\longleftrightarrow}$
Certification: ISO 14001 certification of suppliers (direct material)	80%	75 %	$\leftarrow \rightarrow$
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015

#### **COMPLIANCE AND SOCIETY**

Name and description	2014	2015	2016
<b>Effects of subsidies:</b> Share of business activity in markets with feed-in tariffs or regulated pricing. The sales share in markets without feed-in tariff or regulated pricing is still below 1%. Benchmarks: heavily subsidised markets such as nuclear energy, German coal, EU agricultural market	100%	100%	$\longleftrightarrow$
Governmental financial assistance: investment grants and research grants (in k€)	15,661	9,262	$\leftarrow \rightarrow$
Donations to political parties (in k€)	0	0	$\leftarrow \rightarrow$
Other donations (in k€)	119	165	$\leftrightarrow$
Regional development: Solar2World (delivered kWp)	120	113	$\leftarrow \rightarrow$
<b>Corruption:</b> share of business activity in regions with a corruption index (Transparency International) of less than 60	13%	11%	$\leftarrow \rightarrow$
Ascertained corruption incidents	0	0	$\leftarrow \rightarrow$

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#### INNOVATION

Name and description	2014	2015	2016
Innovation: total R&D expenditures (in m€)	29	23	$\stackrel{\longleftarrow}{\longleftrightarrow}$
Innovation: Total investment in research on ESG relevant aspects. Our entire business (solar energy) is ESG relevant.	100%	100%	100%
Number of inventions filed in the last 12 months	53	77	

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## MANAGE MENT REPORT

#### 019 GENERAL INFORMATION ABOUT THE GROUP

- 019 SolarWorld Group at a glance
- 021 Strategy
- 023 Corporate management and control
- 025 Disclosure relevant for takeovers
- 025 Remuneration of the Management Board and Supervisory Board

#### 026 BUSINESS REPORT 2015

- 026 The stock
- 029 Major business events
- 030 The market
- 033 Trade
- 037 Production
- 039 Global supply chain
- 040 Innovation report
- 044 Environmental commitment
- 048 Employees
- 053 Economic position 2015

#### **062 SUPPLEMENTARY REPORT**

- 062 Disclosure and impact of events of particular importance and their repercussions
- 062 Overall statement by the Management Board on the economic position at the time of the report

## GENERAL INFORMATION ABOUT THE GROUP

#### **SOLARWORLD GROUP AT A GLANCE**

#### SOLARWORLD WORLDWIDE Arnstadt Freiberg $(\mathbf{I})(\mathbf{I})$ Bonn-Grenoble Salisbury Verona Hillsboro Singapore AMERICAS Cape Town Revenue: 394.3 m€ Share of group revenue: 52% **REST OF WORLD REST OF EUROPE** ASIA/PACIFIC Revenue: 30.4 m€ Revenue: 133.0 m€ Revenue: 170.1 m€ Revenue: 35.7 m€ Share of group revenue: 4% Share of group revenue: 17% Share of group revenue: 22% Share of group revenue: 5% Research & Development Production

#### G 03

#### **COMPANY PROFILE**

SolarWorld stock company (AG) is based in Bonn, Germany, and is the holding company for the SolarWorld group. The company is the largest manufacturer of solar power technology producing outside of Asia. It operates manufacturing

facilities in Freiberg and Arnstadt (Germany) as well as Hillsboro, Oregon (United States). SolarWorld is active at all stages of the solar value chain and also conducts its own research and development. As at December 31, 2015, the group employed around 3,800 people worldwide.

Thanks to a diversified, globally distributed customer base, SolarWorld is represented in all mature and growing solar markets except for China. The group is positioned in the quality segment of the international solar markets under the brand "SolarWorld – REAL VALUE."

In fiscal year 2015, SolarWorld achieved groupwide shipments of more than 1.1 gigawatts and consolidated revenue of € 763 million. The group's largest single market was the United States with a share of 52 percent in total revenue. Europe, including Germany, achieved a share of 39 percent.

SolarWorld sells its products predominantly to international distributors and installers, supplying these via a global distribution network. It has a local presence in its core markets through own sales subsidiaries. The company has also developed stable networks with certified partners, within the scope of which selected installers are actively incorporated into the business. Worldwide, more than 1,500 installers now participate in the certified partner programs.

 $\blacktriangleright$  A partner you can trust – throughout the world – p. 035

**PRODUCTS AND SERVICES.** SolarWorld enables both private and commercial users to generate electricity cleanly, efficiently and profitably, by offering a broad-based portfolio of solar power products. This comprises multi- and monocrystalline solar power modules as well as complete solar systems in all sizes, in which SolarWorld modules and system components such as inverters, frames and — increasingly frequently — also storage systems and energy-management tools are used. In this way, SolarWorld customers can increase the share of their consumption of self-generated solar electricity through storage and intelligent control. The range includes solar power solutions for both on-grid as well as off-grid use.

We also sell solar wafers and cells, which we do not ourselves process into modules, to customers from the international photovoltaic industry.

Finally, we also offer investors services such as project planning and the construction and operation of large-scale solar plants. In the field of commercial-technical operational management, we have extensive expertise in our subsidiary Solarparc GmbH.

**DEVELOPMENT OF THE COMPANY SINCE ITS FORMATION.** SolarWorld AG was formed in Bonn in 1998 by Dr.-Ing. E. h. Frank Asbeck. SolarWorld AG went public in 1999 as one of the first solar companies worldwide to do so. The stock is listed in the Prime Standard on the Frankfurt Stock Exchange. In just a few years after going public, the company grew from a dealership to an international group. Growth and technological know-how were advanced mainly through the acquisition of the solar divisions of the companies Bayer (2000), Shell (2006) and Bosch (2014). Within the context of the takeovers, SolarWorld recognized the technological potential of these companies in the solar industry and further developed its own technology from it. Thanks to the acquisition of the solar division of Shell, whose predecessor company Solar Technology International (STI) was formed by Bill Yerkes in the United States as early as 1975, SolarWorld can look back on more than 40 years of experience in solar technology development and production. ► Brand and Marketing – p. 035

Following the severe crisis and the consolidation of the international solar industry in the period 2011 to 2014, SolarWorld has remained one of only a few large solar manufacturers in Europe and the United States. At the beginning of 2014, the group successfully completed its financial restructuring and has since again been on a solid footing. In the course of the restructuring, two long-term anchor investors bought shares in SolarWorld AG: Qatar Solar S.P.C. as new investor with 29.00 percent as well as founder and CEO Dr.-Ing. E. h. Frank Asbeck currently holding 20.85 percent. Another 50.15 percent of the stock is currently in free float. ► The stock – p.026

In fiscal year 2015, SolarWorld continued the growth course started following the restructuring.

**GROUP STRUCTURE.** As at the cut-off date, December 31, 2015, the SolarWorld group comprised a total of 32 (December 31, 2014: 29) companies. ► *Note 2.3.3 Group structure – p. 126* 

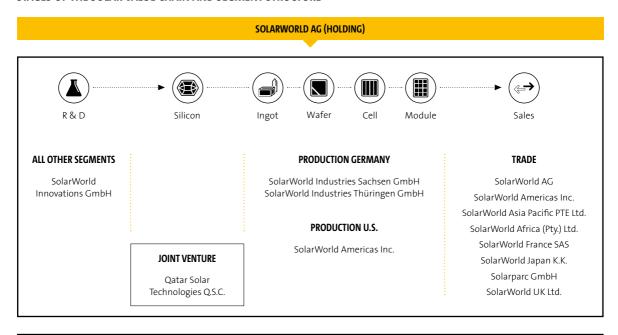
**SEGMENT STRUCTURE.** As in past years, SolarWorld's operational business was divided into four categories in 2015: "Production Germany", "Production U.S.," "Trade" and "All other segments." These provide the structure for our internal organization, management and reporting.

The "Production Germany" and "Production U.S." segments each comprise the regionally coherent and fully integrated production activities.

The "Trade" segment covers international sales of our products. It also includes proceeds generated by our subsidiary Solarparc GmbH from electricity sales, project planning and the sale and operation of solar power stations.

Business activities where the financial impact is not or is no longer crucial to the assets, financial position and earnings of the group are included in the category "All other segments."

#### STAGES OF THE SOLAR VALUE CHAIN AND SEGMENT STRUCTURE



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#### **STRATEGY**

"We build the solar world." Harnessing the unlimited power of the sun for a sustainable energy supply around the world – this is the vision that drives SolarWorld. The company goal of developing business globally and sustainably is derived from this vision.

Following the severe crisis in the international solar industry, which also affected SolarWorld, we are striving to return to profitability as quickly as possible. Profitable business development should enhance the value of the company and open up earnings opportunities for investors.

In fiscal year 2015, we again pursued our vision and our goal with the group strategy:

Thanks to our customer-oriented solar power solutions, we offer real added value and are international leaders in technology.

- We provide solar power solutions for our markets that meet all customer expectations and market requirements.
- SolarWorld is to become the best-known international solar brand for the volume segment, with the highest quality standards.
- With our operational excellence, we build the basis for a profitable and sustainable company.
- Our employees are the key to our success through their high level of commitment.

The Management Board derives focal points from the group strategy for each fiscal year; these are discussed with all executives in the first quarter. The aim here is to familiarize the executives with the strategic themes, so that they can communicate these to their employees in the respective departments. Experience has shown that the key to successful implementation of a strategy at all group levels lies in involving all employees.

Implementation of the group strategy is in part accompanied by complex change processes within SolarWorld – caused by the major change in the international solar markets and the ongoing high pressure of competition. SolarWorld employees shall be enabled and motivated to participate in shaping the adaptation of the company to the framework conditions.

Within the change process, we have been orienting ourselves towards five core themes since 2012, which have determined the framework of our business actions ever since:

**CUSTOMER FOCUS.** Customer demands should drive the entire business and all processes within SolarWorld. Product differentiation and comprehensive customer service create added value for the customer.

PERFORMANCE AND INNOVATION. SolarWorld products stand for high power. Here, the company is a step ahead of the competition. Among other things, SolarWorld is the technology leader in PERC high-performance cells (passivated emitter rear cell). As a further development of this approach, the company developed bifacial solar modules, which can turn sunlight into power both from the front and the rear side. These modules enable system operators to significantly increase their yields. Solar power solutions from SolarWorld create more added value by enabling customers to increase their self-consumption of solar electricity and thus reduce their energy costs.

► Innovation report – p. 040

SALES GROWTH. The group aims to substantially increase shipments in its international markets. For this, SolarWorld uses the strength of its brand with the uniform global image "REAL VALUE." Our partnerships in sales are of particular importance for future growth. SolarWorld has established certified partner programs in a number of markets and again developed these further in 2015. ► Trade – p. 033

**COST EFFICIENCY AND PROFITABILITY.** SolarWorld is continuously working on reducing costs in all organizational units and at all sites. In 2015, costs were saved among other things through higher utilization of production capacity, further improvements in purchasing and the harmonization of processes at differing sites. A series of measures taken in production in 2015 should bring the expected effects as from 2016.  $\blacktriangleright$  *Production* – *p.037* 

After comprehensive changes in our organization in the United States, we have implemented measures in 2015 that are intended to improve the cost structure at the German sites. In this respect, some areas of responsibility at the individual sites were summarized in one unit. In 2015, this was implemented in the areas Technical Planning & Media Supply as well as Technical Service.

**DEVELOPMENT OF THE ORGANIZATION.** The aim is for the international organizational units of the group to grow closer together to make the business processes more global. ► <u>Globalization Advanced − p.023</u> In 2015, we have also improved our efficiency at the German sites in Freiberg and Arnstadt by changing the management structure.

#### **MAJOR PROJECTS 2015+**

In addition to numerous operational measures to implement the strategy, SolarWorld carried out so-called change projects in fiscal year 2015 to successfully bring about complex structural changes together with its employees:

**SAP INTRODUCED AS GLOBAL ERP SYSTEM.** At the beginning of October 2015, the major part of the production and sales units as well as further departments within the group were successfully cut over to SAP, thus creating a new global enterprise resource planning (ERP) system. The introduction of SAP was the largest single project in fiscal year 2015. More employees across departments and sites worked on this project than on any other in the group's history.

The launch in October did not represent final completion of the project. At the turn of the year 2015-2016, we also introduced the SAP HCM (Human Capital Management) instrument, a global human resources information system based on SAP. The aim is to effectively bundle the previous human resources systems. Our aim with the global SAP system is to create the basis for decisive progress in the future: Thanks to SAP we have equipped ourselves for the planned sales growth, can offer our customers an optimized service, can significantly increase our cost efficiency on the basis of improved transparency and networking of the sites. We have also created a new technical basis for the group to continue to grow together into a global organizational unit.

**INTEGRATION OF THE ARNSTADT SITE CONTINUED.** Ever since the takeover of production lines of Bosch Solar Energy AG in March 2014, our aim has been to also integrate the employees at the site into the SolarWorld group. A change project to support the cultural integration of the new site was completed at the end of 2015. Regular surveys of focus groups have shown that the goals of this project have been achieved. A task for the future will be to intensify the integration of SolarWorld Industries Thüringen GmbH continuously and to further harmonize the processes at all production sites.

GLOBALIZATION ADVANCED. Growing together into an effective unit is one of the most important tasks of the SolarWorld group. Following the successful transfer of Purchasing into global organizational structures, we have made a start on corresponding repositioning of the IT and Human Resources divisions in 2015. We intend to continue this process in 2016, and also to globalize further support functions in the group. In addition, we are launching cross-site and groupwide projects increasingly frequently. Globalization of the processes is necessary to be able to achieve top-level operational performance levels.

All of these measures are vitally important in respect to achieving our goals and our long-term competitiveness.

#### **CORPORATE MANAGEMENT AND CONTROL**

**STRATEGIC GROUP MANAGEMENT.** The Management Board determines the group's goals annualy. With these goals in mind, the units of global controlling coordinate business planning for the group. Business planning is structured into requirements

for individual departments, which are then translated into specific, measurable targets as part of operational budget planning.

To produce, manage and control operational planning for the group, we primarily refer to the financial performance indicators of revenue, EBITDA (earnings before interest, taxes, depreciation and amortization) and EBIT (earnings before interest and taxes). The units of global controlling continuously monitor these and other department-specific indicators in a target-actual comparison and produce a monthly report for the Management Board. This report analyzes business trends by regions and identifies gaps in a target-actual comparison.

Furthermore, controlling also monitors working capital and liquidity as well as the results of operational measures to boost efficiency and cut costs.

In the "Trade" segment, we produce a daily summary of shipments, revenue and orders levels. On a monthly basis, a more detailed analysis and target-actual comparisons of shipments and revenue by product groups, regions and customers are produced in standardized form and reported to the Management Board. As a result, we identify trends and seasonal fluctuations in the price and quantity structure at an early stage. Once every year, we also measure customer satisfaction. Here, we rely in part on customer surveys and information obtained from direct dialog with our customers.

In the "Production Germany" and "Production U.S." segments, we focus on trends in costs per unit and per watt, as well as in production output. We pay particular attention to individual cost drivers such as material usage and the ratio of personnel costs. Non-financial indicators such as productivity figures, employee recruitment and retention as well as resource consumption supplement the financial control indicators.

Management Board members maintain constant dialog with each other. In addition, they convene for a regular meeting every week at which they talk about the business situation, discuss opportunities and risks, review target

achievement and adjust targets if necessary. In the event of deviations from plan, the Management Board introduces necessary counter-measures in close consultation with the management bodies of group companies. In addition, members of the Board and managing directors of the subsidiaries get together several times a year. At these meetings, the respective regional and market-specific circumstances are taken into account, and further short- to medium-term goals and measures are decided upon.

INTERNAL CONTROL SYSTEM. The internal control system (ICS) in the SolarWorld group includes various mechanisms and has a decentralized structure. Corporate controlling, group accounting and the corporate audit perform oversight control functions. Corporate controlling is responsible for monthly reporting of the segment-based financial indicators and for the risk management system. Group accounting ensures that accounting is uniform and complies with legal requirements and standards as well as the group's internal guidelines and generally accepted accounting principles. ► Internal control and risk management system in relation to the group accounting process − p.067

The corporate audit pursues an integrated, risk-oriented and systematic approach in its audits. One of its aims is to assess the reliability of the risk management system and internal control system. The audit examines processes in respect to regularity, security, safety and efficiency criteria and compliance with legal requirements and company policies. As an instrument of the Management Board, the corporate audit is organizationally and functionally independent, thus enabling the proper performance of its duties. Corporate audit can autonomously determine the scope of the audit and reporting. The audit reports its results to the Management Board and the Supervisory Board. If necessary, corporate audit can provide support with the implementation of particular measures.

#### DISCLOSURE RELEVANT FOR TAKEOVERS

The information pursuant to Section 315 (4) German Commercial Code (HGB) can be obtained from the following paragraphs:

**RESTRICTIONS ON TRANSFER.** Under the terms of a shareholder agreement of December 19, 2013, CEO Dr.-Ing. E. h. Frank Asbeck and Solar Holding Beteiligungsgesellschaft mbH, in which he and his family members hold a direct and indirect stake, undertake not to dispose of the 2,904,720 no-parvalue shares acquired from creditors in the course of the financial restructuring and not to enter into any agreements concerning the voting or other rights associated with these shares (Section 315 (4) No. 2 HGB). The defined lock-up period lasts until termination of the shareholder agreement or until repayment by SolarWorld AG of a very substantial part of the financial liabilities, whichever occurs sooner. The shareholder agreement ends with the conclusion of the ordinary Annual General Meeting which decides on fiscal year 2018.

AMENDMENTS TO THE ARTICLES OF ASSOCIATION AND APPOINTMENT AND DISMISSAL OF MANAGEMENT BOARD MEMBERS. The provisions concerning the appointment and dismissal of Management Board members as well as amendments to the Articles of Association (Section 315 (4) No. 6 HGB) result from the German Stock Corporation Act (AktG).

**MANAGEMENT BOARD POWERS.** Regarding Management Board powers (Section 315 (4) No. 7 HGB), reference is made to the Stock Corporation Act. In addition, the following applies:

At the Annual General Meeting on May 30, 2014, the Management Board was authorized with the approval of the Supervisory Board to increase capital stock once or several times to a total of up to € 7,448,000.00 for a period of five years, i.e. until May 30, 2019, by issuing new, no-parvalue bearer shares or registered shares in exchange for cash contributions or contributions in kind.

AGREEMENTS IN THE EVENT OF A CHANGE OF CONTROL. As of December 31, 2015, financial liabilities amounting to € 377.2 (December 31, 2014: 407.4) million existed for which creditors can demand early repayment in the event of a change of control (Section 315 (4) No. 8 HGB). A change of control shall be deemed to occur if Qatar Solar S.P.C. and the current or future members of the Management Board together directly or indirectly hold a total of more than 49.9 percent of the issued shares, another person or a group of persons acting in concert other than those aforementioned directly or indirectly holds more than 30 percent of issued shares, or all material assets of SolarWorld AG are sold to one person or a group of persons acting in concert.

The information pursuant to Section 315 (4) No. 1 and No. 3 HGB (the composition of subscribed capital and shares in capital) can be found under ightharpoonup The stock - p.026. With regard to Section 315 (4) Nos. 4, 5 and 9 HGB, no information is required.

## REMUNERATION OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD

For information about the remuneration system for the Management Board and Supervisory Board, please see the ► Remuneration report – p. 100. This information is part of the group management report.

### **BUSINESS REPORT 2015**

#### THE STOCK

ROLLERCOASTER RIDE ON EUROPEAN STOCK MARKETS. At the beginning of the 2015 fiscal year, the stock-market environment was under the favorable influence of the ongoing expansive monetary policy and the improving economic situation in Europe. As the relative weakness of the euro against the U.S. dollar had an invigorating effect on exports of European companies, European stock markets showed strong price increases in the first months of 2015. For example, the German stock index (DAX) started the year at 9,765 points and reached a new all-time high of 12,375 points on April 10, 2015. From mid-April however, the ongoing Greek crisis and the risk of Greece leaving the European monetary union were a burden on the European capital markets. The DAX subsequently lost a significant share of its gains from the first months, with simultaneously high volatility. In August, China's surprisingly weak economic performance triggered a genuine stock-market crash on "Black Monday" that kept international capital markets in suspense and weighed on indices worldwide. The smouldering Greek sovereign debt crisis and the Volkswagen emissions manipulation, which broke in September, further darkened sentiment in the ensuing period. These factors caused significant price declines on European stock markets and the DAX fell to its annual low of 9,428 points at the end of September. A recovery set in at the beginning of October – triggered above all by the positive European economic data. On December 30, 2015, the DAX closed at 10,743 points and thus showed a rise of 10 percent in the year under review.

HIGH FLUCTUATION IN SOLAR STOCKS. In the first half of 2015, solar stocks continued to benefit from the positive general stock-market environment and the good growth outlook for the industry. From August onwards, however, negative macroeconomic factors also dominated here, before a further recovery finally set in in the fourth quarter. The main cause of this recovery was the extension of the Investment Tax Credit (ITC) program in the U.S. until 2021. The Photovoltaic Global 30 Index, which maps the 30 largest solar companies by market capitalization, closed at 26.07 points on December 30, 2015, thereby showing a rise of around 10 percent in fiscal year 2015.

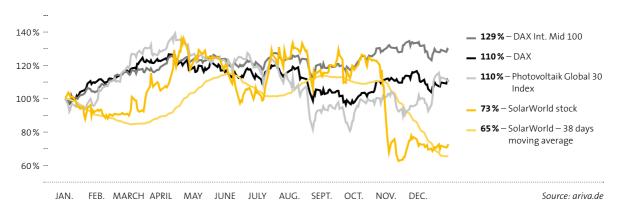
#### FALL IN THE PRICE OF THE SOLARWORLD STOCK IN THE FOURTH QUARTER.

The performance of the SolarWorld stock (ISIN DE000A1Y-CMM2) in the first 10 months of 2015 was volatile but positive overall. However, on November 2, media reports on a partial decision of the responsible District Court in Michigan, U.S., in the ongoing legal dispute of our subsidiary SolarWorld Industries Sachsen GmbH with the U.S. silicon supplier Hemlock Semiconductor Corp. caused a major fall in prices. On October 28, 2015, the court had affirmed its provisional decision from May 2015 that it would not admit the objection of nullity of the underlying contracts in the proceedings based on violation of European antitrust law. The partial decision of the court was of a technical nature and was expressly not intended to represent any assessment of the content of the objection. Furthermore, SolarWorld Industries Sachsen has further lines of defences against the claims. SolarWorld sees no increased probability of occurrence for the risk of the

silicon supplier being able to enforce claims against SolarWorld Industries Sachsen GmbH. ► <u>Legal risks – p. 076</u> ► <u>Note 42 Contingent liabilities – p. 168</u> Nevertheless, some misleading media reports in connection with this partial decision created enormous uncertainty among investors

because these reports mentioned a final decision and/or imminent insolvency of SolarWorld AG. As a result, the SolarWorld stock fell to its lowest level of  $\leqslant$  7.85 on November 13, 2015. It closed the year at  $\leqslant$  9.13 and thus fell by around 27 percent over the entire reporting period.

#### **SOLARWORLD STOCK PERFORMANCE COMPARISON**



G 05

#### INDICATORS FOR THE SOLARWORLD STOCK (ISIN DE000A1YCMM2)

Capital stock as at December 31, 2015	€ 14,896,000	
Total number of shares as at December 31, 2015	14,896,000	
Proportion of shares in free float as at December 31, 2015	50.2%	
Xetra closing price as at January 2, 2015	€ 12.56	
Xetra closing price as at December 30, 2015	€ 9.13	
Market capitalization as at December 30, 2015*	€ 136,000,480	
Earnings per share	€-2.23	
Average Xetra trading volume 2015 65,923 shares		

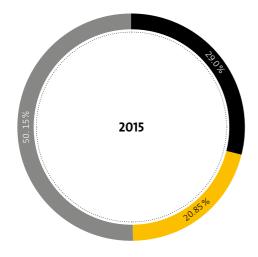
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<sup>\*</sup> Product of number of shares and closing price

#### CAPITAL STOCK AND SHAREHOLDER STRUCTURE

As at the cut-off date December 31, 2015, the capital stock remained unchanged at  $\leqslant$  14,896,000.00 and was divided into 14,896,000 no-par-value bearer shares with an imputed nominal value of  $\leqslant$  1.00. SolarWorld AG has issued exclusively common shares, so that each share entitles its holder to one vote.

#### **SHAREHOLDER STRUCTURE AS AT DECEMBER 31, 2015**



 Qatar Solar S.P.C., Doha/Qatar
 Dr.-Ing. E. h. Frank Asbeck, Bonn/Germany (held directly or indirectly by controlled companies)

■ Free float

#### G 06

In the year under review, the shareholder structure has changed, compared with December 31, 2014. At the beginning of February 2015, Strategic Value Master Fund Ltd. and a number of its controlling companies announced that their respective share of capital stock with voting rights had dropped below the threshold of 3 percent of the capital stock of SolarWorld AG. Consequently, the share of voting rights held by Mr. Victor Khosla, who as Chief Investment Officer controls the companies within Strategic Value Partners group, fell at first below 5 percent and in the next step below 3 percent. SolarWorld AG published the

corresponding voting rights announcements pursuant to Section 26 of the German Securities Trading Act (WpHG), and a summary is available on the company's website. 

• www.solarworld.de/notification-of-voting-rights

As at December 31, 2015, the strategic investor Qatar Solar S.P.C. held an unchanged stake of 29.00 percent in the capital stock of SolarWorld AG. The share of CEO Dr.-Ing. E. h. Frank Asbeck as well as of the companies controlled by him — Solar Holding Beteiligungsgesellschaft mbH and Eifelstrom GmbH — was likewise unchanged, compared with the previous year cut-off date, and totaled 20.85 percent.

SolarWorld AG held no own shares as at December 31, 2015.

#### ANNUAL GENERAL MEETING

The fifteenth Annual General Meeting of SolarWorld AG was held on June 2, 2015. Overall, around 230 shareholders attended the event in Bonn. Approximately 52 percent of the capital stock of the company participated in the voting, which approved the actions of the Management Board and the Supervisory Board of SolarWorld AG for the 2014 fiscal year with majorities of more than 99 percent respectively. All agenda items and voting results can be found on the Internet site www.solarworld.de/hv2015.

#### CO-DETERMINATION PRINCIPLE ESTABLISHED IN THE SUPERVISORY BOARD.

Among other things, the shareholders approved an amendment to the Articles of Association to bring them into line with the requirements of the German Co-determination Act (Mitbestimmungsgesetz). For the first time, SolarWorld AG has formed a Supervisory Board during the year under review that is subject to co-determination on a basis of parity, since the company permanently employs more than 2,000 people in Germany. As a result, the Supervisory Board comprises six shareholder-appointed members who are elected at the Annual General Meeting, and six employee-appointed members. In view of these changes, the six shareholder-appointed members were newly elected at the Annual General Meeting on June 2, 2015. The composition of the shareholder representatives remained unchanged:

- Dr. Khalid K. Al Hajri, Doha, Qatar
- · Faisal M. Al Suwaidi, Doha, Qatar
- Heiner Eichermüller, Scottsdale, Arizona, United States
- · Dr. Georg Gansen, Bonn, Germany
- Dr. Andreas Pleßke, Herrsching am Ammersee, Germany
- · Jürgen Wild, Vaucresson, France

After the Annual General Meeting, Dr. Georg Gansen assumed chairmanship of the Supervisory Board as before. For information on the election of the employee representatives to the Supervisory Board see  $\triangleright$  <u>Co-determination</u> strengthened. – p. 050

#### CAPITAL MARKET COMMUNICATION

SolarWorld Investor Relations department uses various communication tools to take account of requirements to provide comprehensive, transparent and timely information to the capital market. 

Transparent communication — p.094 In this way, SolarWorld is able to inform a wide range of interested parties about the company's strategy, positioning and growth potential as well as about business developments, its economic position and current and future opportunities and risks.

In 2015, SolarWorld AG sought a dialog with existing and potential investors. For example, the Chief Financial Officer and the Investor Relations department held numerous one-to-one and group talks with institutional investors and analysts at international roadshows and conferences in Germany, the UK, Denmark and the United States. SolarWorld was also available for discussions with interested representatives of the capital market at the world's leading trade fair for the solar industry, Intersolar Europe in Munich, Germany, and at the Solar Power International in Anaheim, California (United States). The main focus of investors was on the operational turnaround, groupwide expansion of PERC production and further cost-reduction potential. Furthermore, investors were interested in the ongoing legal dispute with the silicon supplier Hemlock Semiconductor Corp. in the U.S. as well as the positioning of SolarWorld in the U.S. market and the possible consequences of the threatened expiry of the investment tax credit (ITC) program. At the end of 2015, however, it was decided that this program would be extended until 2021.

#### **MAJOR BUSINESS EVENTS**

BUSINESS FIGURES SIGNIFICANTLY IMPROVED VERSUS PREVIOUS YEAR. In 2015, SolarWorld increased its groupwide shipments by 33 percent to 1,159 (2014:873) MW. Thus, SolarWorld exceeded the mark of one gigawatt for the first time in its history. The three production sites of the group (Freiberg, Arnstadt and Hillsboro) ran nearly at full utilization to meet the high demand. In line with shipments, group revenue also rose by 33 percent to € 763 (2014:573) million. In the operating business, SolarWorld succeeded in improving its figures considerably versus the previous year, too. Earnings before interest, taxes, depreciation and amortization (EBITDA)

increased significantly to  $\le$  41 (2014 adjusted for one-off effects: 1.6) million. Earnings before interest and taxes (EBIT) improved substantially to  $\le$  -4 (2014 adjusted for one-off effects: -44) million.  $\triangleright$  Economic position 2015 – p. 053

**CONSISTENT FOCUS ON HIGH-PERFORMANCE TECHNOLOGY.** Our group was the world's largest manufacturer of PERC solar cells (passivated emitter rear cells) in fiscal year 2015 and underlined its technology leadership with a new world efficiency record in this field. In 2015, we made a start on gradually changing our cell production completely to PERC

and combining it with further technologies that increase both the performance as well as the yields of our products. An example: the introduction of the 5-busbar technology. This enabled us to present our customers with a 300-watt solar module in standard format with 60 cells for the first time in 2015. At the end of 2015, we also switched initial parts of our production to the manufacture of bifacial cells and modules. ► Innovation report - p. 040

ENABLING MORE SELF-CONSUMPTION. In 2015. Solar World launched a series of products onto the market together with extensions and improvements to the existing product portfolio. The focus here was on solutions that enable our customers to increase their self-consumption of solar electricity and thus to save energy costs. To this end, for example, we further developed the SunPac LiOn solar power storage system and expanded the opportunities for energy management with the Suntrol eManager. ► Enabling greater independence - p. 041

SALES NETWORK EXPANDED INTERNATIONALLY. In January 2015, SolarWorld set up a sales office in Tokyo, Japan. The new

company SolarWorld Japan K.K. is further advancing our expansion in Asia together with the subsidiary in Singapore. Furthermore, in June 2015, another European sales company was formed, SolarWorld UK Ltd in Salisbury, UK. ► Trade – p. 033

**SAP INTRODUCED.** At the beginning of October 2015, the major part of our production and sales units as well as further departments within the group were successfully switched to SAP, thus creating a new global ERP system. Already in 2015, the introduction of SAP helped the group grow together into a more global organizational unit. Through SAP, SolarWorld has now created a sound base for notably optimized processes spanning sites and business areas - and thus also equipped itself for future growth plans. ► SAP introduced as global ERP system -p. 023

CO-DETERMINED SUPERVISORY BOARD FORMED. As of June 2015, to match the six shareholder representatives on the Supervisory Board of SolarWorld AG, there are now also six employee-appointed members representing employees. ► Co-determination strengthened – p. 050

#### THE MARKET

ECONOMIC SITUATION IN INDUSTRIAL COUNTRIES IS RECOVERING. Economic developments in the U.S. and Europe improved in 2015. An expansive monetary policy, rising wages and progress with the debt-reduction process stimulated both private consumption as well as the willingness of industry to invest. The lower external value of the euro boosted exports from the euro zone. The euro began 2015 at an exchange rate of 1.21 U.S. dollars and closed the year at 1.08 U.S. dollars. The economy in the euro zone grew by 1.5 (2014: 0.8) percent, compared with the previous year.

In the U.S. – the main sales market for SolarWorld – economic growth accelerated to 2.5 (2014: 2.2) percent. Based on the country's good economic situation, the U.S. Federal Reserve raised the prime rate slightly at the end of 2015, thus ending the zero-interest policy introduced in 2009. By contrast, economic development in emerging economies was weak - one important reason why the global economy grew only moderately in 2015 by 3.1 (2014: 3.5) percent.

GROWING GLOBAL DEMAND FOR SOLAR PRODUCTS. Aided by the positive general economic situation and favorable subsidy conditions, the international solar industry continued its recovery in the year under review. The year 2015 also saw the creation of important preconditions for the future development of the solar industry: The industry is placing high growth expectations on the extension of tax subsidies on investments in solar power systems (investment tax credit/ITC) in the U.S. and the Paris international climate agreement, with a clear commitment to limit climate change and minimize its effects.

Overall, market experts at Deutsche Bank expect a rise of 32 percent in global installations of new solar power systems in 2015 to 57 (2014: 43) GW. As in the previous year, China, Japan and the U.S. were the world's three largest solar markets.

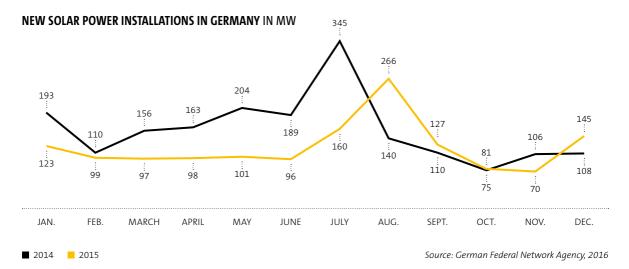
**U.S. SOLAR MARKET INCREASES BY 17 PERCENT.** The U.S. market continued its strong growth course in 2015. According to estimates by GTM Research, new installations increased by 17 percent to 7.3 (2014: 6.2) GW. The strongest growth came in the residential sector, which increased by 66 percent, compared with the previous year. Commercial installations stagnated, while utilities again reported the largest installation volume at more than 50 percent of total new installations.

In the United States, additional steps to address unfair trade practices in the solar market were taken. At the beginning of 2015, investigations based on petitions filed by SolarWorld were concluded, and anti-dumping and anti-subsidy duties were imposed on Chinese solar modules made from non-Chinese solar cells, as well as on all products containing Taiwanese solar cells. As a result, duties of around 75 percent are applicable to these imports from China and around 20 percent on imports of solar cells from Taiwan.

The new measures took effect on February 1, 2015 and are applicable for at least five years. Similar duties of about 30 percent remain in place based on trade cases filed by SolarWorld in 2012, covering Chinese solar cells as well as Chinese solar modules made from Chinese solar cells.

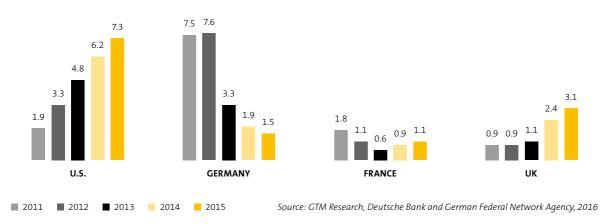
With regard to the future development of the U.S. solar sector, favorable framework conditions were created in the reporting period for continuation of growth. At the end of December 2015, the U.S. Congress approved the extension of the ITC program by a further five years, i.e. companies, utilities and households will still be able to offset a part of the costs of purchasing and installing solar systems against their tax in the years after 2016.

**EUROPEAN SOLAR MARKET RECOVERS SLIGHTLY.** In Europe, the solar market grew again for the first time since 2011. The newly installed capacity rose by 10 percent to 7.5 (2014: 6.8) GW according to estimates by Deutsche Bank. At the end of 2015, the EU Commission opened review proceedings concerning the extension of the anti-dumping and antisubsidy measures applicable in Europe. The proceedings can last up to 15 months, meaning that a decision cannot be expected until the beginning of 2017. During this time, the current anti-dumping and anti-subsidy measures will remain in force.



G 07

#### HISTORICAL DEVELOPMENT OF OUR MAIN SALES MARKETS IN GW



G 08

In 2015, the UK retained its position as Europe's largest solar market. New solar systems with a total capacity of 3.1 GW were installed there – an increase of just under 30 percent, compared with 2014 (2.4 GW). However, a major reduction in subsidy funds for solar electricity at the beginning of 2016 was announced in the middle of 2015. This is likely to have a negative effect on demand in 2016.

In Germany the solar market shrank by 23 percent, equivalent to new installations of just 1.5 (2014: 1.9) GW. Nevertheless, SolarWorld increased its sales volumes by 64 percent here, compared with the previous year. ► Trade − p. 033

In contrast to Germany, the French solar market developed positively. It expanded by more than 20 percent to 1.1 (2014: 0.9) GW. The Italian market also continued to recover. Although solar electricity has no longer been subsidized by the government in this market since 2013, more and more customers are convinced of the economic viability of this energy source even without feed-in tariffs. Overall, demand for solar systems in Italy rose by 10 percent to 0.42 (2014: 0.38) GW.

**ASIAN SOLAR MARKET EXPANDING.** According to estimates of Deutsche Bank, new solar power systems with a total capacity of 32.5 (2014: 25.6) GW were installed in 2015 in Asia – more than half of new installations worldwide. The two largest solar markets in this region and simultaneously worldwide were China (13.0 GW) and Japan (12.7 GW).

### REPERCUSSIONS OF THE GENERAL CONDITIONS ON BUSINESS DEVELOPMENT

The SolarWorld group succeeded in using the positive development of the international solar market in 2015 for its own growth. Our company increased shipments by 33 percent, compared with the previous year. We made decisive gains in our main sales regions, the U.S. and Europe. Globally, there was a slight fall in average prices for solar products during the course of the year. Despite temporary fluctuations, the development of exchange rates was positive overall for SolarWorld. Following the far-reaching crisis in the industry in recent years, 2015 saw the first signs of a normalization of the market. Thanks to its strong brand and its clear positioning as a quality provider of high-performance products, the SolarWorld group succeeded in gaining new customers and increasing market shares.

#### **TRADE**

**RECORD SHIPMENTS OF 1.1 GIGAWATTS.** In 2015, SolarWorld increased its shipments of modules and kits by 31 percent, compared with the previous year, and achieved a level of 1,108 (2014: 849) MW. This is the largest volume of shipments ever achieved by SolarWorld. At 353 MW, the fourth quarter of 2015 was SolarWorld's best ever quarter in terms of shipments — a major achievement by our international sales teams. We placed around half our goods in America, the remaining half in the regions Europe, Asia-Pacific and Africa. The international share of shipments of modules and kits fell slightly to 82 (2014: 86) percent, as our business in Germany developed disproportionately well.

PRESENT IN THE MARKETS AS A MANUFACTURER OF PREMIUM PRODUCTS.

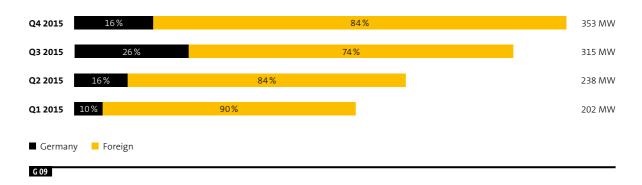
SolarWorld customers were able to choose from a broad range of products in 2015. These included solar power modules, standardized kits with modules and accessories as well as complete solar power solutions with battery storage system and intelligent energy management. Our range here comprised on the one hand multicrystalline modules in standard format with 60 cells and, on the other hand, monocrystalline modules in standard format, in XL format with 72 cells, and in the completely black variant mono black, which is architecturally very attractive. Demand for our monocrystalline modules with PERC high-performance technology was particularly high. These modules offer a level of performance that is above the industry average.

In 2015, our focus was again on the market segments with high expectations in terms of quality, performance and aesthetics. These are above all the markets for roof systems on private homes (Residential) and on commercial buildings (Commercial). Additionally, we again supplied modules to large-scale projects, where we were also able to offer our customers added value with the right products, e.g. with the XL-format module that is particularly suited to the construction of large-scale systems in the segments Commercial and Utilities. Overall, we supplied modules to a series of large-scale projects, for example in the United States, France, UK, Germany and Poland in the second half of 2015.

#### UNITED STATES: LARGEST INDIVIDUAL MARKET WITH 56 PERCENT GROWTH.

The U.S. was by far SolarWorld's largest individual market in 2015. Here, in our second home market alongside Germany, we increased our shipments by 56 percent, compared with the previous year to 546 (2014: 351) MW. High-performance modules with PERC in standard format were in particular demand. In the second half of the year, we also sold more modules in XL Format as we gained more production capacities for this product.

#### REGIONAL DEVELOPMENT OF SHIPMENTS OF MODULES AND KITS



MARKET SHARE GAINED IN GERMANY. Germany was SolarWorld's second largest single market in 2015 with shipments of 196 MW — a growth of 64 percent on the previous year (2014: 119 MW). This performance is particularly notable as the German solar market shrank by 23 percent, compared with the previous year. This strong gain in market share shows that our sales strategy — with its focus on long-term partnerships and our positioning as a provider of quality products — is bearing fruit.

**INCREASING IMPORTANCE OF EUROPEAN EXPORT MARKETS.** The other European markets have been playing a major role for SolarWorld for many years. In the reporting period, we placed 303 (2014: 264) MW here, i.e. 15 percent more than in the previous year.

The largest single markets in this region were the UK, France and Italy. We have our own sales offices in each of these countries. In the British market, we witnessed a pull-forward effect in the second half of the year due to the impending reduction in subsidies at the beginning of 2016. In France, we have established ourselves as the most-sold module brand and have developed a broad customer base. In the Italian market, which no longer has feed-in tariffs, we noticed a recovery in our shipments in 2015. Here, we have adapted to small-scale business, in which we convince our partners and customers that investing in a solar system is still attractive. As a market, Italy is in the "post feed-in tariff" phase. In our opinion, it has the potential to become a role model for solar markets that function even without statutory subsidy incentives. The driving forces in these markets are the interest in the electricity self-consumption and the reduction of energy costs.

In Europe, we were also successful in many smaller markets. These include countries such as Austria and Switzerland, the Benelux and Scandinavia regions as well as new solar markets such as Poland. We achieved a leading position there in 2015 by supplying a total of 9 MW to three major projects during the course of the year.

**SALES IN THE ASIA-PACIFIC REGION BELOW PREVIOUS YEAR.** Our volume of shipments in Asia-Pacific fell significantly in 2015, compared with the previous year. This is mainly due to the fact that we had supplied a major project of 50 MW in Central Asia in the previous year.

The solar market in the Asia-Pacific Region is exposed to particularly fierce price competition, not least due to the proximity of the production location China. For us, as a western manufacturer of quality products, Japan is the most promising single market in this region, as Japanese customers particularly appreciate quality and efficiency. We have been present with our own sales subsidiary in Tokyo since 2015.

One good reference project for us in this region in 2015 was a commercially used solar system at the Hong Kong International Airport, China's second-largest airport. Here, we equipped a roof system on the new "Midfield Concourse" airport building, designed by the architect Sir Norman Foster, with SolarWorld modules.

PLEASING DEVELOPMENT IN SOUTH AFRICA. Roof systems on commercially used buildings are also a promising business area in southern Africa. Where off-grid or ground-mounted systems were previously dominant, more and more companies are now discovering the benefits of generating and using solar electricity themselves. In this way, they can ensure uninterrupted and fault-free energy supply, while at the same time saving electricity costs. With its long-standing sales presence in Cape Town, SolarWorld is respected by customers as a reliable partner that also offers support through its technical expertise. We also sell a large volume of accessories in this market. In 2015, we increased the volume of our shipments in this region by 71 percent, compared with the previous year.

Outstanding examples in South Africa in 2015 were a roof system on the warehouse buildings of the tea producer Rooibos Ltd. and on buildings of the Victoria & Alfred Waterfront in Cape Town, Africa's largest commercial and shopping center.

A PARTNER YOU CAN TRUST – THROUGHOUT THE WORLD. For us, being a manufacturer of quality products also means showing a presence in the markets as a responsible partner for our customers. An early market entry and a commitment over many years have enabled us to develop sustainable customer relationships in numerous regions. This consistency is appreciated by both existing and new customers. Our programs for certified partners are a further success factor. Here, we involve selected installers in our business as brokers to the end customer. We have established nationwide networks of certified partners in countries such as Germany, the United States, France, the UK and Italy. In 2015, we further developed our program in Germany by dividing participants into various categories. This differentiation will enable us to create better performance incentives.

#### **BRAND AND MARKETING**

**SOLARWORLD – REAL VALUE: BRAND AND TECHNOLOGY LEADER.** Being globally present with a strong brand is of major strategic importance for SolarWorld, given the international orientation of its business. In 2015, the group was, for the first time, represented in all its markets with a new uniform brand image and the consistent message "SolarWorld – REAL VALUE." This branding as a manufacturer of quality products unmistakably distinguishes SolarWorld from all other solar manufacturers

"SolarWorld — REAL VALUE" goes hand-in-hand with our promise of particular customer benefit. This is represented by our four core values:

- · Proven quality
- Leading solutions for our customers
- A responsible partner you can trust worldwide
- · Authentic focus on sustainability

These core values form the basis of our brand communication. The claim associated with REAL VALUE is that the inner attitude and the conduct of SolarWorld employees toward all stakeholders are resolutely focused on the four core values. The customer value proposition of REAL VALUE is one that we wish to fulfil all-round with our products and services. A representative customer survey in 2016

confirmed that 99.5 (2015: 99) percent of our customers worldwide are convinced by the quality of our products. The customer value proposition of REAL VALUE is one that we wish to fulfil all-round with our products and services. A representative customer survey in 2016 confirmed that 99.5 (2015: 99) percent of our customers worldwide are convinced by the quality of our products.

In 2015, personal feedback from numerous customers and partners has confirmed the positive effect and the high international recognition value of REAL VALUE. From the U.S. to Europe and South Africa, as far as Japan and Australia, all trade-fair stands, brochures and Internet sites, among other things, are tailored to REAL VALUE. To this end, the corporate design was further developed and launched in a globally uniform manner in 2015.

In the year under review, we further strengthened the REAL VALUE brand in terms of the aspects proven quality and technology leadership. In this respect and among other things, we have emphasized the particular value proposition of the SolarWorld modules. They are tested on the basis of quality criteria that are far above the common industrial standard. SolarWorld stands for quality "Made in Germany" and "Made in the United States" that lasts and delivers consistent performance. The basis of our current know-how is the technology experience gained over 40 years, which we placed at the focal point of a campaign in 2015.

#### "40 YEARS OF REAL VALUE": INTERNATIONAL CAMPAIGN IMPLEMENTED.

In 2015, the group was able to look back on a history of 40 years in the industry, research and development as well as production. During the year under review, this was at the focal point of our international campaign "40 years of Real Value." The central message of the campaign was SolarWorld's principle of combining and further developing its own know-how and the knowledge of renowned companies to achieve qualitatively perfected technology. As a result, SolarWorld is ideally positioned for the future. The campaign included above all communication measures at major trade fairs such as Intersolar Europe and Intersolar North America as well as at events with customers, such as the "Installer Summit" in August at our Hillsboro site.

► www.40yearsrealvalue.com

The starting point of the forty-year history was the formation of the company Solar Technology International (STI) in 1975. STI is a predecessor company of the present-day SolarWorld subsidiary in the United States. The founder of STI was Bill Yerkes (1934-2014), a forefather of modern solar technology. He put into practice his vision of not restricting photovoltaics to space travel, but rather making this technology a mass-market product for energy supply on our planet. At the 2015 Intersolar Europe in Munich, Bill Yerkes was awarded the SolarWorld Einstein Award posthumously for his achievements in the industrialization of crystalline silicon solar technology. His widow and his daughter received the prize on his behalf. SolarWorld has been using this award since 2005 to honor personalities who have rendered particularly outstanding service in the  $production, use \ and \ spread \ of \ solar \ technology. \ Solar World$ also rewards particular achievements by up-and-coming scientists through the Junior Einstein Award. ► Promoting young scientists – p. 051

**SALES SUPPORTED IN ALL MARKETS WORLDWIDE.** The primary task of our marketing teams in 2015 was to support the sales teams in selling the products and in developing sustainable business structures and partnerships throughout the world. In line with the two-part organization of our global sales operation, we managed our marketing activities for the American continent from Hillsboro and those for Europe, MENA, southern Africa and the Asia-Pacific region from the distribution center in Bonn.

In the second year following the financial restructuring, we paid attention in our marketing activities to acting in a particularly cost-conscious manner and achieving a broad international effect even without high advertising budgets. We implemented measures for both B2B as well as B2C communication. In addition to our extensive communication via online and print media, we again demonstrated a high presence at international trade fairs in 2015, among other places in Europe, the United States, South Africa, Japan and Australia. A further focus in the B2B sector was the support of our certified partners.

#### ADDED VALUE OF SELF-CONSUMPTION OF SOLAR POWER EMPHASIZED.

Part of the group strategy involves offering genuine added value with customer-oriented solar power solutions.

► <u>Strategy — p. 021</u> Through our products SunPac LiOn and the SolarWorld eManager, we offer our customers the possibility of lowering their energy costs through self-consumption of solar electricity, achieving a high level of energy independence. ► <u>Enabling greater independence — p. 041</u> In 2015, we again made targeted use of this purchasing argument in our approaches to end customers, e.g. in an advertising spot shown in Germany on ARD at prime time over several weeks in the fall.

#### SOLARWORLD AGAIN HONORED AS "GERMANY'S CUSTOMER CHAMPION."

The customer-oriented management of SolarWorld was again recognized with the "Germany's customer champion" award in 2015. SolarWorld achieved the status of Germany's customer champion for the second time after 2013, following a detailed check on the company in an all-round customer relations analysis and an evaluation on the basis of a representative customer survey. The initiators of the competition are the "Deutsche Gesellschaft für Qualität e.V." (DGQ) and "forum! Marktforschung." This award is further confirmation of the fact that SolarWorld is successfully committed to achieving long-term customer relations.

SOLAR MOBILITY – A SUCCESSFUL FLIGHT OVER THE ALPS. For many years, SolarWorld has been supporting projects that prepare the way for the mobility of the future. In addition to the solar vehicle SolarWorld GT, developed and sent around the world in collaboration with the Bochum University of Applied Sciences, we are also involved in flying. The ultralight aircraft SolarWorld eOne was created as part of a joint project between SolarWorld and PC Aero GmbH. Equipped with 320 solar cells from SolarWorld, it flew over the Alps in July 2015 as an ambassador for solar mobility. The cells used here were the same as those installed in SolarWorld solar modules. The aim of the project is to make solar-powered electric aircrafts ready for series production soon and to enable emissions-free flying.

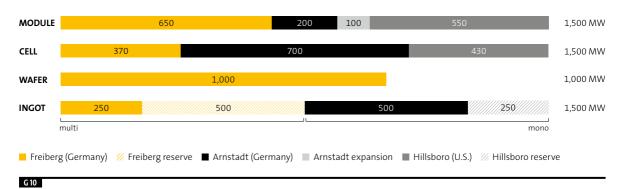
# **PRODUCTION**

**INTENSE YEAR FOR PRODUCTION SITES.** The employees at the three production sites of the SolarWorld group can look back on a particularly intense 2015 fiscal year. Their commitment has enabled the volume of shipments to grow to more than one gigawatt. In Freiberg, Arnstadt and Hillsboro, the group used all active capacities at full utilization to service the increasing demand of customers on the one hand and, on the other hand, to achieve the highest possible economies of scale and thus more favorable manufacturing costs.

With full capacity utilization in production, we simultaneously implemented a number of challenging measures in the course of the year that are intended to equip our group for the continuing highly competitive situation on the solar market. These measures included above all the further integration of SolarWorld Industries Thüringen GmbH. the ramp-up of crystallization in Arnstadt, the expansion of capacities at several stages of the value chain, the gradual changeover of the systems to PERC (passivated emitter rear cell) and more efficient sawing techniques as well as organizational restructuring at the production sites. In addition, the production companies were closely involved in the implementation of SAP. ► Major projects 2015+-p.023 Also in the second year following the financial restructuring of SolarWorld AG, the production had to make sparing use of the available means. The challenge of realizing an ambitious package of measures at full capacity utilization and on low budgets was taken up with great commitment. However, given the host of measures, temporary delays occurred in some areas during implementation so that we couldn't make use of all potentials to reduce costs and raise efficiency in 2015.

CAPACITIES EXPANDED ALONG THE VALUE CHAIN. In fiscal year 2015, SolarWorld expanded its production capacities at all sites and at several stages of the value chain. At the Arnstadt production site, which came to SolarWorld from Bosch in March 2014, we reactivated existing systems for crystal pulling during the course of the year. Crystallization is the preliminary stage to the production of monocrystalline solar wafers. The monocrystals are further processed at the neighboring site in Freiberg, Saxony. In 2015, we expanded this site into a sawing center for mono and multicrystalline wafers, as SolarWorld Industries Sachsen has the best expertise and cost structure of the entire group in this production stage. In 2015, our sites in Thuringia and Saxony grew closer together thanks to this sharing of tasks.

# **PRODUCTION CAPACITIES 2015+**



037

In 2015, a test was also carried out at the Hillsboro site in the U.S. to determine if reactivating the existing crystallization there is worthwhile. The result: In 2016, we will also pull monocrystals for monocrystalline wafers here using a similar process to that in Arnstadt. In this way, we will strengthen our added value in the American solar market, where monocrystalline products and our modules with PERC high-performance cells are particularly in demand.

At Hillsboro, we also pressed ahead with the expansion of our module production from 380 to 550 MW in 2015. Following some delays, the additional capacity was not available to us in the second half of 2015. Full commissioning of the new capacities should be completed at the beginning of 2016.

In 2015, we also improved the nominal power of our cell and module capacities by increasingly switching our production facilities to the manufacture of high-performance products. This has enabled us to obtain higher production capacities from our existing lines.

**NEW PRODUCTS AND PROCESSES INTRODUCED.** SolarWorld is the technology leader in PERC high-efficiency cells and was the world's largest manufacturer in this area at the end of 2015. The pioneer within the group is our production in the United States, where we have been successfully producing PERC cells since 2012. Since 2015, we have also been switching to PERC gradually at the Freiberg and Arnstadt sites.

In 2015, SolarWorld intensively further developed the PERC approach, to maintain its advantage over competitors. We combined other optimization measures from our research and development area with PERC. For example, we started production of the first bifacial cells and modules at the end of 2015. Finnovation report – p. 040

Additionally, we introduced new processes at our sawing center in 2015, which we hope will bring notable cost savings. In this respect, SolarWorld Industries Sachsen uses self-developed processes to a large extent and has upgraded existing machines to make the most efficient possible use of investment resources. Since, contrary to our plans, we were not yet able to implement this measure in full in 2015, we now expect a noticeable reduction in our production costs for mono and multicrystalline wafers as from the 2016 fiscal year. ► Innovation report − p.040

continuous improvement with tpm. As part of the closer integration of all stages of the value chain at the Freiberg site, Teamwork Production Management (TPM) was also reorganized in 2015. The aim is the reorganization and adaptation of all TPM pillars (continuous improvement, autonomous maintenance, preventative maintenance, quality maintenance, education and training, early-phase management, TPM in service and safety, health, environment) to the cross-site structures and processes, so as to make use of all potential for optimization of processes and the sustainable avoidance of losses on a step-by-step basis. TPM stands for the involvement of all employees. To this end, a start has been made on developing new team structures at the site

# **GLOBAL SUPPLY CHAIN**

**GROUPWIDE SUPPLY CHAIN FURTHER DEVELOPED.** The SolarWorld group aims to establish a continuous supply chain that is customer and sales-driven, as is usual in the automotive industry, for example. On the one hand, a global supply chain of this nature ensures SolarWorld's requirements-oriented supply with material and simultaneously offers our customers the highest product quality and excellent services. On the other hand, it represents a permanent challenge, as demand is constantly shifting in the various regional markets, even in the short term. As a group with production sites in Germany and the U.S. as well as sales sites on four continents, SolarWorld is linked to its customers and suppliers in a global network, thus creating diverse points for the further development of its supply chain.

As early as 2013, we transferred the departments Purchasing, Production Planning and Logistics to a joint organizational unit to create a global supply chain. Since then, we have been working continuously on improving the processes within the supply chain, among other things through the resolute global organization of the individual departments.

In this context too, the most important project in the 2015 fiscal year was the introduction of SAP as a uniform ERP system. This will enormously increase opportunities for implementation of our idea of a global supply chain. In the course of the SAP project, we have increasingly set ourselves the task of again bringing global production and sales planning closer together. This should enable better management of production volumes based on planned sales volumes. • SAP introduced as global ERP system – p. 023

**SUPPLY WITH MATERIAL AT GOOD CONDITIONS ENSURED.** In 2015, our global purchasing team again made a significant contribution toward lowering the cost of materials. In view of the global flows of goods within the group, a central interest of ours in 2015 was also to act even quicker and more flexibly together with our suppliers and service providers.

The supply of our company with direct and indirect materials at market-oriented conditions is a fundamental factor in our competitiveness and is therefore also decisive for the success of our company. SolarWorld was well supplied with all materials in 2015.

To ensure our security of supply on a strategic level, we avoid or minimize possible dependencies on suppliers through a specific share of own production in the solar value chain.

PARTNERSHIPS WITH SUPPLIERS FURTHER STRENGTHENED. Trusted partnerships have always been part of the core values of SolarWorld and also characterize the relationship with our suppliers. Long-term relationships with suppliers and service providers are a key element for lasting success in the solar industry. We therefore strive for an intense dialog with our suppliers. We have established a regular forum for this through the "SolarWorld Supplier Day." The fourth event of this type took place in April 2015 at our distribution center in Bonn. Under the heading "Grow together now," the 67 participants from our most important suppliers gained an insight into current developments at SolarWorld. They created new ideas for the further development of the partnership in workshops, including the use of joint stocks and an improved exchange of information. We recognized the best suppliers of the year through the SolarWorld Supplier Award. It was awarded for the categories "Sustainability," "Quality," "Innovation" and "Supply Chain Performance."

# **INNOVATION REPORT**

**INCREASING ADDED VALUE FOR CUSTOMERS.** Innovation has been of strategic importance for SolarWorld ever since the formation of the company. Developing new products and technologies within the group itself is indispensable for the competitiveness of SolarWorld and its strong position as a manufacturer of quality products in the international solar market

The impulses for innovation stem from the needs of our customers and the requirements of the various markets. The aim is permanent expansion of the added value provided to customers by our solar power solutions, because this enables us to differentiate ourselves effectively from our competitors. The focus of our development work in the 2015 fiscal year was, on the one hand, on technologically leading high-performance products that generate particularly high electricity yields for our customers. On the other hand, we concentrated on solar power solutions with the possibility of increasing self-consumption of solar electricity and thus reducing dependency on energy suppliers. In this way, we wish to make the operation of a solar power system attractive, particularly in regions with no feed-in tariffs or other regulatory subsidy incentives for photovoltaics.

PRODUCING MORE EFFICIENTLY. SolarWorld is involved in fierce cost competition, above all with Asian manufacturers. In addition to creating added value for customers, we therefore direct our innovative powers towards increasing the efficiency of production at our sites in Germany and the U.S. through new manufacturing technologies and thus continuously saving costs. As an example, since mid-2015 we have been using diamond wire saws on a small scale in monocrystalline wafer production, based on a self-developed process. We are also increasingly using structured wire for the manufacture of multicrystalline wafers; among other things, this makes sawing more productive than with conventional wire. In 2015, both processes have shown that they can make a contribution towards increasing material yield and efficiency levels in future.

**EXPANDING LEADERSHIP IN HIGH-PERFORMANCE PRODUCTS.** SolarWorld is the global technology leader in the PERC high-efficiency cell (passivated emitter rear cell) and, at the end of 2015, improved its own world efficiency record for industrially manufactured PERC solar cells on the basis of monocrystalline p-type silicon wafers to 22.04 percent, as confirmed by the Fraunhofer Institute for Solar Energy Systems ISE in Freiburg/Germany.

Through PERC, we have set a trend for the entire solar industry. For this reason, we have worked intensively in 2015 on maintaining the competitive edge in high-performance cells and modules through the combination of PERC with other performance-enhancing processes. We combined PERC cells, for example, with five instead of three busbars—the contacts on the front of the solar cells through which these are wired to one another—as is normal on the market. The use of five busbars can increase cell efficiency by up to 2 percent. Thanks to the combination of PERC and 5-busbar technology, we succeeded in 2015 in producing the world's first 300-watt module in standard format with 60 p-type solar cells.

Parallel to the technology with five busbars, we also made progress in the year under review on an approach involving an alternative contacting process and put it into model production. With this new process, the shading on the cell surface is less, with the result that up to 6 percent more output is possible than with a standard module. In 2016, we shall be able to assess whether progress to mass production is viable.

**INTRODUCTION OF BIFACIAL SOLAR POWER SOLUTIONS.** In the reporting period, we also succeeded in developing the world's first solar module with bifacial p-type solar cells. The bifacial cells in the Sunmodule BISUN® can produce electricity from both sides by using both the incident direct sunlight on the front side as well as the reflected, indirect light on the rear side. For this, a second solar-cell grid is applied to the surface

of the rear side of the cell. This collects and conducts the charge carriers activated through the penetration of light. The new product offers customers major added value: Solar power modules with bifacial cells provide considerably higher yields than a normal module with the same nominal power. The size of the additional yields depends above all on the albedo, the degree of reflection radiation, of the respective base surface. If the solar module is assembled on a grass surface with low albedo in the standard form, an additional yield of 6 to 7 percent is achieved. Given a higher albedo, for example on white concrete and given an optimum tilt of the module allowing a particularly high amount of indirect light to fall on the rear side, even additional yields of up to 25 percent are possible.

In future the Sunmodule BISUN® will be offered in both standard format with 60 cells as well as in XL format with 72 cells. We will also make additional use of our extensive expertise in the field of system technology: A new product family is being created around the new bifacial module with various self-developed frames that support the additional yield of the bifacial module to a particularly high extent. We will launch these products onto the market in 2016 under the BISUN® name. BISUN® is a particularly good example of the strength of SolarWorld in bringing together its pioneering role in cell technology with its experience as a provider of integral solar power solutions.

# BIFACIAL SOLAR POWER SOLUTIONS FROM SOLARWORLD

	Sunmodule BISUN® module with bifacial cells	BISUN® solar power solutions with bifacial modules			
Customer value proposition	Further development of SolarWorld module with bifacial cells that also uses the indirect light on the rear side for electricity generation. SolarWorld will offer bifacial modules in a glass-glass variant and in a variant using glass at the front and a transparent backsheet at the rear side.	Complete system that combines bifacial modules and various frame types and can thus increase additional yields to up to 25 percent.			
(2) Future potential Expansion of the positioning as provider of solar modules and complete solar power solutions that enable significantly higher electricity yields than standard products.					

**ENABLING GREATER INDEPENDENCE.** In 2015, SolarWorld again launched new products onto the market that take account of customer wishes for greater independence in energy supply. To this end, we have again improved and extended our existing solar power solutions with battery storage system and intelligent energy management. Among other things, our customers can now also use the SunPac LiOn solar power storage system for small roof systems. The extended Suntrol eManager improves use of the self-generated solar electricity through new apps with generation forecast and appliance control. In addition, our development

teams already have a series of new ideas which we wish to make ready for the market in 2016: for example the options of integrating a heat pump and a heater rod, or of charging an automobile battery.

A further significant new product in the field of system technology in 2015 was the Sunplug eco inverter that is also suitable for small solar systems on the roofs of private houses. The inverter under the SolarWorld brand has enabled us to further strengthen our positioning as a provider of complete and high-quality systems.

# **NEW DEVELOPMENTS, EXPANSIONS AND IMPROVEMENTS IN SYSTEMS**

	<b>SunPac LiOn</b> solar power storage system from 2 kWh	Suntrol eManager energy management	<b>Sunplug eco</b> inverter for small-scale solar power systems
Customer value proposition	System expansion and improvement with lithium iron phosphate battery. Since 2015 also with a capacity from 2 kWh, modular expansion to 4, 6, 8 and 10 kWh; automatic increase in the charging/discharging capacity depending on the battery capacity used.  Expansion from 5,000 to 10,000	Expansion and improvement through new apps with generation forecast and appliance control. The Suntrol eManager enables maximum use of the selfgenerated solar power. Up to 90% self-sufficiency can be achieved in private homes.	Inverter in power classes 1.2 to 5.5 kW for small private systems up to 6 kWp.  The Sunplug eco inverter is easy to install, highly efficient during operation and very reliable.
	charging and discharging cycles.  Expand the positioning as a provider self-consumption of solar power.	of complete solutions, especially with	the ability to improve

**IMPROVING THE PRODUCT DEVELOPMENT PROCESS.** The creation of customer and market-oriented innovations requires cross-department consultation between Sales, Marketing, Product Management and Purchasing on the one hand, and production-related Research and Development (R&D) and Production on the other hand. In the 2015 fiscal year, we have again worked intensively on bringing these departments even closer together for innovation as well as on optimizing the joint product development process. Our aim is to increase accuracy in the selection of projects and to industrialize innovations quicker than in the past. To this end, we have improved our organization in 2015 by creating a new department – Global Product Development.

This department is technically integrated into our R&D subsidiary SolarWorld Innovations GmbH at the production site in Freiberg. SolarWorld Innovations analyses which technologies are required for the realization of new products and makes these available to production. As at December 31, 2015, SolarWorld Innovations employed 110 (December 31, 2014: 116) people. The share of employees working for SolarWorld Innovations in the group total decreased to 3.8 (December 31, 2014: 4.2) percent. This development can mainly be attributed to the increase of staff in production units and consequently in the group total.

# **DEVELOPMENT OF INVENTIONS AND PATENTS, AS OF DECEMBER 31**

	2011	2012	2013	2014	2015
Number of registered inventions	58	71	59	53	77
Number of active patent applications	230	226	234	345	273
Number of granted active patents	99	113	123	166	219
Number of active patent families	152	173	175	243	253

**LINKS WITH STRONG PARTNERS.** Ever since 2007, SolarWorld Innovations has been the hub of an R&D network in Freiberg. This includes manufacturers of machines, systems and consumables as well as a series of cooperation partners from research and science. All in all, SolarWorld Innovations collaborated with more than 35 scientific institutes, universities and higher education institutions in the 2015 reporting period.

**INVOLVED IN PUBLICLY FUNDED PROJECTS.** Part of the SolarWorld R&D activities has been incorporated into publicly funded programs and projects for many years. In this respect, the research program "Photovoltaic Innovation Alliance," run by the German Federal Government, again played an outstanding role in 2015. Here, SolarWorld Innovations coordinates a series of group projects in a lead-management role. In

2015, we implemented projects on various research themes as part of the program: on the high-performance cell, on crystallization and wafering as well as on the economic operation of solar systems independently from feed-in tariffs.

**IN-HOUSE EXPERTISE STRENGTHENED.** Developing know-how in the group and protecting this via our Intellectual Property Management is of great importance to us. During the reporting period we significantly increased the number of registered inventions and patents. We are again on an upward trend as regards the number of invention disclosures. Even the number of patents granted has risen significantly. By contrast, the number of ongoing patent applications has fallen for two reasons: In some cases, the patent has been granted; other applications have been abandoned for cost reasons due to low prospects of success.

# **HEADCOUNT DEVELOPMENT SOLARWORLD INNOVATIONS GMBH AS AT DECEMBER 31**

	2011	2012	2013	2014	2015
Employees in research and development*	98	118	118	116	110
Group employees	2,701	2,355	2,073	2,730	2,932
Proportion in %	3.6	5.0	5.7	4.2	3.8
T 12					

<sup>\*</sup> Excluding temporary workers and students

# **DEVELOPMENT OF R&D EXPENSES**

	2011	2012	2013	2014	2015
Total R&D expenses (in m€)	27.2	49.1	26.5	29.0	23.3
Sponsored portion (in %)	14.5	10.7	27.5	25.4	34.3
T13					

## RESEARCH RATIO AND RESEARCH INTENSITY

in %	2011	2012	2013	2014	2015
Research ratio	2.6	8.2	5.8	5.1	3.1
Research intensity	1.6	3.7	3.4	3.7	2.6
T 14					

[Research ratio = R&D expenses/revenue x 100] [Research intensity = R&D expenses/total expenses x 100]

# **ENVIRONMENTAL COMMITMENT**

Sustainability has been the core of our business activities ever since the formation of SolarWorld. We are striving for globally sustainable energy production. Within the context of the SolarWorld vision we confirm our claim to achieve this goal. Strong competition and high cost pressure cannot deter us from thinking and acting sustainably, because this is what distinguishes us from our competitors. As a manufacturing company, the focus of our attention is on four environmental themes: energy, emissions, water, and waste. We have set ourselves specific goals for these areas which we wish to achieve by 2020. We shall achieve our goals through optimized processes and the replacement

of environmentally harmful substances. In normal industry practice, the relation to the production unit watt peak (Wp) is decisive. We measure how much energy, emissions, water and waste we use and save per unit produced. Furthermore, we set an emissions target for new cars in our vehicle fleet.

If we succeed in achieving the targets set before 2020, we shall set ourselves even more ambitious goals, so as to provide ourselves with additional motivation to achieve further savings. For example, we achieved our goal for the water consumption as early as 2014, and have raised it further as a result.

# **ENVIRONMENTAL GOALS 2020**

	Unit	Base year 2012	Goal 2020/ percentage	Actual 2015/ percentage
Energy and climate protection			change	change vs. 2012
Energy and climate protection				
Groupwide energy consumption	kWh/Wp	0.63	0.47 -25 %	0.52 -17%
			7.45	7.47
Cumulated energy demand (life cycle) <sup>1</sup>	$MJ_{eq}/Wp$	9,93	-25 %	-25%
			0.29	0.47
Groupwide CO₂ emissions	$kgCO_{2eq}/Wp$	0.45	-35%	5%
			0.98	0.73
Global warming potential (life cycle)	$kgCO_{2eq}/Wp$	1.33	-25%	-45 %
Average CO <sub>2</sub> emissions from passenger cars in the		152	95	129
SolarWorld vehicle fleet (new passenger cars) <sup>2</sup>	gCO <sub>2eq</sub> /km	(all cars)	-38%	-15%
Water				
	· · · · · · · · · · · · · · · · · · ·		1,802	1,637
Specific water consumption	m³/MWp	2,253	-20%	-27%
			1,564	1,506
Specific volume of waste water	m³/MWp	1,738	-10%	-13%
Waste				
			24.2	27.3
Specific volume of waste	t/MWp	26.9	-10%	1%

<sup>&</sup>lt;sup>1</sup> Since 2015, the calculations have been carried out using further-developed methods, databases and conversion factors. To ensure that the results remain comparable with those for 2014, these figures have also been adjusted retrospectively.

<sup>&</sup>lt;sup>2</sup> The emissions data which takes account of the corrected levels following the Volkswagen emissions scandal is not currently available. We therefore use the original data for our calculations.

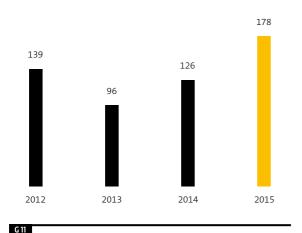
Solar power generation helps reduce harmful greenhouse gas emissions and preserve fossil resources when it replaces these sources in the energy mix. Although energy is consumed to manufacture solar modules, our products generate far more energy over their life cycle than it takes to make them. Likewise, far more greenhouse gas emissions are avoided than are created in the entire manufacturing process.

**co, EMISSIONS.** Since the Carbon Disclosure Project Germany was founded in 2005, we have been involved in monitoring our greenhouse gas emissions. In a CDP ranking released in November 2015, SolarWorld improved its position clearly once again. Reaching a total of 100 points, the group increased its score by 13 points, compared with last year (2014: 87). Thus, we were the best solar company in this ranking as often before.

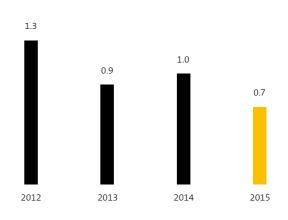
Due to the significant rise in production and shipments, our groupwide greenhouse gas emissions increased in 2015 to around 178 (2014: 126) thousand t  $\rm CO_{2eq}$ . Also, the reactivation of crystallization led to a rise of emissions. In the previous year, emissions caused on this stage of the value chain had been produced by our suppliers and had thus not been attributed to the group.

Considering the whole life cycle of our products, however, we were able to reduce greenhouse gas emissions per production unit. The so-called global warming potential (GWP) specifies the amount of greenhouse gas emissions per production unit (kg  $\mathrm{CO}_{\mathrm{2eq}}/\mathrm{Wp}$ ). In the life cycle analysis, we take into account emissions from the entire production process of our solar modules, including preliminary stages and input factors. In 2015, our GWP stood at 0.73 (2014: 1.04) kgCO $_{\mathrm{2eq}}/\mathrm{Wp}$ . The GWP figures of 2013 and 2014 were recalculated due to updated calculation principles in the database.

# **GROUPWIDE CO<sub>2</sub> EMISSIONS** IN THOUSAND tCO<sub>2EO</sub>



# GLOBAL WARMING POTENTIAL IN kg CO<sub>2EO</sub>/Wp



G 12

**PAYBACK TIMES.** The energy payback time is the amount of time it takes the solar power plant to produce as much energy as was used to manufacture it. Similarly, the  $CO_2$  payback time refers to the time it takes to compensate for the greenhouse gases that were emitted during manufacturing. Our calculations follow the cradle-to-gate approach. SolarWorld's technological progress can be determined from the energy and  $CO_2$  payback times.

While it takes one year to compensate for the energy consumption of the entire production process of a system in Bonn, Germany, (power yield: 940 kWh/kWp) it only takes half a year in San Francisco, U.S., (power yield: 1,670 kWh/kWp). By comparison, the energy payback time in 2008 was 3.5 years according to a study by ESU-services.

Both in San Francisco and in Bonn,  $CO_2$  emissions that are produced during the manufacturing of a SolarWorld module are compensated for after about a year and a half. The Californian energy mix includes less  $CO_2$ -intensive sources of energy than the German energy mix. That is why it takes nearly as long in San Fransisco as in Bonn to compensate for emissions with a solar power system despite a significantly higher solar irradiation.

These calculations come from our life cycle analysis for our solar modules (not including system components) with an average lifespan of 30 years, installed on a roof with a southerly orientation and an optimum inclination.

An overview of many locations around the world and additional information on the calculations is available on our website **www.solarworld.de/sustainability**.

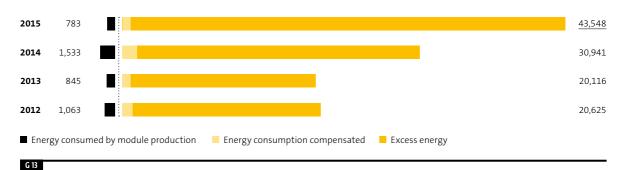
**POSITIVE ENERGY AND CO<sub>2</sub> BALANCE**. Thanks to the volume of solar power modules sold in 2015, an energy surplus of 43,548 (2014: 30,941) GWh can be achieved during a lifetime of 30 years. Some 20.18 (2014: 14.71) million  $tCO_{2eq}$  can be saved as a result. The costs for environmental damage avoided total around  $\in$  1,615 (2014: 1,177) million. The  $CO_2$  emissions avoided exceed the  $CO_2$  emissions caused along the entire production chain by a factor of 24 (2014: factor of 17).

Since we have no exact information about how and where our modules are installed, our calculations are based on a standardized installation in Germany (1,275 kWh/m²).

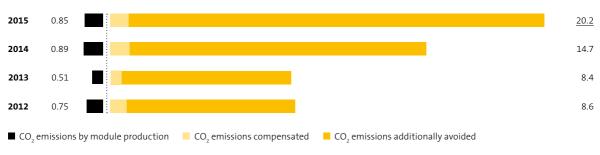
When estimating the avoided costs of environmental damage, we use the best-practice approach of 80 euros per ton of  ${\rm CO_2}$  as recommended by the German Federal Environmental Agency. Since 2015, the calculations have been carried out using further-developed methods, databases and conversion factors. To ensure that the results remain comparable with those for 2014, these figures have also been adjusted retrospectively.

You can find further information under ► <u>Sustainability in</u> detail 2015

# **ENERGY BALANCE IN GWh**



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



G 14

# **EMPLOYEES**

**HIGH COMMITMENT BY EMPLOYEES.** The year 2015 was full of challenges for employees at all SolarWorld sites. Together, they produced and sold a record volume of 1.1 GW of products as well as implemented a host of ambitious measures during the course of the year.

In 2015, the employees again demonstrated a high level of commitment and interest in SolarWorld. This is shown, among other things, by the high participation level of 67 percent in our groupwide employee survey, carried out at the end of 2015

GOALS AND STRATEGY IN HUMAN RESOURCES. During the reporting period, we worked on two main tasks in the field of human resources: On the one hand, we supported employees and executives in implementing the group strategy and shaping necessary changes within the group. This included a series of special projects, such as the switchover to SAP. ► <u>Major projects 2015+-p.023</u> On the other hand, one of our major interests was to further strengthen the high commitment levels of our employees and to support them individually in their professional development. We wish to continue to position ourselves both internally and externally as an attractive employer in the future, to generate enthusiasm for SolarWorld among specialists, executives and nextgeneration staff alike and to tie them to us. This is of major importance for the successful future of our company.

All measures of the HR strategy in the group are based on the guiding principles of the RISE & Shine company mission. The acronym RISE stands for "Responsibility," "Innovation," "Sustainability" and "Engagement." Among other things, we have derived our competency model from this. We take this as a basis when supporting each individual SolarWorld employee as well as when selecting new employees.

Our "REAL VALUE" brand is not only a promise to our customers, but also constitutes the guidelines for internal dealings with and among our employees, in teams and between

colleagues. We shall continue to pursue and further intensify this approach in future Femployer branding – p. 085

**SHAPING CHANGE SUCCESSFULLY.** In 2015, we continued the so-called Change Program to support employees and executives in the successful implementation of changes within the group. This program included a series of individual projects in 2015. ► *Major projects 2015 + − p.023* In this way, we wish to ensure that project goals set are achieved in practice, with simultaneous strengthening of employee loyalty. A decisive factor for us in this respect is recognizing possible fears of employees and dealing with these where necessary. Additionally, executives should be enabled to deal appropriately with possible resistance.

In addition to regular discussions within the team, we have organized staff meetings and shop floor tours with the management. Furthermore, all employees within the group are kept informed of the content and progress of the change projects through various communication measures, e.g. flyers, regular reports in the employee newspaper and in the Intranet news portal.

PREPARING EXECUTIVES FOR MORE GLOBAL STRUCTURES. Our management assumes particular responsibility as regards the implementation of our group strategy and change measures. A central task of the executives involves jointly advancing the growing together of individual departments to form global organizational units. ► Strategy − p.021 In this respect, executives must be placed in a position to lead global teams successfully. This includes leadership in so-called matrix organizations and leading intercultural teams. An important goal is to strengthen the cooperation culture within the group and to enable executives to lead jointly. As this requires an identical understanding at all sites, we created a management vision for the entire SolarWorld group in 2015.

**ALIGNING RESOURCES TO REQUIREMENTS.** During the year under review, we again carried out a precise check on our HR requirements in the individual departments and adjusted these to the cost structures. We required more employees in 2015 than in the previous year to be able to implement the

growth plans in production. We recruited new employees above all at our site in Hillsboro, Oregon (United States). At the same time, however, we reduced our staff in support functions by bundling departments across sites.

# **HEADCOUNT DEVELOPMENT AS AT DECEMBER 31**

2014	2015	Change
2,161	2,157	-4
44	49	+5
545	748	+203
24	27	+3
2,730	2,932	+202
	2,161 44 545 24	2,161 2,157 44 49

Due to the significantly higher production volume in the reporting period, the number of temporary staff increased to 903 in 2015 (2014: 677). Including temporary staff, we employed 3,835 persons throughout the group as at December 31, 2015 (December 31, 2014: 3,407) — an increase of 13 percent.

Using temporary staff gives us the flexibility we need for rapid and efficient adjustment of production volumes to market demand. Here we have worked for many years with established temporary staffing companies. Nevertheless, we intend to reduce the share of temporary staff in the future and to tie more people to the company as permanent employees.

**FLUCTUATION RATE AGAIN LOWER.** In 2015, the fluctuation rate fell, compared with the previous year, to 8 (2014: 10) percent. This was the third consecutive year of improvement. This is a pleasing development, as we wish to tie employees to our company. To this end and among other things, we create development perspectives for them within the group, support them through further-training offers and promote our strong corporate culture which favors lasting commitment by our employees.

**CREATING INCENTIVES THROUGH VARIABLE REMUNERATION.** Solar World offers its employees financial incentives to work towards the group's goals. In addition to their fixed remuneration, they receive contractually agreed variable remuneration. This depends on the achievement of targets, agreed in advance, during the respective fiscal year. The target figures are based in part on the group and in part on the individual companies. If the agreed targets have been achieved in a fiscal year, the variable remuneration is normally paid out during the following year. • Sustainability in detail 2015

**GENDER EQUALITY.** Offering equal opportunities for men and women within our company is part of our identity. We strive to achieve a balanced ratio of men and women at all levels. This is a permanent challenge as the focus within the group is on technical professions and the STEM areas (science, technology, engineering and mathematics), where women are still underrepresented among students and in application procedures. During the 2015 fiscal year, the share of women throughout the group was 25.5 (2014: 25.2) percent. The share of next-generation female staff among our trainees reached 10.2 (2014: 9.1) percent.

SolarWorld has for many years attached importance to raising the share of women in management positions, such that it reflects the share of females in the entire group. During the reporting period, the groupwide share of women in management positions was 16.7 (2014: 17.5) percent.

In 2015, we committed ourselves to a specific target figure for the first time: We wish to achieve a share of women in management positions of 25 percent by June 30, 2017. This will enable us to meet the requirements of the Law on Equal Participation of Men and Women in Private-Sector and Public-Sector Management Positions that came into effect in Germany in 2015. To achieve this target, we planned initial measures at a global level in 2015, so as to create uniform conditions at all sites, offering both genders the same opportunities of holding management positions. By virtue of the fact that we have worked towards this subject even before the statutory obligation, we see a very good chance of achieving our self-imposed target figure.

**SUPPORTING THE COMPATIBILITY OF FAMILY AND WORK.** SolarWorld takes account of the challenge faced by many employees in reconciling family and work. We therefore wish to make working conditions as family-friendly as possible. For example, this includes flexible working hours and the option of working from home where feasible. Other measures are currently being planned, such as setting up more parent-child offices where parents can occasionally bring their children to work if necessary and look after them in a suitable environment.

**CO-DETERMINATION STRENGTHENED.** As of 2015, to match the six shareholder representatives on the Supervisory Board of SolarWorld AG, there are now also six employee-appointed members representing employees. In June 2015, the six employee representatives were appointed to the Supervisory Board by court order. These members belonged to the control body on an interim basis. The direct election of the employee representatives by the employees at the German sites in Arnstadt, Bonn and Freiberg was then completed at the beginning of October. As prescribed by law in Germany, the Supervisory Board includes three employees and one manager of SolarWorld in addition to two representatives of the trade unions.  $\blacktriangleright$  Boards of SolarWorld AG — p.097

In addition, employee interests are represented by Works Councils at the German sites Arnstadt, Bonn and Freiberg. Since 2014, there has also been a Group Works Council, made up of members of the Works Councils at all three German sites.

**SUPPORTING THE DEVELOPMENT OF EMPLOYEES.** We offer our employees various opportunities for further training as well as individual development perspectives. In a yearly career development discussion, employees together with their executives decide on personal development goals and steps. These steps also include further-training measures. Overall, the training offer is based on the groupwide corporate objectives and tailored to the individual requirements of the employees.

Among other things, we offer our employees training courses in project management and IT. In 2015 we spent € 0.64 (2014: 0.36) million on further-training measures. To facilitate employees' development in the company and improve their chances of internal promotion, we operate an internal jobs portal. This allows employees to find out about job vacancies in the company at an early stage and apply for them within a protected period before the jobs are advertised externally.

**OPENING UP CAREER OPPORTUNITIES FOR OWN TALENT.** Since as early as 2012, SolarWorld has been implementing special development measures for high potentials within the own group. Since then, next-generation staff, who have been identified by their executives as showing above average commitment and performance levels, have been supported in their professional and personal development within the framework of the talent management program. This is intended to support them in shaping their career path. In this way, we improve our chances of filling technical and management positions with employees that have acquired a great wealth of experience in our company and who have a strong identification with SolarWorld. Since 2012, 12 talents from the Bonn, Freiberg and Hillsboro sites have gone through the program or already successfully completed it. Some of them today hold management positions, among other places in the areas finance, marketing and production.

We accepted new talents into the program at the end of 2015. This time, we have added not only talents with the perspective of a management position with disciplinary responsibility, but also talents for careers as technical specialists or in project management. We also wish to use the talent management to get more women into management positions in the SolarWorld group than has been the case in the past. Foundary of the talent management program are female

**TRAINING YOUNG TALENTS.** Supporting next-generation staff in their professional development is a matter of great importance to us. In this way, we wish to acquire future specialists for our company. In addition, our experience repeatedly shows how beneficial the dialog between young and old is for the achievement of our corporate goals.

SolarWorld therefore trains young people in technical, commercial and IT professions at its German sites. In 2015, the trainee ratio was 1.7 (2014: 1.6) percent. During this year 16 (2014: 22) next-generation staff completed their training with us. In the year under review, we took on 15 (2014: 20) trainees as permanent employees following completion of their training. 20 (2014: 15) persons started their training with us in 2015. We are particularly pleased by the fact that, since the reporting period, SolarWorld Industries Thüringen has for the first time also been training young people at the Arnstadt site, taken over in 2014.

The fact that SolarWorld trainees have repeatedly received high awards for their performances is one that makes us proud. During the reporting period, one trainee at SolarWorld Industries Sachsen GmbH in Freiberg received an award as Germany's best trainee in his profession as process mechanic. In the interim, SolarWorld has been represented by a training graduate for the fourth time in six years, this time at the 10th National Apprenticeship Awards of the Association of German Chambers of Industry and Commerce — a reflection of the high-quality training at the Freiberg site.

**PROMOTING YOUNG SCIENTISTS.** We also provide support for young academics during their scientific qualification. As well as our own doctoral candidates, we also supported academic research by Ph.D. and master's students at many different universities in 2015. We have been maintaining close contact to university facilities and research institutes for many years to strengthen the dialog between industry and research. This is particularly true of our largest site at Freiberg, where we cooperate extensively with TU Bergakademie Freiberg.

In addition, we make our own contribution towards the promotion of young next-generation researchers by inviting applications for the annual SolarWorld Junior Einstein Award. The prize of € 5,000 has been awarded since 2006 to researchers whose scientific theses have put forward innovative ideas relating to photovoltaics and related subjects. In 2015 the Junior Einstein Award went to Michael Rauer for his doctoral thesis on improving the performance of solar cells. ► www.einstein-award.de

POSITIONING SOLARWORLD AS AN ATTRACTIVE EMPLOYER. Following the crisis in the solar industry, we have been working with great commitment on positioning SolarWorld as an employer offering interesting perspectives in an industry of the future. Above all, we wish to be attractive for next-generation talent. We are therefore pleased by the fact that our company was the most popular employer in the renewable energy sector among young engineers and scientists in 2015. This is the finding of the Universum Student Survey 2015. For the ranking, just under 35,000 students from 219 German universities were surveyed about their assessment of companies as employers, but also about their long-term career goals, as well as on topics related to job and career.

In the future, we wish to further strengthen the positioning through the ightharpoonup Employer branding - p. 085

**IMPROVING HEALTH AND SAFETY.** SolarWorld also sets high standards in terms of occupational health and safety. Our occupational health and safety management follows the global standard BS OHSAS 18001. We pursue a zero-accident strategy at all group sites. The accident rate in 2015 was 17.4 (2014: 13.2) per 1,000 employees.

We also help our employees in staying healthy and improving their fitness. For example, we organize regular health days at our German sites. These include health checks and courses on nutrition. Our employees in the United States can complete a total health assessment online at any time.

In Germany, we also offer exercise programs such as back training, pilates or yoga. As in previous years, SolarWorld and its employees also took part in various sporting events in 2015, such as the "Bonn company run" or the Germany-wide "Stadtradeln" (city cycling) campaign. In 2015, our employees started the worldwide "SolarWorld Global Fitness Challenge" on their own initiative. Here, the employees at all sites converted their sporting activities into steps taken.

Further information on the subject of health and safety can be found in Sustainability in detail 2015

# **ECONOMIC POSITION 2015**

# TARGET-ACTUAL COMPARISON OF KEY PERFORMANCE INDICATORS

In our 2014 Annual Group Report, we presented our forecast for the development of the key performance indicators of the SolarWorld group in fiscal year 2015. The following table gives an overview on forecast versus actual result:

We were able to achieve all forecasts but one. Our expectations for shipments and revenue were even exceeded. Due to delays implementing some operating measures, it became apparent in late October 2015 that we would not be able to achieve positive EBIT in the fiscal year. Therefore, we had to adapt our forecast, setting the new target to achieve positive EBIT in Q4 2015.

	Results 2014	Forecast 2015	Results 2015	Status
Shipments	873 MW	Increase by at least 25 % to more than 1,000 MW	+33% or 1.159 MW	achieved
Revenue	€ 573 million	Increase by at least 25% to more than € 700 million	+33% or € 763 million	achieved
EBITDA	€ 1.6 million*	Significant increase versus the previous year	€ 41 million	achieved
EBIT	€ -44 million*	Original forecast: positive EBIT for fiscal year 2015	Total year 2015: € -4 million	not achieved
		<b>New forecast as at Oct. 29, 2015:</b> significant increase versus the previous year, but still negative; positive EBIT in Q4 2015	Q4 2015: € +14 million	achieved

<sup>\*</sup> adjusted for one-off effects arising from the acquisition of solar activities from Bosch Solar Energy AG as well as impairment losses on repayment claims and/or advance payments due to a commercial agreement with a raw material supplier

# **EARNINGS POSITION**

# **DEVELOPMENT OF REVENUE AND PROFIT OR LOSS**

In fiscal year 2015, SolarWorld boosted its groupwide shipments by 33 percent to 1,159 (2014: 873) MW, compared with the previous year. Due to the significant gain of market shares in our home market Germany, the groupwide foreign quota of shipments fell by 4 percentage points to 82 (2014: 86) percent. In Q4 2015, total shipments of the SolarWorld group rose by 52 percent to a record level of 375 (Q4 2014: 246) MW.

Shipments of solar modules and kits in the "Trade" segment, were up 31 percent to 1,108 (2014: 849) MW. Again, we saw strong growth in our largest single market, the United States, where we raised shipments by 56 percent, compared with the previous year. Overall, SolarWorld sold about half of its solar modules and kits in the U.S. market. As for Germany, we managed to defy the negative market trend and to increase shipments by 64 percent versus 2014.  $\blacktriangleright$  Trade – p. 033

# **DEVELOPMENT OF SHIPMENTS**

Shipments in MW	2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	2015
Modules and kits	849	202	238	315	353	1,108
Wafers and cells	24	8	8	13	22	51
Total	873	210	246	328	375	1,159
T 18						

External shipments of solar wafers and cells doubled year-on-year to 51 (2014: 24) MW.

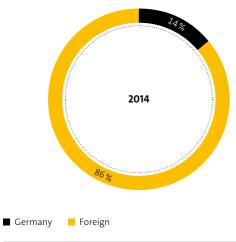
The SolarWorld group managed to increase consolidated revenue in fiscal year 2015 by 33.2 percent or € 190.1 million to € 763.5 (2014: 573.4) million. Thus, SolarWorld exceeded its revenue forecast of at least € 700 million. The foreign quota of revenue fell by 0.5 percentage points to 82.6 (2014: 83.1) percent. In Q4 2015, group revenue increased by 40.9 percent or € 67.2 million to € 231.7 (Q4 2014: 164.5) million.

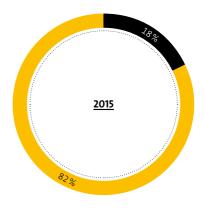
In the "Trade" segment, revenue grew by 34.9 percent to € 755.1 (2014: 559.7) million in 2015. SolarWorld was able to increase its revenue disproportionately versus 2014 i. a. because it sold a higher share of high efficiency modules in

its product mix. There was an additional positive effect on our revenues due to the relative strength of the U.S. dollar against the Euro. The external revenue in the "Production Germany" segment now plays a minor role because intermediate products are mainly sold by our sales units. The remaining external revenue therefore decreased by  $\in$  7.1 million to  $\in$  5.7 (2014: 12.8) million.

With regard to the development of operating business figures (EBITDA and EBIT) in comparison with the previous year 2014, we point out that the SolarWorld group had considerable one-off effects in fiscal year 2014. One-off effects in the previous year included a profit (badwill) of € 136.5 million resulting from the acquisition of solar activities from Bosch as well as impairment losses on repayment

# SHIPMENTS DIVIDED INTO DOMESTIC AND FOREIGN SALES





G 15

claims and/or advance payments of € 30.3 million due to a commercial agreement with a raw material supplier. In fiscal year 2015, there were no one-off effects of a corresponding magnitude. We refer, however, to our explanations at Development of material income statement line items — p.056.

For greater ease of comparison, figures on fiscal year 2014 given below do not include these considerable one-off effects.

As planned, we managed to improve groupwide earnings before interest, taxes, depreciation and amortization (EBITDA) in fiscal year 2015 significantly, too. EBITDA increased by  $\leqslant$  39.2 million to  $\leqslant$  40.8 (2014: 1.6) million. In Q4 2015, EBITDA increased by  $\leqslant$  26.2 million to  $\leqslant$  26.3 (Q4 2014: 0.1) million.

In the "Trade" segment, EBITDA in 2015 rose by  $\in$  23.0 million to  $\in$  9.7 (2014: -13.3) million. In the "Production U.S." segment, EBITDA improved to  $\in$  8.6 (2014: -8.4) million. In the same period, EBITDA in the "Production Germany" segment amounted to  $\in$  10.3 (2014: 14.8) million.

The impairment tests conducted did not result in the need for impairment losses or reversals of impairments.

Groupwide earnings before interest and taxes (EBIT) improved in 2015 to € -4.2 (2014: -43.8) million. At the end of October 2015, SolarWorld AG announced that it would not achieve its target of reaching a positive operating result. This development can be mainly attributed to delays in implementing operating measures. In Q4 2015, SolarWorld reached positive EBIT, improving by € 28.9 million to € 14.1 (Q4 2014: -14.8) million.

In the "Trade" segment, we were able to improve EBIT versus 2014 to  $\in$  7.2 (2014: -15.4) million. EBIT in the "Production U.S." segment increased by  $\in$  18.7 million to  $\in$  -2.3 (2014: -21.0) million. In the "Production Germany" segment, EBIT amounted to  $\in$  -15.2 (2014: -9.8) million. Among other things, the decrease was caused by the ramp-up of crystallization in Arnstadt as well as by delays in implementing some of the operating measures as mentioned above.

# **REVENUE BY SEGMENT** IN M €



G 16

Groupwide financial result amounted to € -40.7 (2014: 510.3) million. In 2014, the financial result was influenced positively by one-off effects amounting to € 555.7 million originating from the profit of the financial restructuring.

The group's net profit after taxes came to € -33.3 (2014: 464.2) million. The group's net profit, too, was influenced by one-off effects from the acquisition of the solar activities from Bosch and the profit that had resulted from the financial restructuring.

# **DEVELOPMENT OF MATERIAL INCOME STATEMENT LINE ITEMS**

In fiscal year 2015, the cost of materials rose by  $\in$  96.2 million to  $\in$  519.1 (2014: 422.9) million. This was mainly due to significant manufacturing output growth, compared with the previous year, in which we took over the production site in Arnstadt, Germany at the end of Q1. While the cost of materials was higher in absolute figures, we succeeded in reducing the cost of materials ratio to 65.6 (2014: 69.2) percent.

Personnel expenses rose by € 19.7 million to € 158.0 (2014: 138.3) million. This increase mainly resulted from the integration of the production in Arnstadt, Germany, and the headcount growth at our site in Hillsboro due to the expansion of production there. As we increased our total operating performance, however, our personnel cost ratio could be decreased to 20.0 (2014: 22.6) percent. Depreciation and amortization were lowered by 0.9 percent or € 0.4 million to € 45.0 (2014: 45.4) million.

Other operating expenses rose slightly by € 1.6 million to € 176.5 (2014: 174.9) million. Expenses for external personnel and distribution increased here because the production and shipments volume were substantially higher than in the previous year. There was a countervailing effect resulting from the fact that the previous year's figures were weighed down by impairments on repayment claims and/or advance payments made because of a commercial agreement with a raw material supplier (€ 30.3 million). Moreover, legal and consultancy fees fell considerably. We could reduce our expense ratio by 6.3 percentage points to 22.3 (2014: 28.6) percent thanks to the increase of our total operating performance.

In comparison to the previous year, other operating income fell by 130.2 million to  $\in$  102.6 (2014: 232.8) million. The decrease can mainly be attributed to prior year's profit from the initial accounting for assets acquired from Bosch ( $\in$  136.5 million) and to the absence of income resulting from the termination of long-term supply contracts with wafer customers ( $\in$  18.3 million). Running counter to this, currency gains increased due to volatile exchange rates by  $\in$  14.6 million. A corresponding increase of currency losses by  $\in$  14.9 million is included in other operating expenses. In addition, other operating income rose through increased reversals from provisions by  $\in$  12.1 million. This resulted mostly from reversals of provisions for warranties

# **FIVE-YEAR COMPARISON OF INCOME POSITION**

in k€	2011	2012	2013	2014	2015
	1,044,935	606,394	455,821	573,382	763,465
Change in inventories of finished goods and works in progress	72,054	-64,666	-91,925	36,328	24,512
Own work capitalized	14,349	65	542	1,438	3,852
Operating performance	1,131,338	541,793	364,438	611,148	791,829
Cost of materials	-819,152	-534,568	-272,666	-422,938	-519,143
Personnel expenses	-138,224	-129,378	-112,366	-138,281	-157,989
Amortization and depreciation	-452,514	-417,564	-41,877	-45,440	-44,966
Other operating income	260,499	166,459	59,287	232,784	102,574
Other operating expenses	-225,805	-247,066	-185,480	-174,898	-176,456
Operating result	-243,858	-620,324	-188,664	62,375	-4,151
Financial result	-59,492	-67,489	-76,739	510,274	-40,694
Taxes on income	-5,592	81,522	37,097	-108,485	11,563
Result from discontinued operations (after tax)	1,808	0	0	0	0
Consolidated net result	-307,134	-606,291	-228,307	464,164	-33,282

T 19

# **INDICATORS OF INCOME POSITION**

in %	2011	2012	2013	2014	2015
Return on sales (Consolidated net result/revenue)	n.a.	n.a.	n.a.	80.9	n.a.
Cost of materials ratio (Cost of materials/operating performance)	72.4	98.7	74.8	69.2	65.6
Personnel expenses ratio (Personnel expenses/operating performance)	12.2	23.9	30.8	22.6	20.0

# FINANCIAL POSITION

# PRINCIPLES AND OBJECTIVES OF FINANCIAL MANAGEMENT

SolarWorld AG conducts group financial management centrally, which enables us to distribute financial resources efficiently within the group. Controlled directly by the Management Board, the financial management team is responsible for group liquidity planning and controlling, raising capital, and hedging against interest rate, currency and price risks.

We align our financial management with the requirements of our operational business in the short and medium term, and with our corporate strategy in the long term. The central task for financial management is to ensure sustained liquidity protection and flexibility, while minimizing capital costs and financial risks.

Our financial liabilities consist mainly of bonds and structured loans. For the most part, these run until 2019 and are secured by group assets. Follow-up financing will be necessary by 2019.

Central cash management invests liquidity positions exclusively in fixed deposits (day-to-day, weekly and monthly deposits) in the public and private German banking sector on a daily basis in Euro as well as foreign currencies such as U.S. dollar and British pound. Derivative financial instruments are used only as hedging instruments.

Note 40b Principles and objectives of financial risk management – p.160

An overview of long-term loans and repayment arrangements appears in the notes. ► *Note 40e Liquidity risks – p. 162* 

# **FINANCING ANALYSIS**

As compared to December 2014, equity decreased by  $\leqslant$  29.8 million to  $\leqslant$  208.9 (December 31, 2014: 238.7) million. The equity rate amounted to 24.0 (December 31, 2014: 26.1) percent at the cut-off date.

We were able to further reduce our financial liabilities by € 44.1 million to € 405.8 (December 31, 2014: 449.9) million primarily because of various scheduled debt repayments and an unscheduled one as well as the elimination of a

purchase price liability for SolarWorld AG & Solar Holding GmbH in GbR Auermühle. Most of our financial liabilities (85.9 percent) were classified as non-current as at December 31, 2015 (December 31, 2014: 87.0) percent.

Investment grants and subsidies recognized in non-current liabilities decreased to € 23.9 (December 31, 2014: 29.1) million as at the cut-off date. These public funds accrued on the liabilities side of the balance sheet are reversed over the period of utilization of subsidized investments through profit or loss.

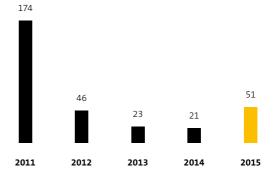
Non-current provisions decreased in 2015 by  $\in$  10.3 million to  $\in$  23.5 (December 31, 2014: 33.8) million. This mainly results from the reversal of provisions for warranties and from lower pension provisions.

All other current liabilities rose to € 70.5 (December 31, 2014: 48.5) million. This can mainly be attributed to higher advance payments received as well as an equity contribution called in by Qatar Solar Technologies Q.S.C. in January 2015, which is based on a respective shareholders' agreement.

# INVESTMENT ANALYSIS

In fiscal year 2015, we invested a total of € 50.7 (2014: 20.7) million in intangible assets and property, plant and equipment. About € 18.1 million was invested in the "Production Germany" segment in the wafer, cell and module production. In the "Production U.S" segment, we invested

# **DEVELOPMENT OF INVESTMENTS** IN M €



G 17

a total of  $\in$  18.1 million in the expansion of capacities in cell and module production. In addition,  $\in$  12.3 million was invested in the "Trade" segment and  $\in$  2.2 million in "all other segments."

# LIQUIDITY ANALYSIS

Cash flow from operating results increased by € 26.3 million to € 15.7 (2014: -10.6) million. Due to the significantly higher production volume, inventories rose, compared with the previous year. However, SolarWorld managed to improve its cash flow from operating activities considerably to € 52.5 (2014: -36.7) million.

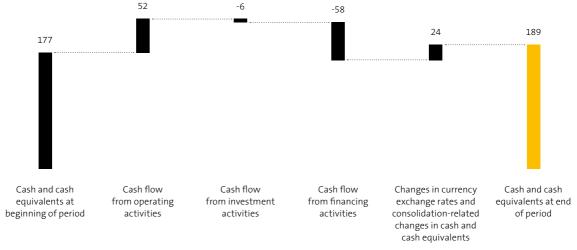
Cash flow from investing activities totaled € -6.5 (2014: 82.7) million. This includes cash receipts of € 33.8 (2014: 81.0)

million, arising from the negative purchase price agreed for taking over large proportions of the manufacturing facilities of Bosch Solar Energy AG. Furthermore, cash inflow of  $\in$  1.2 (2014: 8.3) million was obtained in investment grants in 2015, while payments for investments in fixed assets totaled  $\in$  41.5 (2014: 12.4) million.

Cash flow from financing activities in fiscal year 2015 amounted to € -57.6 (2014: -38.1) million. In the reporting period, SolarWorld AG made loan repayments amounting to € 31.3 million and interest payments of € 26.7 million.

The liquidity of the group improved in 2015: At the cut-off date December 31, 2015, liquid funds amounted to € 188.6 (December 31, 2014: 177.1) million.

# **CASH FLOW RECONCILIATION** IN M €



G 18

# FIVE-YEAR COMPARISON OF FINANCIAL POSITION

Capital in k€	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015
Equity	614,391	-11,409	-243,084	238,668	208,877
Non-current liabilities	1,339,274	634,669	600,022	508,974	446,157
Current liabilities	282,107	568,970	574,897	167,699	213,674
Total	2,235,773	1,192,230	931,835	915,341	868,708
T 21					

# FINANCIAL POSITION INDICATORS

2011	2012	2013	2014	2015
n.a.	n.a.	n.a.	194.5 %	n.a.
n.a.	n.a.	n.a.	12.7%	n.a.
2.1	0.7	0.4	1.4	1.0
2.8	0.8	0.6	2.0	1.5
4.1	1.2	0.8	3.0	2.3
	n.a. 2.1 2.8	n.a. n.a.  2.1 0.7  2.8 0.8	n.a. n.a. n.a.  2.1 0.7 0.4  2.8 0.8 0.6	

<sup>\*</sup> Intangible assets and property, plant and equipment less accrued investment grants plus net current assets except for current net liquidity

# **ASSET POSITION**

# **ASSET STRUCTURE ANALYSIS**

Total assets of the SolarWorld group went down by € 46.6 million to € 868.7 (December 31, 2014: 915.3) million.

Non-current assets decreased by  $\leqslant$  44.8 million to  $\leqslant$  367.2 (December 31, 2014: 412.0) million. This mainly resulted from the use of advance payments for raw materials made on a long-term basis and the sale of a building, classified as non-operating assets. Accordingly, property, plant and equipment, including property held as financial investment, fell to  $\leqslant$  319.8 (December 31, 2014: 359.5) million at the cut-off date. Other non-current assets decreased by  $\leqslant$  11.6 million to  $\leqslant$  9.7 (December 31, 2014: 21.3) million. Mainly due to the implementation of a new ERP system, intangible assets increased by  $\leqslant$  9.5 million to  $\leqslant$  23.3 (December 31, 2014: 13.8) million.

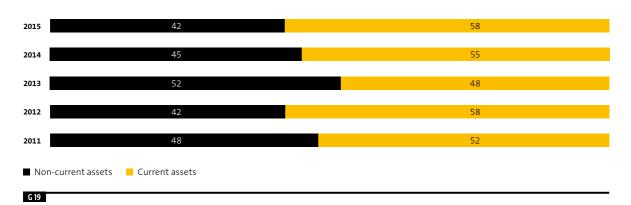
In our current assets, inventories (excluding short-term advance payments made) rose by  $\in$  20.0 million to  $\in$  156.1 (December 31, 2014: 136.1) million. At the same time, trade receivables increased by  $\in$  21.5 million to  $\in$  97.4 (December 31, 2014: 75.9) million. Both developments can be attributed to the increase of our business volume. Trade payables rose, too, so that our working capital increased less than proportionately by  $\in$  6.1 million to  $\in$  175.8 (December 31, 2014: 169.7) million.

Current other financial assets decreased by € 25.5 million to € 24.9 (December 31, 2014: 50.4) million. This can mainly be attributed to payments received from the acquisition of the solar activities from Bosch. Assets held for sale amounted to € 1.4 (December 31, 2014: 9.0) million at the cut-off date. The decrease is mainly due to the sale of a piece of land in the U.S. in O1 2015.

# **FIVE-YEAR COMPARISON OF THE ASSET POSITION**

Assets in k€	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015
Non-current assets	1,068,447	501,001	483,003	412,044	367,182
Current assets	1,167,326	689,917	441,800	494,270	500,157
Assets held for sale	0	1,312	7,032	9,027	1,369
Total assets	2,235,773	1,192,230	931,835	915,341	868,708
T 23					

# **ASSET POSITION INDICATORS IN %**



# ASSET POSTION INDICATORS

in %	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015
Equity ratio (Equity/total assets)	27.5	n.a.	n.a.	26.1	24.0
Investment intensity (Non-current assets/total assets)	48.4	42.0	51.8	45.0	42.3
First degree equity-to-fixed assets ratio (Equity/non-current assets)	0.6	n.a.	n.a.	57.9	56.9
Second degree equity-to-fixed assets ratio (Equity + non-current liabilities/non-current assets)	1.8	1.2	0.7	1.8	1.8

# **OFF-BALANCE SHEET FINANCIAL INSTRUMENTS**

# **ASSETS NOT SHOWN IN THE BALANCE SHEET**

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

The group had no assets that were not shown in the balance sheet as at December 31, 2015.

# **SUPPLEMENTARY REPORT**

# DISCLOSURE OF EVENTS OF PARTICULAR IMPORTANCE AND THEIR REPERCUSSIONS

There were no material subsequent events after the cut-off date December 31, 2015.

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

The management of SolarWorld AG rates the economic position of the group as difficult. This assessment is based on the earnings, financial and asset position resulting from

the consolidated financial statements for the fiscal year 2015 as outlined above, and ongoing business trends in 2016 at the time of setting up this management report.

# MANAGE MENT REPORT

# 065 RISK REPORT

- 065 Opportunity and risk-management system
- 067 Internal control and risk-management system in relation to the group accounting process
- 068 Individual risks
- 078 Overall statement by the Management Board on the group's risk position

# **079 OPPORTUNITY REPORT**

- 079 Opportunities from the development of general conditions
- 079 Strategic opportunities
- 080 Performance-related opportunities

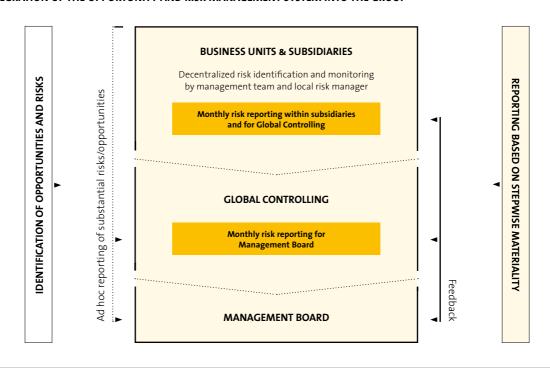
# **081 FORECAST REPORT**

- 081 The future market 2016+
- 082 Future strategic alignment of the group
- 083 Expected business development 2016
- 086 Expected earnings and financial position
- 087 Overall statement by the Management Board on future group development

# **RISK REPORT**

# **OPPORTUNITY AND RISK-MANAGEMENT SYSTEM**

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



# G 20

An opportunity and risk-management system is necessary to promptly identify and analyze risks and as far as possible proactively introduce counter-measures. It is equally important to identify and exploit market opportunities at an early stage. With our opportunity and risk-management system, we aim to safeguard the group's ongoing existence in the long term and enhance corporate value.

Based on the corporate strategy, the Management Board defines the essential features of the risk policy and manages the company accordingly. Global controlling, which

is responsible for global opportunity and risk reporting, together with local risk managers supports the Management Board in assessing the probability of occurrence and effect on earnings of major opportunities and risks. The opportunity and risk-management system has the core task of identifying those risks that, if they were to occur, could result in a significant deviation from planned financial control indicators. It should also enable us to identify opportunities at an early stage that could lead to an improvement in business development.

All fully consolidated, operating companies in the SolarWorld group are included in the opportunity and risk management system. Responsibility for identifying and monitoring risks primarily resides locally with executives in the first and second management levels. They are assisted by local risk managers, who produce monthly opportunity and risk-management reports for global controlling. This reporting is produced taking materiality limits into account in respect to the impacts of opportunities and risks on revenue, the liquidity position and EBITDA. Materiality limits increase with levels of responsibility. They are defined, reviewed annually and adjusted where necessary by the Management Board, taking the acceptable overall risk level into account. In the case of risks and opportunities considered to have a highly material potential impact, reporting takes place immediately and directly to the Management Board.

Global controlling makes local opportunity and risk reports available to the Management Board in a consolidated fashion. In addition, the Management Board is continuously informed about current market trends and receives regular competitor analyses. The Management Board assesses all options available to the company to counteract identified risks and exploit potential opportunities. The measures to be introduced are defined, implemented and controlled within the relevant departments or companies, with the involvement of local business management and local risk managers. Depending on the materiality limit, the Management Board may also be involved. Insurance policies are taken out to transfer or minimize potential risks where possible and economically justifiable.

In its meetings, the Management Board discusses material opportunities and risks, examines trends and deliberates on measures to be implemented. In the case of risks threatening the existence of the company, the Management Board consults the Supervisory Board.

The internal corporate audit monitors the opportunity and risk-management system. New findings resulting from the audit are taken into account.

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

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

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

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

Some of the most important basic principles of the internal control system are the separation of functions and adherence to guidelines, along with defined preventive and monitoring control mechanisms such as systematic and manual coordination processes and predefined approval processes.

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

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

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

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

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

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

Independently of group accounting, global controlling carries out a monthly analysis of target-actual and actual-actual deviations based on groupwide reporting, as a result of which an examination of major or implausible changes takes place at an early point in time.

# INDIVIDUAL RISKS

# LEGEND:

Risk assessment		Time horizon of effects		
<u></u>	Up versus previous year	Short-term	One to three years	
<b>\</b>	Down versus previous year	Medium-term	Three to five years	
→	Flat versus previous year	Long-term	More than five years	

**PRELIMINARY NOTE:** For the purposes of risk analysis and the disclosed counter-measures, we do not distinguish between the reportable operating segments "Production Germany" and "Production U.S." in our in-house production, except in the case of risk factors which need to be assessed

differently by region. Counter-measures may serve to reduce the risk (*reduce*), transfer the risk to third parties (*transfer*), e.g. by taking out insurance, or consciously assume the risk (*assume*).

# MACRO-ECONOMIC RISKS →

#### Risks

- 1. Weak economic development: unstable economic conditions, lower private consumption, decreasing willingness to invest, tighter financing terms and increased inflation risk
- 2. Falling domestic electricity prices: delays in solar power becoming competitive/reaching grid parity; slowdown in tapping new markets Probability
- 1. Medium: Overall, the world economy improved in 2015 and is expected to continue its expansion in 2016 according to the Kiel Institute for the World Economy. However, the levels of national debt in a number of European countries remain high, which could threaten the stability of the euro as well as the economic trend in the euro zone. Geopolitical conflicts in Eastern Europe and the Middle East could also have a negative impact on the economic and financial situation in general. The weak economic development in the emerging countries might slow down the growth of the world economy, too.
- 2. Medium: Falling costs of primary sources of energy are hardly being passed on to electricity consumers, with the result that declining oil prices have little impact on the domestic electricity price. Furthermore, energy prices should rise in the medium term on the basis that energy demand will continue to grow.

# Effect (strength, time horizon)

- 1. Medium, short-term to long-term: A decline in the general wilingness to invest might have a medium effect on our group revenue and earnings. Large-scale projects would be affected the most by a tougher financing environment, since in the short term, credit bottlenecks could occur for large-scale investment projects and especially for project financing. A weak economy in emerging countries such as China may reduce the price level of solar products because of exchange rate effects.
- 2. Medium, medium-term: Domestic electricity prices have a medium impact on our business since end customers may choose between self-produced solar power or power from a utility company, i.e. the electricity generation costs of a solar power system are compared with domestic electricity prices.

## Counter-measures

- Trade: Our internationalization helps us spread the risk of a decline in consumption among various regional markets. (*reduce*)

  By offering a diversified range of products, we appeal to various customer groups to spread the financing risk and compensate for shifts in demand. (*reduce*) ► Future sales markets − p. 083
- All segments: Due to ongoing cost reductions and efficiency enhancements along the entire value chain, we are able to offer solar systems at competitive prices. Thus, the levelized cost of electricity of solar plants undercuts domestic electricity prices in a number of markets already and continues to get closer elsewhere. (assume)

# POLITICAL AND REGULATORY RISKS ↓

#### Risks

- 1. Changes in laws promoting solar power: slower market growth due to a reduction in or even abolition of financial incentives in individual countries
- 2. Discontinuation of countervailing duties in the U.S. and in the EU: Unfair trade practices would no longer be monitored and sanctioned; rapid price decline due to dumping

# **Probability**

- 1. Low: Economic incentives for new solar technology installations are regularly reviewed by policymakers and in many cases reduced in important sales markets for the SolarWorld group such as the United States, Germany, France, the United Kingdom and Japan. In SolarWorld's most important sales regions, new legislations were passed by the end of 2015 so that there is a low probability of further changes in 2016. ► The future market 2016+ − p. 081
- 2. Low: On February 1, 2015, new anti-dumping and countervailing duties came into force in the United States, which complement the existing duties on solar products imported from China. These determinations will be effective for the next five years. The level of the U.S. duties is revised every 18 months. In the European Union, the EU Commission also opened an investigation regarding an extension of the anti-dumping and countervailing duties imposed in Europe. This procedure may take up to 15 months, so that a decision is not to be expected before early 2017. Until then, existing anti-dumping and countervailing measures remain in force.

# Effect (strength, time horizon)

- 1. High, short-term to medium-term: A reduction of incentives for new installations of solar power technology may have a negative impact on the willingness of customers to invest. Such declines in demand may lower our revenue in individual regions and have a negative impact on our earnings. As long as grid parity has not been achieved in individual markets, SolarWorld will be exposed to this risk.
- 2. Medium, medium-term to long-term: Massive price decline due to dumping could significantly diminish our sales volumes or make it impossible for us to sell our products at a cost-covering price level. This would negatively impact our revenue and result.

#### Counter-measures

- Trade: We spread this risk across several markets by means of our international presence. (reduce) > Future sales markets p.083
- All segments: Development and sales of solar power solutions that enable customers to reach a high degree of self-consumption and that are thus profitable even without or with decreasing feed-in tariffs. (reduce) > Enabling greater independence p. 041
- All segments: Continuous cost reductions and efficiency enhancements enable long-term competitive pricing and thus faster achievement of grid parity as well as increasing independence from incentives. (assume)
- All segments: We engage in dialog with politicians and society, are active in several industry associations and are committed at a socio-political level to increasing the percentage of photovoltaics in the energy supply. (assume)

T 26

# RISKS ARISING FROM ALTERNATIVE SOLAR POWER TECHNOLOGIES $\rightarrow$

## Ricks

Technological breakthrough or sharp cost reductions in alternative solar power technologies: risk of substitution for crystalline technologies

# Probability

**Low:** Due to continuing low prices for crystalline solar products, few manufacturers of alternative solar power technologies have cost benefits versus crystalline manufacturers. This particularly applies to the roof-mounted systems market as alternative solar power technologies only have low module efficiency, making optimum use of limited roof space more difficult.

# Effect (strength, time horizon)

**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

• **Production; All other segments:** intensive and continuous research and development to increase efficiency and optimize costs; partnerships with universities and research institutes; analysis of technological trends, competitor analyses *(assume)* 

# RISKS FROM TOUGHER COMPETITION →

#### Risks

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

# **Probability**

**High:** Due to rising capacities in the solar industry, competitive pressure persists, which could lead anew to a strong decrease of sales prices. In spite of legal measures (anti-dumping and countervailing duties and undertaking concerning minimum prices) in the U.S. and EU against violations of international trade law, the danger of unfair competition still exists as some market players sell below production costs on a long-term basis to drive competitors out of the market. A lot of competitors have a higher investment power thanks to state support. Some have announced that they will significantly expand their capacities mainly for high efficiency technologies such as PERC. Therefore, we presume the probability that competitive pressure will increase to be high.

# Effect (strength, time horizon)

**High, medium-term to long-term:** Loss of market share, failing profitability and increased negative margin trends due to stronger international price competition may weigh down revenue and earnings. If competitive pressure in the solar industry increased anew, the implementation of measures to enhance business profitability would become much more difficult.

#### Counter-measures

- Trade: Differentiation of our products through innovation, quality, service and design (reduce)
- Trade: customer retention programs (reduce) ➤ Brand and marketing p. 035
- Production; all other segments: Optimization of production along the entire value chain to improve our cost structure; research and development (assume)
- Production: Increase production capacities to achieve economies of scale (assume) ➤ Future development in production p. 084
- All other segments: Strategic alliances and acquisitions to achieve synergy effects and thus strengthen the group's market position (transfer, assume)
- · All other segments: Legal steps to guard against dumping and unfair competition by Chinese solar manufacturers in Europe (assume)

# PROCUREMENT RISKS →

#### Risks

- 1. Insufficient silicon supply: limitations on production volume due to insufficient silicon supply; compulsion to buy on unfavorable terms and/or poor quality
- 2. Costs of purchasing other raw materials (silver, copper, aluminum, etc.) on the rise: higher procurement costs; strong speculative fluctuations particularly for silver, aluminum and copper; inaccurate hedging
- **3. Deterioration of procurement conditions:** Suppliers could reduce their payment terms/credit limits for SolarWorld, or only deliver after advance payment.

# **Probability**

- 1. Low: We maintain supplier agreements with a silicon supplier that secure our supply at competitive conditions in the medium term. In addition, procurement on the spot market at good condition is possible currently. In the medium term, our joint venture will make an additional contribution to our silicon supply.
- 2. Low: The Kiel Institute for the World Economy expects that raw material prices will remain low in 2016 because of the weak economy in emerging countries.
- 3. Medium: Since the operating turnaround has not been completed yet, some suppliers could reduce their credit limits and payment terms for SolarWorld, or only make deliveries subject to advance payments.

# Effect (strength, time horizon)

- 1. High, short-term to medium-term: Silicon is the main raw material used to manufacture crystalline technology. Supply bottlenecks, delayed deliveries or quality defects could halt production, which would have a negative impact on revenue and earnings.
- 2. Medium, short-term: Higher prices for other raw materials might negatively impact earnings and margins.
- 3. Medium, short-term: liquid funds would be temporarily tied up. Deliveries subject to advance payment could mean that the SolarWorld group has to bear the corresponding supplier's risk of default, defective performance or non-performance.

# Counter-measures

- Production; Trade: Expansion of our supplier networks and maintenance of our good, long-term supplier relationships; renegotiations with suppliers; flexibilization of purchase terms (assume, reduce)
- Production; Trade: Use of alternative products reduces dependence on individual suppliers (reduce)
- All other segments: Strategic alliances and acquisitions to achieve synergy effects and thus strengthen the group's negotiating
  position with suppliers (assume, transfer)

# CORPORATE STRATEGY RISKS →

#### Risks

Misjudgments concerning future developments: bad strategic decisions with regard to investments, disinvestments, technology development, location decisions, acquisitions and joint ventures, financing, organizational structure and business model

# **Probability**

**Medium:** The solar power industry is subject to frequently changing economic, political, regulatory and technical influences, to which the companies have to adapt flexibly and quickly. In the meantime, technical entry barriers are comparatively low so that the solar industry is a narrow market with a lot of competitors, which often act in an unpredictable way. In this environment, it is hard to measure the impacts of long-term strategies and corresponding business models reliably.

# Effect (strength, time horizon)

**High, short-term to long-term:** Due to the fact that the solar industry is capital-intensive, the economic consequences of possible wrong strategic decisions are to be measured as high. Lack of acceptance or profitability of new products might affect revenues and earnings of the company. Loss of market shares, image and capital resulting from this might worsen the economic position of the group.

# Counter-measures

- All other segments: make use of external consultants (reduce)
- Production; all other segments: strategic alliances to split the investment risk (transfer, assume)
- All other segments: research and development activities close to production and cooperation schemes with universities and research centers (assume)
- All segments: identify market trends by means of market analyses in all business segments and long-term relationships with customers, suppliers and political decision-makers (reduce, assume)
- All segments: more global orientation of structures and functions in the group; exchange best practices between individual
  group locations (assume)

#### T 30

# **DEFAULT RISKS** →

## Risks

Insolvency of individual customers: loss of receivables outstanding

## Probability

**Low:** Our customers consist mainly of a large number of wholesalers and installers, who essentially are not affected negatively by the high competitive pressure in the solar industry. Moreover, they are benefitting from the dynamic growth of the solar market. Therefore, we assess the general risk of loss of receivables outstanding to be low.

# Effect (strength, time horizon)

**Low, short-term:** The loss of receivables from individual customers would only have a small impact on our business as we have a very broad customer base and none of our customers accounts for more than 10 percent of our revenue.

## Counter-measures

- Trade: ongoing monitoring and analysis of receivables (reduce)
- Trade: selective conclusion of credit insurance policies (transfer)
- Trade: cash in advance and down-payment arrangements (reduce)
- Trade: spread risk across a wide customer base of more than 1,200 customers, i.e. international system
  integrators, specialized wholesalers and installers (reduce)

# SALES AND PRICE RISKS →

#### Risks

Continuing or increasing price pressure and supply surplus: lower demand for our products

#### Probability

**Medium:** Price pressure in the market may intensify as a result of competition and changes in the legal framework in core markets. Less favorable incentives and financing conditions for purchasing solar power systems could lead to drops in demand on the market. Anti-dumping measures could be relaxed or circumvented. Customers could decide to buy products from competitors. Overall, demand for solar products is rising dynamically throughout the world, which implies that the relationship between supply and demand might normalize. However, the devaluation of the Yuan in early 2016 may have a negative effect on the international average selling prices for solar products because most solar manufacturers are located in China. Overall, we consider that the probability of this risk occurring is medium.

## Effect (strength, time horizon)

High, short-term to long-term: If less than the agreed volumes of our products are purchased or if prices drop, this could mean that we are unable to sell our products at a cost-covering price. Furthermore, impairments on inventories may be necessary, which would adversely affect earnings. Not only could a steep drop in demand diminish revenue, it could also result in a lower utilization of our production and negatively impact unit costs as well as margins and affect the intrinsic value of the production facilities. It could also increase our storage costs. Any unexpected shift in demand (regionally or to another customer segment) could negatively affect achievable sales revenues and margins and produce deviations from expected earnings.

#### **Counter-measures**

- Trade: identify changing customer needs at an early stage and target them specifically with new products (assume)
- Trade: enhance the value added of the SolarWorld brand; increase customers' loyalty to the company and affirm their decision to buy from SolarWorld (assume)
- Trade: Spread risk via the group's internationalization strategy and across a wide customer base of more than 1,200 customers, i.e. international system integrators, specialized wholesalers and installers (reduce)

#### T 32

## **HUMAN RESOURCES RISKS** →

# Risks

Shortage of highly-skilled technical and executive staff: difficulties in filling key positions; high attrition rate

# Probability

**High:** The availability of highly qualified technical and executive staff in the labor market is declining, while competition for talent is growing. The consolidation that took place in the solar industry negatively affects the appeal of solar companies as employers.

## Effect (strength, time horizon)

**Medium, medium-term:** A high fluctuation can be an obstacle to the implementation of optimization measures. A shortage of skilled technical staff can lead to a potential erosion of our technological edge and slowdown in corporate growth. This may adversely affect revenue and earnings. In 2015 the fluctuation rate stood at 8 (2014: 10) percent.

#### **Counter-measures**

- All segments: selective, needs-oriented skills development for our existing staff; development of a global succession planning especially for key
  positions; continuation of a change process to further support employees in the operative restructuring (reduce, assume) ➤ Employees p. 048
- All segments: Strengthening of attractiveness as an employer and retention of employees by employer branding (reduce)
- · All segments: Defining deputy roles and powers within the scope of our quality management system (reduce)

# IT RISKS →

## Risks

- 1. Disturbances in the operation of IT systems and networks: jeopardized availability of IT services at international sites and negative impact resulting from this on all business processes of SolarWorld
- 2. Hacker attacks: risks from data loss and industrial espionage

#### **Probability**

- 1. Medium: By the implementation of a groupwide ERP system and a global platform for the network infrastructure, the availability of our IT services has been improved. Furthermore, our IT systems undergo regular maintenance and are adapted so that they meet professional, organizational and safety-related demands.
- 2. High: Hacker attacks on IT infrastructure cannot be prevented by the company. Regular security updates, controls and action plans prevent and limit the effects on our operative business.

#### Effect (strength, time horizon)

- **1. High, short-term to medium-term:** Possible interim slowdown in processes due to the implementation of a new ERP system; interruption of production and workflows might cause productivity losses.
- 2. High, long-term: Industrial espionage and theft of intellectual property could result in the loss of competitive advantages.

## Counter-measures

- All segments: regular investments in updates, software and hardware systems; up-to-date virus scanners and firewalls reduce the risk of virus and hacker attacks; certified systems enhance security and reliability; encryption protects our data. (reduce)
- All segments: The global network platform is set up as a redundant system at two separate centers. Thus, IT functions can be taken over by the second center in case of disruption of the network. (reduce)
- · All segments: separation of production and administration IT systems to minimize potential failure risks (reduce)
- · All segments: regular data backups several times per day (reduce)

#### T 3/1

# **LIQUIDITY RISKS** 个

#### Risks

- 1. Longer-term negative earnings position: increased outflow of funds; negative operating cash flow; high inventories
- 2. Breach of covenants: termination of loans

#### **Probability**

- 1. Medium: Falling revenue due to increasing price and competitive pressure as well as a failure to meet cost targets may have a negative impact on our operating cash flow and diminish our liquid funds. Too high inventories can tie up liquidity, too.
- 2. Medium: Since December 31, 2015, additional covenants apply to SolarWorld's loans that have to be met at the end of each quarter. Based on the company's current business planning, the Management Board expects to be able to meet these covenants for the full year 2016. In the first and second quarter of 2016, headroom for deviations is more limited than in the second half of the year, increasing the risk of breaching covenants during this period. Concerning the methods for determining covenants, individual creditors of borrowed funds have a different opinion with regard to the interpretation. We refer to Legal risks/Infringement of loan agreements p.076

## Effect (strength, time horizon)

- 1. Medium, short-term to medium-term: Ongoing negative operating cash flow could have a negative impact on the group's liquidity position, limiting our ability to act and to pay. If the company is exposed to this situation in the longer term, refinancing with borrowed capital would become even more difficult.
- 2. High, short-term to medium-term: If this risk occurred, creditors of borrowed funds would have an extraordinary right to terminate loans. This would require renegotiation of the loan agreements or its terms and conditions. Since the amount of loans affected exceeds the company's liquid funds, an exercise of the creditors' extraordinary termination right would threaten the continued existence of the company as a going concern due to a then insufficient cash position.

#### Counter-measures

- All segments: continuous monitoring of compliance with our cost reduction targets and implementation of controlling measures to improve liquidity and results, if required (*reduce, assume*)
- All segments: Regular meetings with all of our creditors; close control of liquidity and earnings using active working capital management and controlling of measures (reduce, assume)
- All segments: ► Note 40e Liquidity risks p. 162

#### T 35

# OTHER FINANCIAL RISKS →

# Risks

## Currency, interest rate and price risks

# Probability

**Medium:** Due to the procurement of raw materials, particularly in U.S. dollars, and the sale of products in other currency regions, we are exposed to currency risks. As a global player we are also exposed to interest rate and price risks.

# Effect (strength, time horizon)

**Medium, short-term:** impact on operating and financial result of the group. Thanks to pro-active, regular and careful review of our financial instruments, we assess these risks as being medium.

## **Counter-measures**

- All segments: selective use of derivative and non-derivative financial instruments (transfer, reduce)
  - ▶ Note 40 Capital management and financial instruments p. 160

## LEGAL RISKS 个

#### Risks

- 1. Litigation between a silicon supplier and our subsidiary SolarWorld Industries Sachsen GmbH: SolarWorld Industries Sachsen GmbH is currently the defendant in court proceedings with the silicon supplier Hemlock Semiconductor Corp., which asserts claims resulting from the non-fulfillment of long-term silicon supply contracts.
- 2. Infringement of loan agreements: The contracts regulating the company's borrowed funds contain extensive obligations and conditions as well as partly imprecise legal terms that are open to interpretations. Individual creditors of borrowed funds have a different opinion with regard to the group's interpretations of some contract points.
- **3. Other pending litigation and proceedings:** individual court or administrative proceedings in which third parties claim rights against SolarWorld, especially regarding our U.S. subsidiaries
- **4. Other legal risks:** There is a wide range of tax, competition, patent, anti-trust, labor law, trade mark, and environmental regulations within the scope of our international business operations, infringement of which may cause costs.

# **Probability**

1. Low: According to external legal opinions, there are anti-trust concerns under European law regarding the effectiveness of the underlying supply contracts, which could mean that the purchasing obligations of SolarWorld Industries Sachsen GmbH are null and void. From SolarWorld's perspective, the supplier is therefore not entitled to claim damages. In addition, SolarWorld Industries Sachsen GmbH has further substantial lines of defenses against the validity of the claims. However, the District Court for the Eastern District of Michigan, in which the case is unfolding at first instance, ordered on October 28, 2015, to deny a motion to allow illegality under European antitrust law as a line of defense in the proceedings. The partial decision of the court is of technical nature and is no assessment that the underlying agreements do not violate EU antitrust law. All other lines of defense remain allowed. However, the order lowers our chances to win the lawsuit in the first instance.

In case of a negative ruling in the first instance, there will still be the possibility of appeal in the United States, and the defense of illegality under EU antitrust law can be reconsidered at that stage. In addition, a potential U.S. ruling has to comply with the essential principles of the German law in order to be recognized and enforced in Germany. Thus, a German court would have to reassess a potential ruling, if it were to be enforced in Germany. At the latest at this stage, the illegality of the underlying agreements due to infringement of EU antitrust law would become relevant again. Therefore, even in case of a negative ruling in the U.S., SolarWorld continues to assess the probability for Hemlock to actually enforce any claims against SolarWorld as low.

- 2. Low: SolarWorld believes that its interpretations are in accordance with the contractual basis and all contractual obligations and conditions have been complied with. Therefore, it has not infringed any loan agreements. However, one group of creditors has expressed doubts regarding the company's interpretations of specific contract points, especially regarding the calculation of covenants as well as possible transactions requiring approval.
- 3. Medium: Based on the respective states of proceedings, currently, it is to be expected that financial costs will be incurred as a result.
- **4. Low:** SolarWorld is not currently aware of any further material risks from litigation, patent infringement or other legal risks that might significantly impact the business situation of the company. As a result of our global sales presence, however, risks could in principle arise in connection with legal disputes relating to trademark usage.

# Effect (strength, time horizon)

- 1. High, medium-term to long-term: If U.S. courts legally ruled that Hemlock Semiconductor Corp. is entitled to claim for damages against our subsidiary SolarWorld Industries Sachsen GmbH and if this decision could be enforced, this would have a considerable negative impact on the company's liquid funds, possibly even threatening the continued existence of the company as a going concern.
  - ► Note 42 Contingent liabilities p. 168
- 2. High, short-term to medium-term: If this risk occurred, creditors of borrowed funds would have an extraordinary right to terminate loans. This would require renegotiation of the loan agreements or its terms and conditions. Since the amount of loans affected exceeds the company's liquid funds, an exercise of the creditors' extraordinary termination right would threaten the continued existence of the company as a going concern due to a then insufficient cash position.
- 3. Medium, short-term: A ruling sentencing to pay damage claims or an out-of-court settlement could have adverse impact on the earnings, financial and asset position of SolarWorld. In the consolidated financial statements as at December 31, 2015, provisions in the amount of US-Dollar 3 million were made to account for these circumstances. However, it cannot be ruled out that depending on the further course and outcome of the proceedings higher financial charges might be imposed.
- 4. Medium, long-term: Litigation might impact 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

- · All segments: legal advice from several specialized external legal experts (assume, reduce)
- · All segments: increase of transparency and regular communication with contract partners (reduce)

## GUARANTEE AND OTHER LIABILITY RISKS →

#### Risks

- 1. Guarantee risks: granting a linear performance guarantee of up to 30 years for solar modules sold by us
- 2. Other liability risks: e.g. product safety, occupational safety

#### **Probability**

- 1. Low: Based on careful examination of our process and product quality, we assess the risk of claims being made against our performance guarantee as low.
- **2. Low:** Thanks to pro-active regular quality assurance measures and quality controls concerning product, protection against hazards and with regard to health and safety at our sites, we assess the probability of these risks as low.

## Effect (strength, time horizon)

- 1. Medium, long-term: potential negative impact on our asset, financial position and earnings in the event of guarantee claims
- 2. Medium, long-term: production losses; loss of assets; potential claims for damages

#### Counter-measures

- All segments: risk provisioning in the balance sheet for the company's guarantee commitment through the formation of a provision (assume) Note 34 Non-current and current provisions p. 157
- All segments: securing other risks via comprehensive insurance cover based on conventional concepts; regular review of the extent of
  insurance cover for risks, based on site inspections (transfer)
- All segments: compliance with legal provisions and voluntary adherence to more far-reaching standards (e.g. ISO 9001 and ISO 14001, codes of conduct) (assume)
- · All segments: analysis of complaints and improvement of product quality (reduce, assume)

#### T 38

## ENVIRONMENTAL AND OTHER RISKS →

## Risks

- 1. Environmental risks: higher insurance premiums due to more frequent storms/fires/drought periods caused by progressive climate change
- 2. Emission of hazardous substances: unplanned pollutant emission, e. g. in case of a serious production accident
- 3. Penalties for breaking environmental laws: fines and loss of image

# Probability

- 1. High: Climate experts forecast an increase in extreme weather incidents.
- 2. Low: low probability due to safety systems designed as being redundant; systems cause an emergency shutdown in case of a malfunction
- **3. Low:** Fines or compensation payments are less probable since we ensure compliance with standards by means of our environmental management system.

# Effect (strength, time horizon)

- **1. 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.
- 2. Medium, short-term: If pollutant emissions occur, employees may be in danger. Further possible consequences are damages to the company's image as well as financial losses due to a loss of production and the disposal of the hazardous substance or the removal of environmental damages.
- 3. Medium, short-term to medium-term: Fines or compensation payments might impact the financial position of our company.

#### **Counter-measures**

- All segments: Current risks are largely covered by insurance policies. (transfer)
- **Production:** substitution of hazardous substances or reduction of their use as well as safety concepts and emergency plans to mitigate the impact *(reduce)*
- · All segments: further development of the company's environmental management system (reduce)

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

The overall risk position resulting from the analysis and evaluation of individual risks has increased slightly, compared with the previous year. The Management Board considers the group's risk position to remain high because of the ongoing strong competitive pressure, announcement of considerable expansions of production capacities worldwide as well as price pressure and pressure to reduce costs. The individual risks presented above can influence each other and worsen the overall risk position of the group. In assessing the risk position, we have not taken any opportunities into account

Operating measures adopted in the past has been implemented by the company for the most part, particularly cost reduction and optimization measures that will positively impact the earnings, financial and asset position in the coming years. If the expected positive effects resulting from the measures mentioned above and the planned revenue

growth failed to occur, this would negatively impact the earnings, financial and asset position of the company, leading to a possible breach of covenants and thus allowing creditors an extraordinary right to terminate loans. An extraordinary right of termination could also occur, if the company's interpretations of contractual conditions should prove to be inapplicable. This would require renegotiation of the loan agreements or its terms and conditions. Since the amount of loans affected exceeds the company's liquid funds, an exercise of the creditors' extraordinary termination right would threaten the continued existence of the company as a going concern due to a then insufficient cash position.

From a current perspective, the Management Board of SolarWorld AG still assumes that the conditions for the going concern of the company are met.

# **OPPORTUNITY REPORT**

# OPPORTUNITIES FROM THE DEVELOPMENT OF GENERAL CONDITIONS

SolarWorld is well positioned to benefit from the strong international growth in the solar market. Market analysts predict that global demand will grow until the year 2017 at an average annual rate of more than 11 percent. In this context, they expect ongoing dynamic growth in particular in the United States, based on the extension of the ITC tax incentive program until 2021, as decided at the end of 2015. As the U.S. is SolarWorld's largest single market and accounted for around 50 percent of shipments in 2015, the group is likely to benefit significantly from this development.

Through a stronger local sales presence, the SolarWorld group will position itself closer to the individual regional growth and core markets to achieve better market penetration. Especially in industrialized countries, solar markets are currently experiencing a transformation: Customers increasingly view solar technology as an option for reducing their own energy costs—and not any more solely as a financial investment driven by feed-in tariffs. SolarWorld aims to assist its customers in this transformation and is therefore expanding its own range of services with region-specific pre-sales and after-sales activities.

# STRATEGIC OPPORTUNITIES

In 2015, the SolarWorld group significantly expanded its production capacity at all main stages of the value chain. ► *Production capacities 2015+-p.037* In addition, we reactivated the crystallization at the Arnstadt site and expanded the production in Freiberg into the groupwide sawing center. In future we shall use new sawing techniques there that enable a higher throughput. We expect notable economies of scale and cost effects in future as a result.

In sales, in production and in research and development, we aim to form strategic partnerships. Our goal here is to open up new sales channels and develop new products as a way of strengthening the group's competitiveness and ability to act.

# PERFORMANCE-RELATED OPPORTUNITIES

At the end of 2015, the SolarWorld group ended its longterm supply contract with a manufacturer of silicon and re-negotiated the supply conditions. Since 2016, we have been procuring polysilicon from this supplier exclusively at spot market prices. This will foreseeably have positive effects on our future cost structure.

In 2015, we observed a downward price trend for almost all raw materials. Experts also expect further declines in the current fiscal year. A continued fall in the prices for other raw materials, such as silver, aluminum, glass and oil, would have a positive effect on the manufacturing and transport costs of the SolarWorld group and improve margins.

The product innovations launched by us in the reporting period, such as the bifacial modules, underline our technology edge, compared with our competitors. We shall continue to refine this concept in 2016 and will also push ahead with the introduction of the 5-busbar technology and the possible introduction of an alternative contacting process. These measures will enable us to offer increasingly efficient and higher-performance products in future. The suitability of the various technologies for combining with one another also makes synergy effects possible here that can lead to

significant improvements in performance. Highly efficient products in turn constitute an important unique selling proposition of SolarWorld that differentiates us from our competitors and will further expand our position as technology and quality leader.

The implementation of SAP as central ERP system for the group creates uniform global processes, among others for sales, logistics and production. This in turn enables us to react more quickly to customer and production demands. Thanks to globally harmonized master data and bills of materials, it will in future not only be possible to plan our requirements more reliably and better and to minimize the potential for errors, but also to achieve significant cost savings.

In logistics, opportunities result from a targeted pooling of services. In addition, by centralizing distribution processes we can achieve economies of scale and so implement further cost reductions. The changes outlined above should also help us further enhance our delivery quality and reliability, while simultaneously improving our performance. SAP will also make a positive contribution to process optimization in this area.

# **FORECAST REPORT**

# THE FUTURE MARKET 2016+

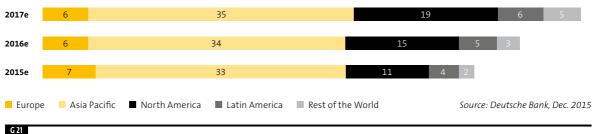
GLOBAL ECONOMY PICKING UP. The global economy is likely to expand somewhat more strongly in 2016. The Kiel Institute for the World Economy (IfW) is reckoning with a rise in global economic output of 3.4 (2015: 3.1) percent in 2016. Global trade is also expected to show a moderate recovery. Low oil prices and the expansive monetary policy in industrialized countries could also benefit the economy. Economic growth of 2.8 (2015: 2.5) percent is expected in the United States. At 1.7 (2015: 1.5) percent, the euro zone is also likely to grow stronger than in the previous year.

GLOBAL SOLAR MARKET ON GROWTH TRAJECTORY. The international solar market will foreseeably also continue to grow in 2016. Global demand for solar products could rise by around 10 percent to 62.5 (2015: 57.0) GW. Even more important: Experts expect this trend to continue unabated in 2017 as a result of the favorable general conditions. They even expect newly installed capacity of 70.7 GW in 2017.

U.S. MARKET CONTINUES GROWTH. One driving force behind this continuing positive market development is the extension of the ITC incentive program by a further five years, decided in the U.S. at the end of 2015. ► Growing global demand for solar products – p. 030 The ITC increases the economic attractiveness of solar power. Market experts therefore expect solar electricity to achieve grid parity in 47 of the 50 U.S. states by the end of 2016 – an important factor for growth in all segments.

Furthermore, the outlook for solar has grown more promising as costs of solar have gone down steadily and become increasingly competitive with traditional generation sources. Bloomberg expects U.S. demand to rise by 25 percent in 2016 to 9.1 (2015: 7.3) GW. The U.S. market should achieve in 2017 new installations of 10 GW

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



## DECREASING SUBSIDIES BURDENING EUROPEAN PHOTOVOLTAIC MARKETS.

After a brief recovery in 2015, analysts forecast that the European market will again shrink in the following year. The decline is attributed above all to developments in the UK. The subsidizing of solar power in this market was drastically reduced at the beginning of 2016. Market structures there must first adjust to the new situation, meaning that a reduction in the market by at least half is to be expected initially in 2016 – to 1.4 (2015: 3.1) GW. By contrast, France, Germany and Italy are likely to show a slight upward trend in demand for solar products. However, this will probably not be enough to compensate for the decline in the British market. Overall, Deutsche Bank expects demand in Europe of around 6.4 (2015: 7.5) GW in 2016. This level of new installations should be maintained in 2017.

**NEW INSTALLATIONS STABLE IN ASIA.** In Asia, Deutsche Bank estimates that in 2016 solar installations will remain unchanged, compared with 2015. Overall, it expects newly installed capacity of 32.8 (2015: 32.5) GW. The reason for this is the stagnation of installations in China at 13 (2015: 13) GW as well as the fall in demand in Japan to 8.2 (2015: 12.7) GW. By contrast, demand in India is expected to triple to 6 (2015: 2) GW. Analysts of Bloomberg, however, estimate that Asian solar installations will continue to grow. For 2015, they assume a newly installed capacity in China of 16.5 GW, expecting it to rise to 19 GW in 2016. According to Bloomberg, demand in Japan will also show a slight increase.

# **FUTURE STRATEGIC ALIGNMENT OF THE GROUP**

In the years ahead, SolarWorld AG will work systematically to implement its group strategy and operational measures. To return to profitability as a company, we want to create more value for customers, achieve growth in the solar markets and at the same time significantly improve our process efficiency.  $\blacktriangleright$  Strategy – p.021

In 2016, we aim to expand our position as a quality provider in the international solar market and substantially increase

our shipments. Strong demand for our solar modules continues to drive growth. At the same time, we will be placing greater emphasis on highpower modules with PERC and bifacial cells. For this reason, we create added value for customers that sets us apart from the competition.

Our location policy will continue to be geared to customer proximity. We intend to adjust production capacities to rising market demand.

# **EXPECTED BUSINESS DEVELOPMENT 2016**

# **FUTURE SALES MARKETS**

**INCREASING VOLUME OF SHIPMENTS BY MORE THAN 20 PERCENT.** In 2016, we again expect to be able to increase the volume of our shipments strongly, compared with the previous year. The target is to increase groupwide shipments by more than 20 percent, compared with 2015. As in the reporting period, we wish to achieve about half the volume of shipments in America, the other half in Europe, Asia/Pacific and Africa. We wish to position ourselves in the quality segments of the global solar markets and to be present in the areas Residential and Commercial as well as in major projects.

**U.S. WITH 50 PERCENT SHARE OF SHIPMENTS.** As in 2015, we intend to achieve around 50 percent of our shipments in the United States. Accordingly, we also assume to grow strongly in this market, even if no more pull-forward effects are expected in 2016 following the extension of the incentives under ITC beyond 2017. In the United States, we see particularly strong demand for our XL module with 72 cells, which will offer a particularly high performance in combination with technologies such as PERC and the 5-busbar contacting.

**GERMANY LARGEST SINGLE MARKET IN EUROPE.** In 2016, Germany will foreseeably again be our largest single market in Europe, followed by France. In the UK on the other hand, it will not be possible to continue our strong growth of the past two years, due to the reductions in subsidies. Nevertheless, we assume that we will retain a sustainable presence in the UK, where we now have established customer relationships and durable sales structures. In Europe, we see good growth opportunities in smaller and young markets.

**RETURNING TO GROWTH IN ASIA/PACIFIC.** In 2016, we wish to significantly increase our shipment volumes in the Asia/Pacific region, where we are represented by sales offices in Singapore and Tokyo. For us, as a manufacturer of quality products, the Japanese market offers the greatest potential.

**CONTINUING SUCCESS IN SOUTH AFRICA.** In South Africa, we see good opportunities to continue our success in the field of commercial roof systems. Thanks to our lasting presence in this market, we can offer customers a reliable service and support them with technical know-how.

# **FUTURE PRODUCTS AND BRAND STRATEGY**

**INCREASING ADDED VALUE FOR CUSTOMERS THROUGH INNOVATION.** In future, we will resolutely continue to pursue the goal of orienting our solar power solutions towards added value for customers. This includes higher electricity yields, greater independence from energy suppliers and the ability to combine with elements such as heat pumps, heating rods and automobile batteries. The new BISUN® product family with bifacial modules and optimized frame systems will enable our customers to achieve up to 25 percent higher yields in future.

continuing brand strategy under real value. Solar World will use the strength of its brand for its future success in international solar markets. In this respect, we will build on the globally uniform brand image under REAL VALUE. All quality processes and product developments within the group should continue to be stringently oriented towards the value proposition of our brand. We wish to create clear added value for our customers when purchasing a SolarWorld product and to place this at the center of our communication. We also wish to keep the REAL VALUE promise with respect to our further stakeholders, for example our employees.

► Employer branding – p. 085

# FUTURE DEVELOPMENT IN PRODUCTION

**INCREASING PRODUCTION QUANTITIES.** We wish to use our production facilities in Germany and the U.S. at full capacity to achieve the planned growth in shipments in 2016. Our U.S. site in Hillsboro is therefore ramping up its additional module capacity as quickly as possible. In addition, crystallization is being reactivated there. The aim is to use all available capacities as efficiently and effectively as possible, so that we can reduce our manufacturing costs and thus ensure our competitiveness.

**CONSISTENT INVESTMENT IN HIGH-TECH.** In 2016, we wish to resolutely continue our successful high-power strategy and switch further parts of our cell and module production to the PERC high-performance technology. We shall also roll out the 5-busbar technology step-by-step and expand the production of bifacial cells and modules. Following the introduction of new technologies, we shall manufacture a greater diversity of various products at our three production sites in 2016 than in the year under review.

**ENSURING THE SUPPLY OF MATERIALS.** SolarWorld will continue to be well supplied with materials in the future. We have reliable supply relationships with several manufacturers in the strategically important field of silicon supply. Our joint venture in Qatar will provide us with a further source of supply in future.

# FUTURE RESEARCH AND DEVELOPMENT ACTIVITIES

**INCREASE COMPETITIVENESS.** Innovation will continue to play a strategic role in the SolarWorld group in future. We are concentrating on the one hand on the creation of added value for customers and, on the other hand, on cost-reduction potential.

We wish to expand the added value for customers by improving the performance of our solar power solutions and thus increasing the yields for the operators of SolarWorld systems. To this end, we will further develop the PERC high-performance technology and combine it with other performance-enhancing processes. We will likewise continue to intensively pursue the approach of the bifacial products in our 2016 innovation activities

Additionally, we wish to create solar power solutions for our customers that enable a higher share of self-consumption and which can be combined intelligently with elements such as heat pumps, heating rods and automobile batteries. In this respect, we are working on the assumption of an integral concept of decentralized energy supply, in which the solar system forms the heart of the smart home. In this way, we also wish not least to prepare photovoltaics for the transition to an era in which solar power will be the most economic form of energy supply, even without feed-in tariffs and other subsidy incentives.

We wish to use the potential for cost savings in future through innovation on all stages of the solar value chain from silicon to module. In 2016, the emphasis will lie on the field of crystallization and wafering.

# **FUTURE HUMAN RESOURCES DEVELOPMENT**

**ENCOURAGING THE COMMITMENT OF EMPLOYEES.** The future success of SolarWorld will be based to a fundamental extent on employees showing the same high level of commitment to the company as in the past. In 2016, we will identify potential for improvement and derive specific measures to strengthen the level of commitment and the corporate culture, based on the global employee survey carried out for the first time in the 2nd half of 2015. We intend to repeat the employee survey in the future to check the success of the measures.

**ADVANCING THE DEVELOPMENT OF THE ORGANIZATION.** SolarWorld should grow together more strongly into a global unit. In 2016, we wish to align further areas of the group in a global manner. These changes are embedded in so-called change projects. Our aim is to enable the executives to lead employees successfully in a global organization. In this context, we wish to further expand the culture of cooperation within the group.

## INCREASING THE SHARE OF WOMEN IN MANAGEMENT POSITIONS.

SolarWorld has set itself a target of achieving a 25 percent share of women in management positions by June 30, 2017 (2015: 16,7 percent). We will tackle this subject on a global level in 2016 and implement measures to encourage women.

**EMPLOYER BRANDING.** SolarWorld wishes to be an attractive employer from both an internal and an external perspective and to position itself better in future in terms of nextgeneration staff, technical and management personnel, through targeted employer branding. The employer branding will be based on the "SolarWorld – REAL VALUE" brand. The promise of "REAL VALUE" and the four brand values apply to all stakeholders. As part of the employer branding, we wish to emphasize how we also offer these real values to our employees.

# **EXPECTED EARNINGS AND FINANCIAL POSITION**

# EXPECTED DEVELOPMENT OF REVENUE AND PROFIT OR LOSS

SolarWorld expects for the year 2016 a global increase in demand for solar products, especially in its main market United States. Competition continues to be fierce, however, which means that average prices in individual markets remain under pressure. Due to its position as supplier of high-power modules with top quality, which offer clients a unique added value, SolarWorld expects to keep its average selling price overall stable.

Based on this premise, SolarWorld will continue on its growth path in 2016, increasing groupwide shipments by more than 20 percent, compared with previous year (2015: 1,159 MW).

In line with shipments, consolidated revenue should grow by more than 20 percent, compared with the previous year (2015:  $\in$  763 million), striving to reach up to  $\in$  1 billion in 2016.

In fiscal year 2016, the SolarWorld group will continue to invest in the increase of its production capacities and in upgrades to PERC technology. It will also further develop its measures to boost efficiency and reduce costs. Earnings before interest, taxes, depreciation and amortization (EBITDA) will increase significantly in 2016.

Earnings before interest and taxes (EBIT) should be positive in fiscal year 2016. Due to typical seasonal effects in the solar business, however, a negative EBIT for Q1 2016 cannot be ruled out. Over the course of the whole year, SolarWorld expects its EBIT to be in the lower double-digit million range.

The Management Board expressly points out that the assumptions and framework conditions on which the business planning is based could change over the course of fiscal year 2016. The Management Board's assessments are based on available information, which it currently considers to be realistic but which is dependent on various factors that are beyond the control and influence of the Management Board of SolarWorld AG and therefore of limited predictability.

# **EXPECTED DIVIDEND AND DISTRIBUTION**

There are no plans to distribute a dividend in 2016. According to current plans, the priority for any future profits will be to repay liabilities and finance the company's further growth. For this reason, no distribution of dividends to shareholders is anticipated in the near future.

# SCHEDULED FINANCING MEASURES

No major financing measures are planned for 2016.

# PLANNED INVESTMENTS

In 2016, group investments will be in the mid double-digit million range. Mostly, investment will focus on expanding manufacturing capacities within the existing lines, upgrading production to PERC and bifacial technology as well as furthering technological improvements to enhance efficiency and reduce costs along the value chain.

# EXPECTED LIQUIDITY DEVELOPMENT

On December 31, 2015, our liquid funds totaled € 188.6 (December 31, 2014: 177.1) million. Cash flow development in 2016 will be influenced to a large degree by the operating result, planned debt repayments and interest payments as well as by potential short-term fluctuations in our working capital.

# OVERALL STATEMENT BY THE MANAGEMENT BOARD ON FUTURE GROUP DEVELOPMENT

The Management Board of SolarWorld AG expects that the group will continue to increase its shipments in 2016. This growth is based on the rising demand for solar power products worldwide. The United States will again be the largest single market of the company in 2016. Further large markets of SolarWorld will be Germany, the rest of Europe, the MENA region, Japan and South Africa.

Our high efficiency products are a key volume driver. The group is therefore pursuing a high-power product strategy, and will successively introduce new processes and products that give customers particularly high yields. These include PERC technology, solar cells with five busbars, and the bifacial technology. Another focus is our range of complete solar energy solutions, which enable customers to increase

the consumption of self-generated solar power and cut their energy bills. Solar modules will continue to be our core product. Our modules last for more than 30 years, can be used universally and are easy to install. Furthermore, they can be digitally integrated in complete energy concepts such as in a smart home.

In addition, measures to continuously improve processes are a high priority. In 2015, SolarWorld rolled out a new global ERP system, which should make a key contribution in this area. Reducing costs and increasing competitiveness remain an ongoing goal. In this way, SolarWorld will create a stronger foundation for long-term growth and a return to profitability.

# GOVER NANCE

# **091 CORPORATE GOVERNANCE**

- 091 Corporate Governance Report 2015
- 097 Boards of SolarWorld AG
- 100 Remuneration report

106 REPORT BY THE SUPERVISORY BOARD 2015

# **CORPORATE GOVERNANCE**

As an internationally active group that is oriented towards sustainability, SolarWorld feels compelled to maintain a responsible and transparent system of corporate governance and monitoring. Good corporate governance fosters the trust of market participants in the company and in the functional capability of the capital market as a whole. We also see this as a basic prerequisite for sustainably increasing the company's value and securing the interests of our investors, business partners, employees and other stakeholders

In addition to following the legal requirements of the capital market and corporate law, the corporate governance system of SolarWorld AG also takes into account the recommendations of the German Corporate Governance Code (GCGC).

We are continuously working on further developing the corporate governance system within the company while also adequately involving all stakeholders. ► <u>Sustainability</u> in detail 2015

# **CORPORATE GOVERNANCE REPORT 2015**

# **DECLARATION OF COMPLIANCE**

The Management Board and Supervisory Board have dealt extensively with the issue of how to apply the recommendations of the GCGC version dated May 5, 2015 to the SolarWorld group. In the declaration of compliance submitted each year in accordance with Section 161 German Stock Corporation Act (AktG), they report on compliance with the recommendations of the GCGC and explain any deviations. In November 2015, the Management Board and

Supervisory Board declared that they had complied with the recommendations with only a few exceptions and will continue to comply with them accordingly. Reasons for the exceptions are explained in detail.

The declaration of compliance in accordance with Section 161 AktG can be accessed by the public permanently on the company's website 

www.solarworld.de/declaration-of-compliance. The declarations from the past five years are also available there.

# MANAGEMENT AND MONITORING

SolarWorld AG has the dual management and monitoring structure legally specified for German stock corporations with clear division of the staff of the management and supervising organs. The Management Board and Supervisory Board cultivate a trustful and result-oriented collaboration to ensure that efficient corporate management and monitoring is achieved. ► Report by the Supervisory Board 2015 − p.106

# MANAGEMENT BOARD

The Management Board leads the group on its own responsibility with the aim of increasing the value of the company in the long term. Its key tasks include setting corporate goals, developing a strategy, managing and controlling the group as well as the provision of investment funds. It involves the Supervisory Board in important decisions and informs the latter regularly and extensively of current business developments, the economic position of the group as well as the financial and investment planning.

The Management Board of SolarWorld AG bases its leadership philosophy on the interests of the different stakeholders of SolarWorld AG in line with Section 4.1.1. of the GCGC.

When filling leadership positions within the company, the Management Board of SolarWorld focuses on maintaining diversity and particularly on giving women a stronger consideration. SolarWorld's goal is to make the proportion of women in leadership positions equal to the proportion of women in the entire group. In fiscal year 2015, 25 percent of the group's employees were women, whereas the share of women in management positions only amounted to 16.7 (2014: 17.5) percent. To eliminate this disparity, the Management Board of SolarWorld AG determined the following targets: The share of women on the two highest management levels below the Management Board of both the group and the SolarWorld AG should be at least 25 percent overall by June 30, 2017. Furthermore, each individual management level should itself achieve a 25 percent share of women by December 31, 2020.

In fiscal year 2015, the Management Board had the same five members as in the previous year.  $\triangleright$  Boards of SolarWorld AG – p. 097

# SUPERVISORY BOARD

The Supervisory Board appoints the Management Board as well as supervises and advises it in its conduct of business. It is also responsible for auditing and approving the consolidated financial statements and the group management report.

Since June 2, 2015, SolarWorld AG has had a co-determined Supervisory Board on a basis of parity, made up of a total of twelve members in accordance with the German Stock Corporation Act (AktG), the Co-Determination Act (MitBestG) and the Articles of Association: six representatives of the shareholders and six employee representatives. The shareholder representatives on the Supervisory Board are elected by the Annual General Meeting. The elections of shareholder representatives are generally carried out as individual appointments. The shareholders are not limited to the election suggestions made by the Supervisory Board, but can also nominate their own candidates. The employee representatives on the Supervisory Board are appointed in accordance with the regulations of the Co-Determination Act.

## COMMITTEES

To adapt its work to the specific situation of the company and to organize it more efficiently, the Supervisory Board of SolarWorld AG has set up a business committee, a human resources committee, a mediation committee, a technology and development committee as well as in accordance with the recommendations of the GCGC a nomination committee and an audit committee. An overview of the respective Chairs and members can be found at ► <u>Committees of the Supervisory Board − p.099</u>

Under Section 5.3.2 Sentence 2 GCGC, the Chair of the audit committee should have particular knowledge and experience of the application of accounting principles and internal control processes. Since, however, no member of the Supervisory Board alone fully satisfies all prerequisites

of this recommendation, SolarWorld AG does not comply with this requirement. Nevertheless, this does not devalue the quality of the work of the audit committee. Rather, the efficiency of the committee work is ensured through communication and by bundling the expertise of all committee members. Moreover, the Supervisory Board and the audit committee resort to the assistance of external experts in individual issues.

# NOMINATION OF CANDIDATES FOR THE SUPERVISORY BOARD CHAIR BEFORE AN ELECTION

In accordance with the recommendation in Section 5.4.3 GCGC, the shareholders should be informed of the nominated candidates for the chairmanship of the Supervisory Board before an upcoming Supervisory Board election. By contrast, Section 107 (1) Sentence 1 AktG, in conformity with the Articles of Association of the company, allows the Supervisory Board to choose a chairman and a deputy chairman from their midst directly following the Annual General Meeting. A nomination of the candidate(s) for the position of chairman from the circle of Supervisory Board members that have not been elected yet would correspond to a premature determination that is not intended. As a result, SolarWorld AG does not comply with this recommendation.

# GOALS FOR THE COMPOSITION OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD

# **COMPETENCE**

The Supervisory Board shall be composed in such a way that its members as a group possess the knowledge required for the correct performance of its duties. The Supervisory Board of SolarWorld AG meets this requirement, and its individual members participate in training measures required for their work on their own responsibility, in accordance with Section 5.4.5 GCGC.

## DIVERSITY

Attention should be paid to diversity when deciding the composition of both the Management Board and the Supervisory Board. In particular, appropriate representation of both genders plays a central role in this respect.

At its meeting on August 12, 2015, the Supervisory Board specified a target of a 20 percent share of women on the Management Board by June 30, 2017, in accordance with Section 111 (5) AktG. This share is already achieved by the current Management Board, which is made up of one woman and four men. Although the Supervisory Board considers an increase in the share of women on the Management Board desirable, there are no plans to expand the Management Board of the company. The Supervisory Board attaches great importance to continuity on the Management Board from the current perspective.

In accordance with the "Law on Equal Participation of Men and Women in Private-Sector and Public-Sector Management Positions," the Supervisory Board of a listed company and one subject to co-determination must satisfy a fixed share of at least 30 percent for both genders. Accordingly, all Supervisory Boards newly elected as from January 1, 2016, have to be composed of at least 30 percent women and at least 30 percent men.

Since June 2, 2015, SolarWorld AG has had a co-determined Supervisory Board on a basis of parity, which consits of 12 members. The previous shareholder candidates, who at the time had been in office for just one year, had their positions confirmed in the new elections required by law. Only one woman was elected in the employee elections. The current composition of the Supervisory Board is diverse and international. Nevertheless, the election results do not meet the gender-specific diversity requirements of the German Corporate Governance Code. The Supervisory Board welcomes the greater diversity that will result following future Supervisory Board elections on the basis of the mandatory statutory regulations applicable as from 2016.

## **AGE PROVISION**

In accordance with Section 5.1.2 of the GCGC, an age limit of 68 years applies for membership in the Management Board of SolarWorld AG. For the Supervisory Board, an age limit of 70 years has been specified (Section 5.4.1 GCGC). No board member has currently reached or will be reaching this limit during the current term of office.

The Supervisory Board in its present form has not specified any concrete targets regarding its composition, the number of independent members and the regular limit of length of membership yet. These targets shall be discussed and set as part of the next efficiency audit, which is expected to be performed in the second half of 2016.

#### INDEPENDENCE

The Supervisory Board pursues the objective of ensuring that it always includes an adequate number of independent members (Section 5.4.2 GCGC).

In accordance with Section 5.4.1 Para. 4 to 6 GCGC, the following must be disclosed concerning two of the share-holder representatives:

The company Qatar Solar S.P.C., Doha, which Dr. Khalid Klefeekh Al Hajri is affiliated with, holds a stake of 29 percent in SolarWorld AG. Furthermore, SolarWorld AG holds a stake of 29 percent in Qatar Solar Technologies Q.S.C., which Dr. Khalid Klefeekh Al Hajri is also affiliated with.

The Qatar Foundation for Education, Science and Community Development, Doha, which Mr. Faisal M. Al Suwaidi is affiliated with, is in control of 100 percent of Qatar Solar S.P.C., which holds a 29 percent stake in SolarWorld AG.

The remaining Supervisory Board members do not have any personal or business relationships that must be disclosed in accordance with the Code.

Therefore, the Supervisory Board of SolarWorld AG assesses that it is composed of an adequate number of independent members.

# DIRECTORS' DEALINGS AND SHAREHOLDINGS OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD

Under Section 15a German Securities Trading Act (WpHG), members of the Management Board and Supervisory Board as well as related parties are obliged to disclose transactions with shares in SolarWorld AG or related financial instruments if the value of these transactions reaches or exceeds a total of € 5,000 in the reporting period. No transactions under Section 15a WpHG were reported to SolarWorld AG in 2015.

The Management Board and Supervisory Board cumulatively hold more than one percent of the voting rights in SolarWorld AG. As at December 31, 2015, the Management Board accounted for a total of 20.9 percent of the voting rights through direct and indirect shareholdings. The members of the Supervisory Board held a 0.005 percent share in the company's capital stock as at the cut-off date.

# TRANSPARENT COMMUNICATION

The investor relations department of SolarWorld AG is integrated into the organization very closely to the Management Board and reports directly to the Chief Financial Officer

It is responsible for ensuring compliance with all legal post-admission obligations under the capital market and stock market law. Information that could potentially be relevant for the capital market is examined for its ad hoc relevance both internally and by external legal consultants. All publications subject to Section 15 German Securities Trading Act (WpHG) go through the relevant media channels and are made available for distribution across Europe in accordance with the applicable legal requirements.

As recommended by the GCGC, all financial reports are conveyed to the Supervisory Board before publication and discussed in a shared meeting with the Management Board. We publish the Annual Group Report within 90 days following the end of the reporting period; the interim

reports are similarly published on the company's website within 45 days. Reporting is provided in two languages: German and English.

Furthermore, SolarWorld AG prepares a corporate financial calendar each year with the most important upcoming dates and makes it available on its website.

In line with the fair disclosure principle, we treat all of our stakeholders equally with regard to information relevant for evaluation. The preferred platform for publication and communication is the internet, since it facilitates the real-time, continual, and widespread distribution of information. For instance, we provide the presentations of the quarterly held analysts' conference calls immediately online to ensure that the information given in these documents is also available to retail investors. We maintain German and English language versions of our website so that international stakeholders also have access to the relevant information.

SolarWorld AG communicates intensively and transparently within the context of the quarterly analyst conferences as well as individual discussions, group meetings, and conferences with analysts, shareholder representatives, and institutional investors. The company also seeks continuous dialog with its retail investors. Both shareholders and noteholders can contact investor relations staff directly through the investor hotline or via email. Additionally, we also offer a bilingual newsletter service that provides timely information on the publication of ad hoc announcements and corporate news.

The current shareholder structure of SolarWorld AG can be seen on our website. Any reportable changes will be published there in due time after they are received by the company.

Several voting right notifications pursuant to Sections 21, 25 and 25a WpHG were made in the reporting period, which the company has subsequently published in accordance with Section 26 WpHG. You can find an overview on our website • www.solarworld.de/notification-of-voting-rights.

# ANNUAL GENERAL MEETING

Our shareholders can exercise the rights of co-determination and control attached to their shares in the Annual General Meeting (AGM). The AGM is held once a year at the place of the company's registered offices in Bonn, and is chaired by the Chairman of the Supervisory Board in accordance with the Articles of Association. At the AGM our shareholders have the opportunity of exercising their right to information, their right to speak as well as their voting right. When voting, one share always corresponds to one vote. The company has not issued any preferred shares devoid of the right to vote or shares that bestow special voting privileges. Our shareholders can cast their vote on site through personal participation in the AGM or in advance by postal vote. SolarWorld AG also appoints voting proxies for each AGM that are bound by the shareholders' instructions. They will accept voting instructions as from the time of convening until shortly before the vote, and then exercise these. Finally, our shareholders can also have themselves represented by an authorized third party of their choice, and exercise their rights in this way.

All relevant information and documentation concerning the AGM, including the power-of-attorney forms, are available on our website within a sufficient period of time before the meeting and remain available until shortly after it is over. The respective voting results from the AGM are also disclosed there immediately.

# **COMPLIANCE MANAGEMENT SYSTEM**

To promote a culture of integrity throughout the whole company while also preventing corruption and legal violations, SolarWorld AG has constructed an extensive compliance management system and is continually developing it further. The global compliance officer is responsible for this. As the central inter-divisional controlling body, the compliance committee led by the global compliance officer meets each quarter and whenever necessary. Its key tasks are to consult about potential for improvement to the compliance management system and to adopt specific measures for the purpose of further developing the system. It conducts an annual analysis of the compliance risks for the group, which it uses to identify weak points as well as to work out and implement risk reduction measures with the responsible departments. Our compliance regulations are also reviewed annually and updated where necessary.

The groupwide code of conduct, which governs how economic, legal, and moral challenges are handled in everyday life at SolarWorld, is an important pillar of the compliance management system. In 2015, the code of conduct was reviewed for the foreign sites in terms of compatibility with the respective national laws, with the aim of carrying out adjustments if necessary.

During the past fiscal year SolarWorld continued the compliance training measures. These involve an introductory training course for new employees as well as annual refresher trainings that will be carried out as e-learning courses as from 2016. Training is compulsory for employees who are exposed to particular compliance risks; training modules are offered to all other employees on an optional basis.

The compliance management system of SolarWorld also contains the whistleblower system "SolarWorld SpeakUp". This makes it possible for all employees of the company as well as any of our main suppliers to report potential compliance-relevant incidents—also anonymously, if requested. In 2015, 6 (2014: 1) notices were submitted through the system. These were not compliance cases.

The measures named above are meant to sharpen awareness of potential compliance risks in the entire group and ensure professional handling of concrete incidents.

SolarWorld supports the "Call to Action" of the UN Global Compact for battling corruption and fostering good corporate governance. Further information on the subject of compliance is available on the SolarWorld homepage:

► www.solarworld.de/en/group/compliance

# **BOARDS OF SOLARWORLD AG**

# MANAGEMENT BOARD

# • Dr.-Ing. E. h. Frank Asbeck, 56

Chief Executive Officer (CEO) and Founder of the company Responsible for strategic group development, innovation, technology development and public relations including energy and environmental policy

Period of office: 1999 to January 9, 2019

# · Dipl.-Wirtschaftsing. Frank Henn, 50

Chief Sales Officer (CSO)
Responsible for international sales including the areas after sales service, technical support and customer service
Period of office: 2004 to January 31, 2019

# · Dipl.-Kfm. tech. Philipp Koecke, 44

Chief Financial Officer (CFO)
Responsible for the areas of finance, controlling, accounting and investor relations
Period of office: 2003 to April 30, 2019

## · RAin Colette Rückert-Hennen, 55

Chief Information, Brand & Personnel Officer (CIBPO) Responsible for the areas information technology, human resources, brand management, marketing and compliance.

Period of office: 2011 to June 30, 2017

# · Dipl.-Ing. Jürgen Stein, 50

Chief Product Officer (CPO)
Responsible for the areas product management, product development, production, quality management, purchasing and supply chain management
Period of office: 2014 to March 31, 2017

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# SUPERVISORY BOARD

As at December 31, 2015, the members of the Supervisory Board of SolarWorld AG were:

# SHARFHOIDER REPRESENTATIVES

# · Dr. Georg Gansen, 56

Chairman residing in Bonn, Germany Attorney-at-law/Corporate Legal Counsel at Deutsche Post AG

# · Dr. Khalid Klefeekh Al Hajri, 61

residing in Doha, Qatar Chairman and CEO of Qatar Solar Technologies Q.S.C. Vice Chairman and Managing Director of Qatar Solar S.P.C.

#### · Faisal M. Al Suwaidi. 62

residing in Doha, Qatar
President of Research and Development at Qatar
Foundation for Education, Science and Community
Development in Doha, Qatar

# · Heiner Eichermüller, 59

residing in Scottsdale/Arizona, U.S. Senior Business Consultant

# · Dr. Andreas Pleßke, 54

residing in Herrsching am Ammersee, Germany Attorney/Chief Restructuring Officer of König & Bauer AG

- Chairman of the Supervisory Board of m.a.x. Informationstechnologie AG, Munich,
- Member of the Supervisory Board of smartOne Business Consulting AG, Berg/Starnberger See
- Member of the Supervisory Board of KBA Mödling GmbH, Mödling (Austria)

# · Jürgen Wild, 54

residing in Vaucresson, France Managing Director of RAG-Stiftung Beteiligungsgesellschaft mbH

- Member of the Supervisory Board of SAG Group GmbH, Langen
- Member of the Supervisory Board of R. Stahl AG, Waldenburg

#### **EMPLOYEE REPRESENTATIVES**

# · Gerald Voigt, 57

Deputy chairman residing in Chemnitz, Germany District manager IG BCE district Dresden/Chemnitz

- Member of the Supervisory Board of envia Mitteldeutsche Energie AG, Chemnitz

# · Albrecht Handke, 33

residing in Dresden, Germany
Press and public relations at and member of the works
council of SolarWorld Industries Sachsen GmbH

# · Wolfgang Lemb, 54

residing in Frankfurt am Main, Germany
Executive Member of the Management Board of
IG Metall

#### • Dr. Ute Mareck, 51

residing in Freiberg, Germany Manager of technology and process at SolarWorld Industries Sachsen GmbH

# · Alexander Richter, 42

residing in Freiberg, Germany
Member of the works council of
SolarWorld Industries Sachsen GmbH and member
of the group works council of SolarWorld AG

## · Olaf Zirr, 43

residing in Erfurt, Germany
Team manager QHSE and deputy chairman
of the works council of
SolarWorld Industries Thüringen GmbH

From June 2, until September 29/30, 2015, also the following members had belonged to the Supervisory Board of SolarWorld AG:

# · Peter Finger

residing in Bonn, Germany
Chairman of the works council of SolarWorld AG

## · Joachim Götz

residing in Erfurt, Germany Chairman of the works council of SolarWorld Industries Thüringen GmbH

## · Anke Martin-Heede

residing in Weißenborn, Germany Chairwoman of the group works council and of the works council of SolarWorld Industries Sachsen GmbH

## COMMITTEES OF THE SUPERVISORY BOARD

# · Business committee

Dr. Georg Gansen (Chairman) Gerald Voigt (Deputy Chairman) Dr. Khalid Klefeekh Al Hajri Dr. Andreas Pleßke Wolfgang Lemb Alexander Richter

# · Human resources committee

Dr. Georg Gansen (Chairman) Gerald Voigt (Deputy Chairman) Dr. Khalid Klefeekh Al Hajri Albrecht Handke

## Mediation committee

Dr. Georg Gansen (Chairman) Gerald Voigt (Deputy Chairman) Dr. Khalid Klefeekh Al Hajri Wolfgang Lemb

## · Audit committee

Dr. Georg Gansen Jürgen Wild Alexander Richter

# · Technology and development committee

Heiner Eichermüller Dr. Ute Mareck Olaf Zirr

# · Nomination committee

Dr. Georg Gansen (Chairman) Dr. Khalid Klefeekh Al Hajri Heiner Eichermüller

# REMUNERATION REPORT

This remuneration report is part of the group management report and complies with the recommendations of the German Corporate Governance Code (GCGC) as well as the requirements of the German Commercial Code (HGB) and the German Accounting Standards (DRS 17). It explains the main points of the remuneration system for the Management Board and Supervisory Board and discloses the amount of remuneration for each individual in accordance with its different components.

# REMUNERATION OF THE MANAGEMENT BOARD

The Supervisory Board of SolarWorld AG determines the remuneration system of the Management Board and negotiates with each Management Board member the individual Management Board remuneration amount derived from this system. The structure of the remuneration system targets the sustainable development of the company and accounts for the company's distinctive characteristics as well as the relevant industry environment. The financial situation of the SolarWorld group is also taken into account.

The remuneration system of SolarWorld AG is composed of non-performance related and performance-related components. In accordance with Section 87 German Stock Corporation Act (AktG), the total remuneration for an individual Management Board member is reasonably proportionate to his or her tasks and the situation of the company.

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

# NON-PERFORMANCE RELATED REMUNERATION

Non-performance related components comprise fixed annual compensation and fringe benefits. The fixed annual compensation is to be paid in twelve monthly installments at the end of each month. Fringe benefits include use of a company car as well as payment of the costs for accident

and D&O insurance. The agreed deductible for the D&O insurance corresponds, in accordance with Section 93 para. 2 sentence 3 AktG, to at least 10 percent of the respective damage up to at least one and a half times the fixed annual compensation. In addition to that, the Chief Financial Officer (CFO), Chief Sales Officer (CSO), Chief Information Technology, Brand and Personnel Officer (CIBPO), and the Chief Product Officer (CPO) receive grants towards their health insurance. Moreover, the CFO, CSO, and CPO are provided with direct insurance in the highest amount permissible according to tax law. Work-related disbursements, expenses, and allowances are reimbursed in accordance with Section 670 of the German Civil Code (BGB).

# PERFORMANCE-RELATED REMUNERATION

The remuneration system of SolarWorld AG contains a variable component that is linked to the economic development of the company. A sustainability component with a multi-year valuation basis completes the system.

The amount of remuneration is dependent on the degree to which the individual target values set for each Management Board member are reached, exceeded, or fallen short of. The key performance indicators whose development is used to measure the variable Management Board remuneration are return on sales calculated from consolidated EBITDA and revenue, groupwide shipments, and the achievement of predefined cost goals. The amount of annual performance-related remuneration is limited to an individually agreed maximum amount for each Management Board member.

Contrary to the recommendation of the GCGC (Section 4.2.3, para. 2 sentence 8), the Supervisory Board reserves the right to make retrospective alterations to the performance targets or to the comparison parameters. In a dynamically developing market environment, it can, from the perspective of the Supervisory Board, be sensible and expedient for the company to adapt the performance targets or the comparison parameters for variable remuneration components retrospectively to a changed environment in justified cases.

The variable remuneration of the Management Board members contains, as required under Section 4.2.3 GCGC and Section 87 para. 1 sentence 3 AktG, a sustainability component that depends on the company's development over a time period of three years. Initially, only 75 percent of the variable bonus for the past fiscal year – to the extent that it depends on consolidated return on sales -will be advanced. After three years have passed, the final variable remuneration will be determined according to the average value from the last three years. If this turns out to be lower than the advance that has already been paid out, then no additional payment will be made. The advance is not recallable. If the final variable remuneration calculated according to the average value turns out to be higher than the advance that has already been paid, a supplementary payment will be made.

# **SPECIAL BONUS**

To ensure that the system fulfills its role as an incentive, the variable Management Board remuneration will be supplemented by special bonuses granted under certain circumstances. One example would be a special assignment carried out by the Management Board in economically difficult years that should be rewarded to maintain the competitiveness of Management Board remuneration. It is for this reason that the Supervisory Board, as the organ responsible for Management Board remuneration, may deem it appropriate to award Management Board members with a special bonus in addition to their variable remuneration to offer incentive.

#### **PENSIONS**

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

## MAXIMUM REMUNERATION

In 2009, the Annual General Meeting decided to place an overall cap on Management Board remuneration per board member amounting to twenty times the average employee remuneration. On May 20, 2010, the AGM also declared approval of the system for compensating members of the Management Board in accordance with Section 120 para. 4 AktG. The Chairman of the Supervisory Board outlined the basic elements of the remuneration system and any changes thereto at the subsequent AGMs (Section 4.2.3 GCGC).

The Management Board remuneration complies with all guidelines of acceptability and the stipulations of the GCGC and the law adopted on June 18, 2009, for Permissibility of Management Board Remuneration (VorstAG). Incidentally, Management Board remuneration at SolarWorld AG already adhered to these principles before the VorstAG came into force.

# **REMUNERATION OF THE MANAGEMENT BOARD 2015**

Altogether, the total remuneration of the Management Board for the fiscal year 2015 amounted to k€ 2,718.5 (2014: k€ 2,275.6). The disclosure of the Management Board remuneration for the fiscal year 2015 was done in accordance with the recommendation of the GCGC in the version dated May 5, 2015 (Section 4.2.5). The uniform model tables make it possible to display separately the contributions and the actual allocation (meaning the payments made) for the year being reported. When considering the allocation, the remuneration values must also be provided which can be achieved in minimum or maximum. Furthermore, additional remuneration for Management Board membership in subsidiaries of SolarWorld AG is listed separately.

# MANAGEMENT BOARD REMUNERATION I: BENEFITS GRANTED

in k€	DrIng. E	E. h. Frank	Asbeck		Frank He	enn			Philipp K	oecke					
	Start: 19	99			Start: 20	04			Start: 20	03					
	2014	2015	Min.	Max.	2014	2015	Min.	Max.	2014	2015	Min.	Max.			
Fixed compensation	270.0	270.0	270.0	270.0	307.5	307.5	307.5	307.5	308.0	308.0	308.0	308.0			
Other compensation	247.1 <sup>1</sup>	163.0 <sup>2</sup>	163.0	163.0	0	0	0	0	15.0	67.2³	67.2	67.2			
Fringe benefits (non-cash compensation)	12.4	12.4	12.4	12.4	12.0	11.0	11.0	11.0	23.8	19.8	19.8	19.8			
Fringe benefits (grants)	0	0	0	0	4.1	4.2	4.2	4.2	3.7	3.7	3.7	3.7			
Total (fixed components)	529.5	445.4	445.4	445.4	323.5	322.7	322.7	322.7	350.5	398.7	398.7	398.7			
One-year variable compensation (bonus)	206.6	443.9	0	810	0	0	0	307.5	0	252.8	0	307.5			
Multi-year variable compensation (sustain-ability components)	0	0	0	0	0	0	0	0	0	0	0	0			
Special Bonus	0	0	0	0	0	0	0	0	300.0	0	0	0			
Total (variable components)	206.6	443.9	0	810.0	0	0	0	307.5	300.0	252.8	0	307.5			
Service cost	0	0	0	0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8			
Total compensation	736.0	889.3	445.4	1,255.4	325.3	324.4	324.4	631.9	652.2	653.2	400.4	707.9			

 $<sup>^1</sup>$  Compensation for Management Board membership in subsidiary Solarparc AG (254.1 k€) and inventor remuneration for SolarWorld Innovations GmbH (0.2 k€)

<sup>&</sup>lt;sup>3</sup> Compensation as managing director in subsidiary Solarparc GmbH (67.2 k€)

2014	2015	Sta	rt. 2011								
2014	2015		Start: 2011 Start: 1/4/2014								
	2013	Min.	Max.	2014	2015	Min.	Max.	2014	2015	Min.	Max.
270.0	300.0	300.0	300.0	225.0	300.0	300.0	300.0	1,380.5	1,485.5	1,485.5	1,485.5
0	0	0	0	0	46.0¹	46.0	46.0	262.1	276.2	276.2	276.2
8.2	8.0	8.0	8.0	5.8	10.0	10.0	10.0	62.1	61.2	61.2	61.2
3.7	3.8	3.8	3.8	1.7	3.8	3.8	3.8	13.1	15.5	15.5	15.5
281.9	311.8	311.8	311.8	232.4	359.8	359.8	359.8	1,717.7	1,838.4	1,838.4	1,838.4
19.1	90.0	0	180.0	28.7	90.0	0	180.0	254.4	876.6	0	1,785.0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	300.0	0	0	0
19.1	90.0	0	180.0	28.7	90.0	0	180.0	554.4	876.6	0	1,785.0
0	0	0	0	0	0	0	0	3.5	3.5	3.5	3.5
301.0	401.8	311.8	491.8	261.1	449.8	359.8	539.8	2,275.6	2,718.5	1,841.9	3,626.9
	0 8.2 3.7 281.9 19.1 0 0	0 0 8.2 8.0 3.7 3.8 81.9 311.8 19.1 90.0 0 0 19.1 90.0	0 0 0 8.2 8.0 8.0 3.7 3.8 3.8 81.9 311.8 311.8 19.1 90.0 0 0 0 0 0 0 0 19.1 90.0 0	0 0 0 0 0  8.2 8.0 8.0 8.0  3.7 3.8 3.8 3.8  881.9 311.8 311.8 311.8  19.1 90.0 0 180.0  0 0 0 0  0 0 0 0  19.1 90.0 0 180.0  0 0 0 0	0     0     0     0     0       8.2     8.0     8.0     8.0     5.8       3.7     3.8     3.8     3.8     1.7       81.9     311.8     311.8     311.8     232.4       19.1     90.0     0     180.0     28.7       0     0     0     0     0       0     0     0     0     0       19.1     90.0     0     180.0     28.7       0     0     0     0     0       0     0     0     0     0	0 0 0 0 0 0 46.0¹ 8.2 8.0 8.0 8.0 5.8 10.0 3.7 3.8 3.8 3.8 1.7 3.8 81.9 311.8 311.8 311.8 232.4 359.8 19.1 90.0 0 180.0 28.7 90.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 19.1 90.0 0 180.0 28.7 90.0	0     0     0     0     0     46.0¹     46.0¹       8.2     8.0     8.0     8.0     5.8     10.0     10.0       3.7     3.8     3.8     3.8     1.7     3.8     3.8       181.9     311.8     311.8     311.8     232.4     359.8     359.8       19.1     90.0     0     180.0     28.7     90.0     0       0     0     0     0     0     0     0       0     0     0     0     0     0     0       19.1     90.0     0     180.0     28.7     90.0     0       0     0     0     0     0     0     0	0       0       0       0       46.0¹       46.0       46.0       46.0         8.2       8.0       8.0       8.0       5.8       10.0       10.0       10.0         3.7       3.8       3.8       3.8       1.7       3.8       3.8       3.8         181.9       311.8       311.8       311.8       232.4       359.8       359.8       359.8         19.1       90.0       0       180.0       28.7       90.0       0       180.0         0       0       0       0       0       0       0       0       0         19.1       90.0       0       180.0       28.7       90.0       0       180.0         19.1       90.0       0       180.0       28.7       90.0       0       180.0         0       0       0       0       0       0       0       0       0	0         0         0         0         46.0¹         46.0         46.0         262.1           8.2         8.0         8.0         8.0         5.8         10.0         10.0         10.0         62.1           3.7         3.8         3.8         3.8         1.7         3.8         3.8         3.8         13.1           81.9         311.8         311.8         311.8         232.4         359.8         359.8         359.8         1,717.7           19.1         90.0         0         180.0         28.7         90.0         0         180.0         254.4           0         0         0         0         0         0         0         300.0           19.1         90.0         0         180.0         28.7         90.0         0         180.0         300.0           19.1         90.0         0         180.0         28.7         90.0         0         180.0         554.4           0         0         0         0         0         0         0         3.5	0         0         0         0         46.0¹         46.0         46.0         262.1         276.2           8.2         8.0         8.0         8.0         5.8         10.0         10.0         10.0         62.1         61.2           3.7         3.8         3.8         3.8         1.7         3.8         3.8         3.8         13.1         15.5           81.9         311.8         311.8         311.8         232.4         359.8         359.8         1,717.7         1,838.4           19.1         90.0         0         180.0         28.7         90.0         0         180.0         254.4         876.6           0         0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0         0           19.1         90.0         0         180.0         28.7         90.0         0         180.0         254.4         876.6           0         0         0         0         0         0         0         0         0         0           0         0         0         0	0         0         0         0         46.0¹         46.0 46.0 262.1 276.2 276.2         276.2 276.2           8.2         8.0         8.0         8.0         5.8         10.0         10.0 10.0 62.1 61.2 61.2         61.2 61.2           3.7         3.8         3.8         3.8         1.7         3.8 3.8 3.8 13.1 15.5 15.5         15.5           81.9         311.8         311.8 232.4 359.8 359.8 359.8 1,717.7 1,838.4 1,838.4         1,838.4 1,838.4         19.1 90.0 0 180.0 28.7 90.0 0 180.0 254.4 876.6 0         0           0

 $<sup>^1</sup>$  Compensation for Management Board membership in subsidiary SolarWorld Innovations GmbH (46.0 k $\in$ )

 $<sup>^2</sup>$  Compensation as managing director in subsidiary Solarparc GmbH (162.7 k $\in$ ) and inventor remuneration for SolarWorld Innovations GmbH (0.3 k $\in$ )

MANACEMENT DOADD	) REMUNERATION II: ALLOCATIOI	NI.
MANAGEMENT DUAKD	, KEMIDINEKALIDIN II: ALLUCALIDI	v

in k€	DrIng. E. h. Frank Asbeck CEO		Frank He	Frank Henn CSO		CFO		Colette Rückert-Hennen CIBPO		Jürgen Stein CPO		agement d Total	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	
Fixed compensation	270.0	270.0	307.5	307.5	308.0	308.0	270.0	300.0	225.0	300.0	1,380.5	1,485.5	
Other compensation	247.1	163.0	0	0	15.0	67.2	0	0	0	46.0	262.1	276.2	
Fringe benefits (non-cash compensation)	12.4	12.4	12.0	11.0	23.8	19.8	8.2	8.0	5.8	10.1	62.1	61.2	
Fringe benefits (grants)	0	0	4.1	4.2	3.7	3.7	3.7	3.8	1.7	3.8	13.1	15.5	
Total (fixed components)	529.4	445.4	323.5	322.7	350.5	398.7	281.9	311.8	232.4	359.8	1,717.7	1,838.4	
One-year variable compensation (bonus)	0	206.6	0	0	0	0	0	19.1	0	49.8	0	275.5	
Multi-year variable compensation (sustain-													
ability component)	0	0	0	0	0	0	0	0	0	0	0	0	
Special Bonus	0	0	0	0	300.0	0	0	0	0	0	300.0	0	
Total (variable components)	0	206.6	0	0	300.0	0	0	19.1	0	49.8	300.0	275.5	
Service cost	0	0	1.8	1.8	1.8	1.8	0	0	0	0	3.5	3.5	
Total compensation	529.4	652.0	325.3	324.4	652.2	400.4	281.9	330.9	232.4	409.6	2,021.2	2,117.4	

# REMUNERATION OF THE SUPERVISORY BOARD

In accordance with the Articles of Association, the Annual General Meeting held on May 30, 2014, approved the system of Supervisory Board remuneration with effect from June 1, 2014.

Every member of the Supervisory Board receives a yearly fixed remuneration of  $k \in 40.0$  in addition to reimbursement for their expenditures in accordance with Section 670 German Civil Code (BGB). In accordance with Section 5.4.6 GCGC, the agreed remuneration system takes into account the chair and deputy chair of the Supervisory Board as well as the chair and members of the committees. The chairman of the Supervisory Board receives three times the fixed compensation, therefore earning  $k \in 120.0$ , and the deputy chairman receives double the fixed compensation, so  $k \in 80.0$ . Thus, membership or chairmanship in committees is also compensated. Ordinary members receive an additional  $k \in 5.0$  in total for membership in one or more committees,

in the case that the person is a committee chairman in at least one committee they will instead receive double, which would be  $k \in 10.0$ . There is no entitlement to variable extra pay or separate attendance pay.

All amounts are given plus VAT, if such tax is applicable. If tenure as a member of the Supervisory Board is taken up or ended during the year, then remuneration will be awarded pro rata temporis.

In addition to Supervisory Board remuneration, SolarWorld AG also takes responsibility for paying premiums for appropriate insurance protection in accordance with the legal liability inherent in duties on the Supervisory Board (D&O insurance). In accordance with Section 3.8 GCGC, the Supervisory Board voluntarily agreed on July 1, 2010, to a deductible of at least 10 percent for the respective damage and up to at least one and a half times the fixed annual remuneration.

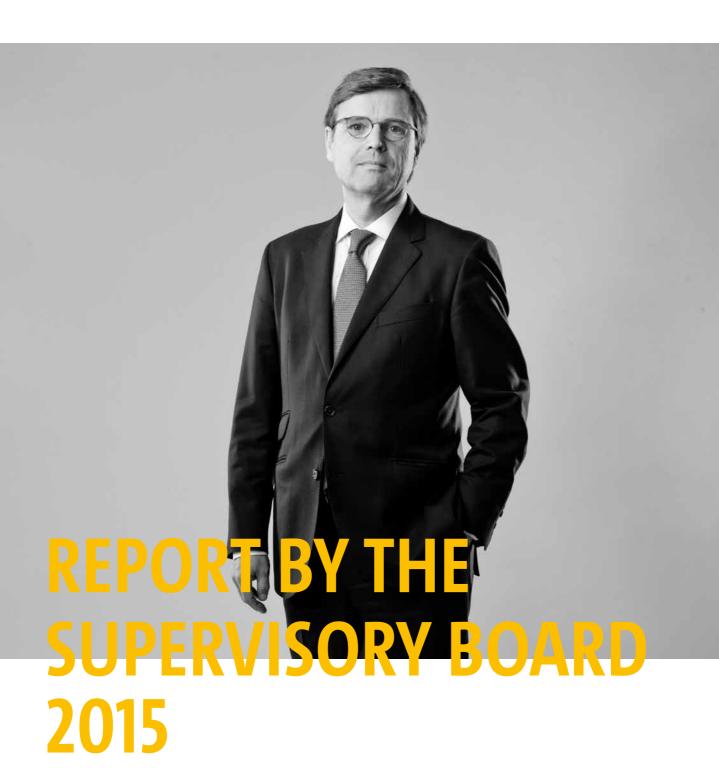
# **REMUNERATION OF THE SUPERVISORY BOARD 2015**

The remuneration of the Supervisory Board for the 2015 fiscal year totaled k $\in$  517.9 (2014: k $\in$  311.9), and is shown individually in the following table:

# **SUPERVISORY BOARD REMUNERATION 2015**

			Fiscal year 2015		Fiscal yea				
in k€		Compensation for committee work	Total compensation	Fixed compensation	Meeting attendance fee	Other compensation <sup>1</sup>	Tota compensation		
Members of the Supervi	sory Board as at 31	/12/2015							
Dr. Georg Gansen (chairman)	120.0	0	120.0	91.9	2.5	12.3	106.7		
Heiner Eichermüller	56.8	3.9	60.7	47.1	0	0	47.1		
Dr. Khalid K. Al Hajri	40.0	1.9	41.9	23.3	0	0	23.3		
Faisal M. Al Suwaidi	40.0	0	40.0	23.3	0	0	23.3		
Dr. Andreas Pleßke	40.0	1.9	41.9	23.3	0	0	23.3		
Jürgen Wild	40.0	1.9	41.9	23.3	0	0	23.3		
Gerald Voigt (deputy chairman)	46.7	0	46.7	-	-	-	-		
Wolfgang Lemb	23.3	1.9	25.3	=	-	=	=		
Dr. Ute Mareck	23.3	1.9	25.3	=	-	=	-		
Olaf Zirr	10.2	0.7	10.9	=	-	=	-		
Alexander Richter	10.2	0.7	10.9	=	-	=	-		
Albrecht Handke	10.2	0.7	10.9	=	-	=	-		
Former Supervisory Boar									
Peter Finger	13.2	0.7	13.8	-	-	-	-		
Joachim Götz	13.2	0.7	13.8	=	-	-	-		
Anke Martin-Heede	13.2	0.7	13.8	-	-	-	-		
Dr. Claus Recktenwald	-	-	-	29.2	2.5	16.0	47.7		
Marc M. Bamberger	-	-	-	14.6	2.5	0	17.1		
Total compensation	500.2	17.7	517.9	276.1	7.5	28.3	311.9		

 $<sup>^{</sup>m 1}$  Compensation for Supervisory Board membership in subsidiary Solarparc AG



Dr. Georg Gansen

Chairman of the Supervisory Board

# **REPORT BY THE SUPERVISORY BOARD 2015**

# DEAR SHAREHOLDERS,

In the fiscal year 2015, international demand for solar power products increased although strong competition continued to define market environment. For the first time in its history, SolarWorld achieved groupwide shipments of more than one gigawatt — an increase of 33 percent compared with 2014. Earnings before interest and taxes (EBIT) improved significantly compared with the previous year, even though a deficit of  $\leqslant$  4 million remained. In the fourth quarter of 2015, a positive EBIT was achieved for the first time again — an important milestone on the path to a sustainable return to profitability.

The group was able to further strengthen its position as a quality provider. While production capacities were extended and new staff recruited, numerous measures were simultaneously implemented to reduce costs and increase efficiency. And with success: In 2015 SolarWorld was the world's largest manufacturer of PERC high-efficiency solar cells and was able to set not just one, but two new efficiency records in this technology. The company also introduced a series of new products, such as the 300-watt solar module and bifacial modules, thereby underlining its claim to provide customers with leading solar power solutions.

The Supervisory Board would like to thank the SolarWorld staff and management for their extraordinary effort and loyalty to the company.

# SUPERVISORY ACTIVITIES OF THE SUPERVISORY BOARD

The Supervisory Board once again accompanied the Management Board in an advisory capacity during the past fiscal year and supervised its activities on the basis of written and verbal management reports and Supervisory Board meetings. In addition, the chairman of the Supervisory Board also maintained regular contact with the Management Board outside Supervisory Board meetings. The Management Board informed the Supervisory Board regularly and without delay on all issues relevant to the company's planning, including the financial, investment and HR planning; course of business; ongoing revenue, earnings and liquidity development; economic situation of the company and group,

including risk situation and risk management; compliance within the group; strategic realignment of the group within the framework of the restructuring process developed and implemented by the Management Board; as well as important decisions and transactions relating to the company and group. Reporting was as and when appropriate, i.e. when specifically requested by the Supervisory Board, as well as regularly according to the rules of procedure issued by the Supervisory Board for the Management Board. The Supervisory Board also consulted external advisors where necessary. As required by law, as well as by the Articles of Association and the rules of procedure for the Management Board, the Supervisory Board was involved in all decisions of fundamental importance to the company. This applies in particular for transactions requiring approval.

# COMPOSITION OF THE SUPERVISORY BOARD

Since the Annual General Meeting (AGM) on May 30, 2014, the Supervisory Board has included six shareholder representatives: Mr. Heiner Eichermüller (Deputy Chairman of the Supervisory Board), Dr. Khalid Klefeekh Al Hajri, Mr. Faisal M. Al Suwaidi, Dr. Andreas Pleßke, Mr. Jürgen Wild and Dr. Georg Gansen.

As of the AGM of June 2, 2015, and on completion of a status procedure pursuant to Section 97 German Stock Corporation Act (AktG), the provisions of the German Codetermination Act apply owing to the circumstance that SolarWorld AG now normally has more than 2,000 but less than 10,000 attributable employees. Since then, the SolarWorld AG Supervisory Board comprises six shareholder representatives elected by the AGM plus six employee representatives.

The AGM of June 2, 2015, re-elected as shareholder representatives the previous members of the Supervisory Board named above. Their term of office ends with the conclusion of the AGM that will decide on the approval of the actions of the members of the Supervisory Board for the 2019 fiscal year. Mr. Peter Finger, Mr. Joachim Götz, Ms. Anke Martin-Heede, Dr. Ute Mareck, Mr. Wolfgang Lemb and Mr. Gerald Voigt were elected to represent the employees and appointed to the Supervisory Board by court order the same

day as a simultaneous ballot was no longer possible due to legal deadlines. Mr. Wolfgang Lemb, Mr. Gerald Voigt, Dr. Ute Mareck, Mr. Olaf Zirr, Mr. Albrecht Handke and Mr. Alexander Richter were elected employee representatives to the Supervisory Board in a ballot that ended on October 5, 2015, when the results of the elections of September 29 and 30, 2015, were officially announced by the central election committee. The previous members appointed by court order, Mr. Peter Finger, Mr. Joachim Götz and Ms. Anke Martin-Heede, therefore ceased to be members of the Supervisory Board. At the constitutive meeting of the equal-representation, co-determined Supervisory Board, Dr. Georg Gansen was confirmed as Chairman of the Supervisory Board, and Mr. Gerald Voigt was elected its Deputy Chairman.

## SUPERVISORY BOARD MEETINGS

In fulfilling its obligations, the Supervisory Board held a total of 10 meetings during the reporting period 2015 – on January 12, January 17, January 20, January 24, February 18, February 26, March 18, May 12, August 12 and November 11. Meetings were generally held as physical meetings. Exceptions were the Supervisory Board meetings on January 17, January 20, January 24, February 18 and March 18, all of which were telephone conferences. In addition, the Management Board regularly informed the Supervisory Board by telephone of any current affairs. They also phoned ad hoc in preparation for or to follow up Supervisory Board meetings. All members of the Supervisory Board participated in all the respective board meetings, with the exception of Dr. Al Hajri on January 17, January 20 and January 24; Mr. Al Suwaidi on January 17, January 20, January 24, February 18 and August 12; and Dr. Mareck on August 12.

# **ADVISORY AND AUDITING PRIORITIES**

The ongoing revenue, earnings and liquidity development, as well as short- and medium-term liquidity forecasts for the company were explained to the Supervisory Board at all meetings and then discussed with the Management Board. These topics were dealt with in particular depth during monthly financial reporting teleconferences with the Chief Financial Officer. The focus of the advisory and supervisory activities during fiscal year 2015 was on the critical support of the optimization of production processes and on the coordination of production and sales efforts, as well as other corporate planning processes. Priority was given to

individual topics such as the development of the respective national sales markets, the integration of production facilities acquired from Bosch in Arnstadt, the legal dispute with Hemlock (a silicon supplier), the sale of the Auermühle property interest, the company's capital resources and the future remuneration of Management Board members, in particular with regard to variable remuneration.

On February 26, 2015, and in the presence of the auditors, the Supervisory Board discussed the 2014 annual financial statements and the consolidated financial statements, the auditors' report and the auditors' mandate for the 2015 fiscal year.

# MAIN TOPICS IN THE INDIVIDUAL SUPERVISORY BOARD MEETINGS

Topics prioritized in individual Supervisory Board meetings were

On January 12, discussion of the budget for the 2015 fiscal year. The Supervisory Board also approved the foundation of two new entities in Italy and the UK. Compliance was a further focus of this Supervisory Board meeting.

The telephone conferences on January 17, 20 and 24 served the further analysis of the budget for the 2015 fiscal year in due consideration of extended sensitivity analyses and prospects for the 2016/2017 fiscal years. The budget for the 2015 fiscal year was approved at the last telephone conference on January 24.

The telephone conference on February 18 served the preparation of the discussion on the annual financial statements and consolidated financial statements with the auditor, which was scheduled for the following meeting.

At the meeting on February 26, the auditor BDO AG Wirtschaftsprüfungsgesellschaft Bonn presented the preliminary results of the audit of the annual financial statements and the consolidated financial statements for the 2014 fiscal year, which were subsequently discussed by the Supervisory Board. The Supervisory Board also reviewed the group's U.S. strategy. A further discussion dealt with the fact that, owing to an increase in the number of employees, SolarWorld AG has become subject to the German

Co-determination Act and the future Supervisory Board should comprise twelve members, half of which ought to be employee representatives.

The meeting on March 18 adopted the annual financial statements and the consolidated financial statements. It was also agreed to recommend that the AGM should mandate BDO AG Wirtschaftsprüfungsgesellschaft AG with the audit for the 2015 fiscal year.

The meeting on May 12 was designated for a discussion on the results of the first quarter of 2015. The group's sales strategy was also examined in detail. The members of the Supervisory Board were given the opportunity to observe production at SolarWorld Industries Thüringen for themselves. The Supervisory Board also dealt with the introduction of co-determination into the Supervisory Board.

The meeting on August 12 discussed the group's interim report for the first half of 2015. This meeting also focused on production and future site planning. The Supervisory Board also dealt with the legal dispute with the silicon supplier Hemlock. Moreover, the meeting installed committees, which are described in detail below. In addition, draft rules of procedure for the Management and Supervisory Boards were discussed. In accordance with the legal requirements, a target of 20 percent by June 2017 was set for the proportion of female members of the Management Board.

The November 11 meeting in Arnstadt discussed the interim report for the third quarter. The legal dispute with Hemlock was also a matter of further discussion. The meeting approved the extension of the employment contract with Chief Sales Officer Frank Henn to the end of January 2019, as well as rules of procedure for the Management and Supervisory Boards.

#### COMMITTEES

Following expansion of the Supervisory Board from six to twelve members, a number of new committees were installed: business committee, human resources committee, mediation committee in accordance with Section 27(3) German Co-determination Act, audit committee, technology and development committee and nomination committee. The Supervisory Board had not previously in-

stalled committees due to its small number of members. The business committee is responsible for preparing Supervisory Board meetings and taking decisions in urgent matters. The human resources committee deals with Management Board matters. The mediation committee fulfils tasks assigned on the basis of Section 27(3) Co-determination Act. The audit committee focuses on monitoring accounting, controlling, risk management and auditing. As stated in the declaration of compliance with the German Corporate Governance Code, no individual member of the Supervisory Board fulfils all the requirements of expert in the field of accounting and internal control processes. Where appropriate, the Supervisory Board and the audit committee draw on external experts to support their members in the execution of their duties. The technology and development committee deals with production technology, research and development and supply chain management. In the 2015 fiscal year it dealt with, i. a. the technology plan, production plans, production-site alignment and logistics plans. From its inauguration in August to the end of the year, the committee also visited the three production sites in Freiberg. Arnstadt and Hillsboro. The nomination committee recommends, if and when required, candidates to the Supervisory Board at the AGM.

# ADVISORY AND AUDITING ACTIVITIES ON THE 2015 ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS

The AGM appointed BDO AG Wirtschaftsprüfungsgesellschaft to audit the annual financial statements and consolidated financial statements of SolarWorld AG for the 2015 fiscal year, as well as the management report for the fiscal year from January 1, to December 31, 2015. The Supervisory Board subsequently discussed and assigned the audit mandate.

The auditors reviewed the 2015 SolarWorld AG management report and the annual financial statements prepared according to the German Commercial Code (HGB) accounting rules and awarded the unqualified audit opinion. This status was also awarded to the consolidated financial statements and group management report prepared according to IFRS accounting rules. The auditors confirmed that the consolidated financial statements complied with the conditions required for exemption from preparing financial statements under German law. In addition, they also

checked the early risk detection system at SolarWorld AG and determined that it fulfils the management responsibilities stipulated in the German Control and Transparency in Business Act (KonTraG).

The financial statements and auditor's reports were presented to the Supervisory Board in good time. They were discussed in detail and checked in the presence of the auditor on February 25, 2016. The auditor reported on the audit procedure and the essential findings of the audit. The Supervisory Board recorded notes from the audit reports and discussed these with the Management Board.

On examination of the annual financial statements as at December 31, 2015, with the management report and the consolidated financial statements with the group management report, the Supervisory Board found no grounds for objection. The Supervisory Board accepted the auditors' opinion and approved the respective documents on March 16, 2016. The annual financial statements of the SolarWorld AG are thereby adopted.

# DECLARATION OF COMPLIANCE AND CORPORATE GOVERNANCE

Corporate governance plays a major role for the Supervisory Board. It presents its report on the topic together with the Management Board in the Corporate Governance Report, which is part of the Group Management Report.

In November 2015, the Supervisory Board and Management Board issued the annual declaration of compliance with the German Corporate Governance Code and published it on the company's website.

The remuneration of Supervisory Board members is published in the Remuneration Report, which is part of the Group Management Report.

The Supervisory Board identified no conflicts of interest among its members in the 2015 fiscal year.

An efficiency review of the Supervisory Board as recommended by the German Corporate Governance Code was last performed during the 2013 fiscal year. No further efficiency review has been conducted since then due to changes in the composition of the Supervisory Board in 2014 and 2015. An efficiency review is scheduled for 2016, after the Supervisory Board has worked together in its current size and composition for about one year.

# CHANGES IN THE MANAGEMENT BOARD AND THE SUPERVISORY BOARD

There were no personnel changes in the Management Board in 2015. Mr. Frank Henn was confirmed as member of the Management Board of SolarWorld AG for a further three years until January 31, 2019, with effect from November 22, 2015. The conditions of his employment are in line with the tasks at hand and the market, and are in a balanced relation to the employment conditions of the other Management Board members

Changes in the Supervisory Board are a necessary consequence of the first implementation of the German Co-determination Act. Details are given in the section "Composition of the Supervisory Board."

Bonn, March 16, 2016 The Supervisory Board

The Supervisory Board

Dr. Georg Gansen

Chairman

# FINANCIAL STATEMENTS

- 113 CONSOLIDATED INCOME STATEMENT
- 114 STATEMENT OF CONSOLIDATED COMPREHENSIVE RESULT
- 115 CONSOLIDATED BALANCE SHEET
- 116 CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
- 117 CONSOLIDATED CASH FLOW STATEMENT
- 118 CONSOLIDATED NOTES
  - 118 General disclosures and accounting policies
  - 140 Comments on the income statement
  - 150 Comments on the consolidated balance sheet
  - 160 Other disclosures
- 173 AUDIT OPINION
- 174 RESPONSIBILITY STATEMENT

# CONSOLIDATED FINANCIAL STATEMENTS

# FOR THE BUSINESS YEAR JANUARY 1, 2015 TO DECEMBER 31, 2015

#### CONSOLIDATED INCOME STATEMENT

in k	ŧ	Notes	2015	2014
1.	Revenue	2.23, 3, 15	763,465	573,382
2.	Change in inventories of finished goods and work in progress	2.11, 2.23, 24	24,512	36,328
3.	Own work capitalized	4	3,852	1,438
4.	Other operating income	2.23, 5	102,574	232,784
5.	Cost of materials	6	-519,143	-422,938
6.	Personnel expenses	7	-157,989	-138,281
7.	Amortization and depreciation	2.8, 8, 16	-44,966	-45,440
8.	Other operating expenses	2.23, 9	-176,456	-174,898
9.	Operating result		-4,151	62,375
10.	Result from investments measured at equity	2.3.2, 11, 20	-12,877	-9,578
11.	Interest and similar financial income	2.23, 11	128	496
12.	Interest payable and similar financial expenses	2.23, 11	-28,687	-38,353
13.		2.23, 11	742	557,709
14.	Financial result		-40,694	510,274
15.	Result before taxes on income		-44,845	572,649
16.	Taxes on income	2.24, 12	11,563	-108,485
17.	Consolidated net result		-33,282	464,164
	Of which attributable to:			
	- Shareholders of SolarWorld AG		-33,282	464,164
18.	Earnings per share	13		
	a) Weighted average number of shares outstanding (in 1,000)		14,896	12,794
	b) Consolidated net result (in €)		-2.23	36.28

113

#### STATEMENT OF CONSOLIDATED COMPREHENSIVE RESULT

in k€ – Note 14	2015	2014
Consolidated net result	-33,282	464,164
Profit/loss from remeasurement of definded benefit plans		
Profit/loss from remeasurement of definded benefit plans, before tax	867	-1,818
Deferred taxes on profit/loss from remeasurement of definded benefit plans	-260	543
Profit/loss from remeasurement of definded benefit plans, net of tax	607	-1,275
Items not to be reclassified to profit or loss	607	-1,275
Exchange differences from currency translations		
Unrealized currency translation gains	9,885	17,492
Deferred taxes relating to exchange differences on translating foreign operations	-7,001	-12,352
Exchange differences from currency translations, net of tax	2,884	5,140
Items that may be reclassified subsequently to profit	2,884	5,140
Other comprehensive net result	3,491	3,865
Of which:		
Other comprehensive result before tax	10,752	15,674
Deferred taxes relating to other compehensive result	-7,261	-11,809
Total comprehensive result	-29,791	468,029
Of which attributable to:		
- Shareholders of SolarWorld AG	-29,791	468,029

T 44

#### **CONSOLIDATED BALANCE SHEET AS AT DECEMBER 31, 2015**

Ass	ets in k€	Notes	Dec 31, 2015	Dec 31, 2014
Α.	Non-current assets		367,182	412,044
l.	Intangible assets	2.6, 2.8, 16, 17	23,301	13,800
II.	Property, plant and equipment	2.7, 2.8, 16, 18	319,825	344,735
III.	Investment property	2.9, 16, 19	0	14,795
IV.	Investments measured at equity	2.3.2, 20	8,986	10,583
V.	Other financial assets	2.14, 21, 40	3,062	5,254
VI.	Other non-current assets	2.10, 23	9,736	21,310
VII.	Deferred tax assets	2.24, 12, 22	2,272	1,567
В.	Current assets		500,157	494,270
I.	Inventories	2.11, 24	171,563	158,063
II.	Trade receivables	2.12, 25	97,402	75,851
III.	Current income tax assets	2.24, 12, 26	187	809
IV.	Other receivables and assets	2.13, 27	17,510	32,030
V.	Other financial assets	2.14, 2.18, 28, 40	24,853	50,420
VI.	Liquid funds	2.15, 29, 40, 41	188,642	177,097
C.	Assets held for sale	2.16, 30	1,369	9,027
_				
Equ	ity and liabilities in k€	Notes	868,708  Dec 31, 2015	
_			Dec 31, 2015	
_	Equity	Notes 31	Dec 31, 2015 208,877	Dec 31, 2014 238,668
_	Equity  1. Subscribed capital		Dec 31, 2015 208,877 14,896	Dec 31, 2014 238,668 14,896
_	Equity  1. Subscribed capital  2. Capital reserve		<b>Dec 31, 2015 208,877</b> 14,896 158	Dec 31, 2014 238,668 14,896 158
_	Equity  1. Subscribed capital  2. Capital reserve  3. Other reserves		Dec 31, 2015  208,877  14,896  158  14,725	Dec 31, 2014 238,668 14,896 158 11,234
Α.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results		Dec 31, 2015  208,877  14,896  158  14,725  179,098	Dec 31, 2014  238,668  14,896  158  11,234  212,380
A. B.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results Non-current liabilities	31	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974
A. B.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities	2.17, 2.18, 32, 40	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582
<b>B.</b>	Equity  1. Subscribed capital  2. Capital reserve  3. Other reserves  4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants	2.17, 2.18, 32, 40 2.19, 33	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101
<b>B.</b> II.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772
<b>B.</b> II. III. IV.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions  Other non-current liabilities	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524  18	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111
B. II. III. IV. V.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions  Other non-current liabilities  Deferred tax liabilities	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524  18  50,067	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111  54,408
B. II. IV. V.	Equity  1. Subscribed capital  2. Capital reserve  3. Other reserves  4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions  Other non-current liabilities  Deferred tax liabilities  Current liabilities	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35 2.24, 12, 36	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524  18  50,067  213,674	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111  54,408  167,699
B. II. IV. V. C. I.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions  Other non-current liabilities  Deferred tax liabilities  Current liabilities  Current financial liabilities	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35 2.24, 12, 36	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,524  18  50,067  213,674  57,222	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111  54,408  167,699  58,297
B. II. IV. V. C. II.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions  Other non-current liabilities  Deferred tax liabilities  Current liabilities  Current financial liabilities  Trade payables	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35 2.24, 12, 36 2.17, 2.18, 32, 40 2.17, 40	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524  18  50,067  213,674  57,222  77,771	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111  54,408  167,699  58,297  42,291
B. II. III. IV. V. C. II. III.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions  Other non-current liabilities  Deferred tax liabilities  Current liabilities  Current financial liabilities  Trade payables  Income tax liabilities	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35 2.24, 12, 36 2.17, 2.18, 32, 40 2.17, 40 2.24, 12, 37	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524  18  50,067  213,674  57,222  77,771  1,398	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111  54,408  167,699  58,297  42,291  2,987
B. II. IV. V. C. III. III. IV.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions Other non-current liabilities  Deferred tax liabilities  Current liabilities  Current financial liabilities  Trade payables  Income tax liabilities  Current provisions	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35 2.24, 12, 36 2.17, 2.18, 32, 40 2.17, 40 2.24, 12, 37 2.21, 34	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524  18  50,067  213,674  57,222  77,771  1,398  6,831	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111  54,408  167,699  58,297  42,291  2,987  15,674
B. II. IV. V. C. I.	Equity  1. Subscribed capital 2. Capital reserve 3. Other reserves 4. Accumulated results  Non-current liabilities  Non-current financial liabilities  Accrued investment grants  Non-current provisions  Other non-current liabilities  Deferred tax liabilities  Current liabilities  Current financial liabilities  Trade payables  Income tax liabilities	2.17, 2.18, 32, 40 2.19, 33 2.20, 2.21, 34 2.22, 35 2.24, 12, 36  2.17, 2.18, 32, 40 2.17, 40 2.24, 12, 37 2.21, 34	Dec 31, 2015  208,877  14,896  158  14,725  179,098  446,157  348,627  23,921  23,524  18  50,067  213,674  57,222  77,771  1,398	Dec 31, 2014  238,668  14,896  158  11,234  212,380  508,974  391,582  29,101  33,772  111  54,408  167,699  58,297  42,291  2,987

115

#### **CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**

				Other reserves		Total
in k€ – Notes 2.4, 31	Subscribed capital	Capital reserve	Currency translation reserve	IAS 19 reserve	Accumulated results	
As at Jan 1, 2014	110,795	68	7,997	-628	-361,317	-243,084
Capital reduction	-110,056	-	=	-	110,056	-
Capital increase by contribution in kind	14,151	=	-	-	-604	13,547
Disposal of treasury shares	6	90	-	-	81	177
Total comprehensive result	-	=	5,140	-1,275	464,164	468,029
As at Dec 31, 2014	14,896	158	13,137	-1,903	212,380	238,668
Total comprehensive result	-	-	2,884	607	-33,282	-29,791
As at Dec 31, 2015	14,896	158	16,021	-1,296	179,098	208,877
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#### CONSOLIDATED CASH FLOW STATEMENT

in k€ – N	Note 41	2015	<b>2014</b> 572,649
	Result before tax	-44,845	
+	Amortization and depreciation	44,966	45,440
+	Financial result (excluding profits and losses from currency translation and restructuring profit)	42,030	48,545
-	Profit from disposal of assets	-343	-1,430
-	Reversal of accrued investment grants	-4,949	-4,813
-	Gain resulting from a business combination (badwill)	0	-136,522
-	Other material non-cash income	-21,151	-534,474
=	Cash flow from operating result	15,708	-10,605
+	Changes in prepayments and customer advances	23,151	15,931
-	Increase in inventories	-21,507	-33,299
-	Increase in trade receivables	-19,953	-28,979
+	Increase in trade payables	26,215	20,854
+	Development in other net assets	30,741	3,459
=	Cash flow from operating result and changes in net assets	54,355	-32,639
+	Interest received	104	376
-	Taxes on income paid	-1,998	-4,426
=	Cash flow from operating activities	52,461	-36,689
-	Cash payments for investments in fixed assets	-41,540	-12,387
+	Cash receipt from investment grants	1,247	8,288
+	Cash receipts from the disposal of fixed assets	32	5,832
+	Cash payments from negative purchase price	33,800	81,000
=	Cash flow from investing activities	-6,461	82,733
+	Cash payments from borrowings	300	52,592
-	Cash payments from the repayment of loans	-31,258	-61,374
-	Interest paid	-26,683	-22,304
-	Restructuring expenses paid	0	-6,347
-	Cash payments for equity measures	0	-862
+	Cash receipts from the disposal of treasury shares	0	177
=	Cash flow from financing activities	-57,641	-38,118
-/+	Net changes in cash and cash equivalents	-11,641	7,926
+	Consolidation-related change of cash and cash equivalents	17,425	0
+	Currency-related change of cash and cash equivalents	5,761	5,509
+	Cash and cash equivalents at the beginning of the period	177,097	163,662
=	Cash and cash equivalents at the end of the period	188,642	177,097

117

# **CONSOLIDATED NOTES**

# GENERAL DISCLOSURES AND ACCOUNTING POLICIES

#### 1. GENERAL INFORMATION

SolarWorld AG is a listed corporation domiciled at Martin-Luther-King-Straße 24, Bonn, Germany. SolarWorld AG's Management Board prepared the consolidated statements on March 15, 2016.

SolarWorld group is the largest manufacturer of solar power products outside of Asia. SolarWorld AG and its subsidiaries research, develop, produce and recycle on all levels of the solar value added chain. The focus of operations is on the production and international distribution of high-end solar energy facilities — from rooftop solar systems to components for outdoor solar parks. The products can be used both in the on- and off-grid area.

In accordance with § 315a HGB, SolarWorld AG prepared its consolidated financial statements per December 31, 2015 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 IFRS Interpretations Committee (IFRS IC). 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. Non-mandatory IFRS have not been adopted.

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

#### 2. SIGNIFICANT ACCOUNTING POLICIES

#### 2.1 BASIS OF PREPARATION

The consolidated financial statements have been in principle prepared on the historical cost basis. However, a number of Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities, as explained in the accounting policies below.

Historical cost is generally based on the fair value of the consideration given exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless whether that price is directly observable or estimated using another valuation technique.

In estimating the fair value of an asset or liability, SolarWorld group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for measurements that have some similarities to fair value but are not fair value, such as realizable value in IAS 2 or value in use in IAS 36.

A market price is not always being readily available and a fair value cannot be reliably determined, but must often be calculated based on different measurement parameters. For financial reporting purposes, fair value measurements are categorized into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- · Level 3 inputs are unobservable inputs for the asset or liability.

If the inputs used to measure the fair value of an asset or a liability fall into different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

SolarWorld group recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

The principal accounting policies are set out below. They basically correspond with those principles applied last year except for those stated as an exception from that rule below.

#### 2.2 CHANGES IN ACCOUNTING POLICIES

# First-time mandatory adoption of standards and interpretations for 2015

The following standards and interpretations or substantial amendments became bindingly applicable for the first time in the business year 2015.

• IFRIC 21 - LEVIES. On May 20, 2013 the IASB issued IFRIC 21 "Levies", an interpretation of IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" that was adopted into European law on June 13, 2014. The interpretation determines the accounting for levies imposed by governments, other than income taxes according to IAS 12, and clarifies in particular when an entity should recognize a liability to pay a levy. The interpretation is mandatorily effective for accounting periods beginning on or after January 1, 2014. In the context of the endorsement, the mandatory effective date was deferred to fiscal years beginning on or after June 17, 2014; earlier adoption was permitted. The amendment does not materially affect the consolidated financial statements of SolarWorld AG.

**Improvements to IFRS.** On December 12, 2013, the IASB also issued the annual improvements for the 2011 to 2013 cycle in terms of smaller and less urgent adjustments that were adopted into European law on December 18, 2014. The following selected contents of the collective standard regarding improvements of IFRS had to be taken into account upon preparing the consolidated financial statements for SolarWorld group:

- IFRS 3 Business Combinations: Clarifies that IFRS 3 excludes from its scope the accounting for the formation of a joint arrangement in the financial statements of the joint arrangement itself.
- IFRS 13 Fair Value Measurement: Clarifies that the scope of the
  portfolio exception defined in paragraph 52 of IFRS 13 includes
  all contracts accounted for within the scope of IAS 39 Financial
  Instruments: Recognition and Measurement or IFRS 9 Financial
  Instruments, regardless of whether they meet the definition of
  financial assets or financial liabilities as defined in IAS 32 Financial
  Instruments: Presentation.
- IAS 40 Investment Property: The acquisition of investment property can meet the definition of both the acquisition of an asset, a group of assets or a business combination in the scope of IFRS 3. It is clarified, that in case the conditions of a business combination in the scope of IFRS 3 are met and the business combination includes investment property, the separate application of both standards independently of each other is required.

The amendments are mandatorily effective for accounting periods beginning on or after July 1, 2014. In the context of the endorsement, the mandatory effective date was deferred to fiscal years beginning on or after January 1, 2015; earlier adoption was permitted. The amendments do not materially affect the consolidated financial statements of SolarWorld AG.

In the current period, the option of an earlier adoption of any non-mandatory standards or interpretations has not been used by SolarWorld AG.

#### Standards and interpretations not yet mandatory

The following standards and interpretations have been issued by the IASB. Their adoption has not been mandatory at the present time and must be endorsed partially by the EU:

IFRS 9 - FINANCIAL INSTRUMENTS. On November 12, 2009 the IASB issued the new standard IFRS 9 "Financial Instruments" on the classification and measurement of financial assets. This standard is the first part of the three-part project to completely replace IAS 39 "Financial Instruments: Recognition and Measurement". In accordance with the approach of IFRS 9 financial assets are measured at amortized cost or fair value. The classification to one of the two measurement categories is based on how an entity manages its financial instruments (so called business model) and the contractual cash flow characteristics of the financial assets. On October 28, 2010 the IASB issued requirements on the accounting for financial liabilities which amend IFRS 9 "Financial Instruments" and complete the classification and measurement phase of the IASB's project to replace IAS 39 "Financial Instruments: Recognition and Measurement". With the new requirements, an entity choosing to measure liabilities at fair value will recognize the portion of the change in its fair value due to changes in the entity's own credit risk in other comprehensive income within equity and not in profit and loss. Issuing amendments to IFRS 9 "Financial Instruments" and to IFRS 7 "Financial Instruments: Disclosures" on December 16, 2011, the IASB defers the mandatory effective date of IFRS 9 from January 1, 2013 to January 1, 2015. In addition the amendment provides relief from the requirement to restate comparative financial statements for the effect of applying IFRS 9; earlier application is permitted. Instead, additional transition disclosures have been added to IFRS 7 to help users of the financial statements to understand the effect that the initial application of IFRS 9 has on the classification and measurement of financial instruments. On November 19, 2013 the IASB issued amendments to IFRS 9 "Financial Instruments" (Hedge Accounting and Amendments to IFRS 9; IFRS 7 and IAS 39). The amendments to IFRS 9 establish a new model that represents a substantial overhaul of hedge accounting that will enable entities to better reflect their risk management activities in their financial statements. In addition, extensive disclosures are required. Moreover recognizing fair value changes of liabilities due to credit

rating within equity will be possible to be earlier adopted without applying the complete regulations of IFRS 9. Furthermore the IASB decided to abandon the mandatory date of January 1, 2015; a new date should be decided upon when the entire IFRS 9 project is closer to completion. On July 24, 2014 the IASB issued the final version of IFRS 9 "Financial Instruments". The new version includes revised requirements for the classification and measurement of financial assets and for the first time regulations on the impairment of financial instruments; with the new "expected loss model" losses are recognized earlier because both existing and expected losses are recognized. The new regulations must be applied for fiscal years beginning on or after January 1, 2018. In general they must be applied retrospectively, but various transition options are allowed; earlier application is permitted. The EU has not yet endorsed the standard. Currently, Management is not able to finally assess what impact adoption of the standard will have – if endorsed by the EU in the current version.

#### AMENDMENTS TO IAS 19 - DEFINED BENEFIT PLANS: EMPLOYEE CONTRIBUTIONS.

On November 21, 2013 the IASB issued narrow-scope amendments to IAS 19 "Employee Benefits" titled "Defined Benefit Plans: Employee Contributions (Amendments to IAS 19)" that were adopted into European law on December 17, 2014. The amendments are applicable to recognizing contributions of employees or third parties to defined benefit plans. Hereby it will be allowed to recognize employees' or third parties' contributions as a reduction of current service costs in the period in which the corresponding servicing has been rendered if the contributions are independent of the number of years of employee service. The amendments to IAS 19 are to be applied for accounting periods beginning on or after July 1, 2014. In the context of the endorsement, the mandatory effective date was deferred to fiscal years beginning on or after February 1, 2015; the option of an earlier adoption has not been used by SolarWorld. The amendments do not materially affect the consolidated financial statements of SolarWorld AG.

IMPROVEMENTS TO IFRS. On December 12, 2013, the IASB issued the annual improvements for the 2010 to 2012 cycle in terms of smaller and less urgent adjustments that were also adopted into European law on December 17, 2014. The following selected contents of the collective standard regarding improvements of IFRS had to be taken into account upon preparing the consolidated financial statements for SolarWorld group:

- IFRS 2— Share-based Payment: Amends the definitions of 'vesting condition' and 'market condition' and adds definitions for 'performance condition' and 'service condition' (which were previously part of the definition of 'vesting condition').
- IFRS 3 Business Combinations: Clarifies that contingent consideration that is classified as an asset or a liability shall be measured at fair value at each reporting date.
- IFRS 8 Operating Segments: Requires an entity to disclose the
  judgments made by management in applying the aggregation
  criteria to operating segments. Clarifies that an entity shall only
  provide reconciliations of the total of the reportable segments'
  assets to the entity's assets if the segment assets are reported
  regularly.
- IFRS 13 Fair Value Measurement: Clarifies that issuing IFRS 13 and amending IFRS 9 and IAS 39 did not remove the ability to measure short-term receivables and payables with no stated interest rate at their invoice amounts without discounting if the effect of not discounting is immaterial.
- IAS 16 Property, Plant and Equipment: Clarifies that when an item of property, plant and equipment is revalued the gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount.
- IAS 24 Related Party Disclosures: Clarifies that an entity providing key management personnel services to the reporting entity or to the parent of the reporting entity is a related party of the reporting entity.
- IAS 38 Intangible Assets: Clarifies that when an intangible asset is revalued, the gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount.

The amendments are mandatorily effective for accounting periods beginning on or after July 1, 2014. In the context of the endorsement, the mandatory effective date was deferred to fiscal years beginning on or after February 1, 2015; 2015; earlier adoption is permitted. The amendments do not materially affect the consolidated financial statements of SolarWorld AG.

**AMENDMENTS TO IFRS 11–JOINT ARRANGEMENTS.** On May 6, 2014 the IASB issued amendments to IFRS 11 "Joint Arrangements" clarifying that both the initial and subsequent acquisition of interests in a joint operation that constitutes a business must be accounted for in line with the principles of IFRS 3 "Business Combinations" except where these principles conflict with the guidance in IFRS 11. In addition, the disclosure requirements of IFRS 3 must be met. The amendments are to be applied for fiscal years beginning on or after January 1, 2016; earlier application is permitted. The EU has endorsed the amendments on November 24, 2015. Currently, Management does not expect the amendments to have a material impact on the Group's consolidated financial statements.

AMENDMENTS TO IAS 16 – PROPERTY, PLANT AND EQUIPMENT AND IAS 38 – INTANGIBLE ASSETS. On May 12, 2014 the IASB issued amendments to IAS 16 "Property, Plant and Equipment" and IAS 38 "Intangible Assets" providing additional guidelines for determining an acceptable method of depreciation or amortization. They have been adopted into European law on December 2, 2015. The amendments clarify that revenue-based methods are not appropriate for calculating the depreciation of property, plant and equipment and are only appropriate in limited circumstances for calculating the amortization of intangible assets. The amendments are to be applied for fiscal years beginning on or after January 1, 2016; earlier application is permitted. Currently, Management does not expect the amendments to have a material impact on the Group's consolidated financial statements.

IFRS 15 - REVENUE FROM CONTRACTS WITH CUSTOMERS. On May 28, 2014 the IASB issued the new standard IFRS 15 "Revenue from Contracts with Customers". The purpose of the new standard on revenue recognition is to bring together the large number of existing guidelines contained in various standards and interpretations. At the same time it establishes uniform core principles to be applied to all industries and all types of revenue transactions. A 5-step model is used to determine at which point in time or over which period of time revenues are to be recognized and in what amount. The standard also includes further detailed guidance and extended disclosure requirements. Due to the amendment to IFRS 15 issued on September 11, 2015, the mandatory effective date was deferred from fiscal years beginning on or after January 1, 2017 to fiscal years beginning on or after January 1, 2018. In general it must be applied retrospectively, but various transition options are allowed; early adoption continues to be permitted. The EU has not yet endorsed the standard. Currently, Management is not able to finally assess what impact adoption of the standard will have - if endorsed by the EU in the current version.

AMENDMENTS TO IFRS 10 - CONSOLIDATED FINANCIAL STATEMENTS AND IAS 28 - INVESTMENTS IN ASSOCIATES AND JOINT VENTURES (2011). On September 11, 2014 the IASB issued amendments to IFRS 10 "Consolidated Financial Statements" and IAS 28 "Investments in Associates and Joint Ventures (2011)". The amendments address a well-known inconsistency between the two standards regarding the accounting of the sale or contribution of assets between an investor and its associate or joint venture. When a transaction involves a business in accordance with IFRS 3, a full gain or loss has to be recognized by the investor; when the transaction involves assets that do not constitute a business, only a partial gain or loss has to be recognized. The amendments are effective for fiscal years beginning on or after January 1, 2016; earlier application is permitted. The EU has not yet endorsed the amendments. Currently, Management does not expect the amendments – if endorsed by the EU in the current version – to have a material impact on the Group's consolidated financial statements.

Improvements to IFRS. On September 25, 2014 the IASB issued the annual improvements for the 2012 to 2014 cycle in terms of smaller and less urgent adjustments that have been adopted into European law on December 15, 2015. In the context amendments of four standards were published: IFRS 5 "Non-current Assets held for Sale and Discontinued Operations", IFRS 7 "Financial Instruments: Disclosures", IAS 19 "Employee Benefits" and IAS 34 "Interim Financial Reporting". The amendments are effective for fiscal years beginning on or after January 1, 2016 and have to be applied prospectively or retrospectively depending on the respective amendment; earlier application is permitted. Currently, Management does not expect the amendments to have a material impact on the Group's consolidated financial statements.

**IFRS 16 – Leases.** On January 13, 2016 the IASB issued the new standard IFRS 16 "Leases". IFRS 16 supersedes the existing applicable standard IAS 17 and related interpretations IFRIC 4, SIC-15 and SIC-27. The new standard brings most leases on-balance sheet for lessees under a single model, eliminating the distinction between operating and finance lease. The lessor's accounting model regulated in IAS 17 largely remains unchanged. The new standard is effective for fiscal years beginning on or after January 1, 2019, with earlier adoption permitted if IFRS 15 "Revenue from Contracts with Customers" has also been applied. The EU has not yet endorsed the standard. Currently, Management is not able to finally assess what impact adoption of the standard will have – if endorsed by the EU in the current version.

**AMENDMENTS TO IAS 12 – INCOME TAXES.** On January 19, 2016 the IASB has published final amendments to IAS 12 "Income Taxes" concerning the recognition of deferred taxes for unrealized losses. The amendments clarify the following aspects:

- Unrealized losses on debt instruments measured at fair value and measured at cost for tax purposes give rise to a deductible temporary difference regardless of whether the debt instrument's holder expects to recover the carrying amount of the debt instrument by sale or by use.
- The carrying amount of an asset does not limit the estimation of probable future taxable profits.
- Estimates for future taxable profits exclude tax deductions resulting from the reversal of deductible temporary differences.
- An entity assesses a deferred tax asset in combination with other deferred tax assets. Where tax law restricts the utilization of tax losses, an entity would assess a deferred tax asset in combination with other deferred tax assets of the same type.

The amendments are effective for fiscal years beginning on or after January 1, 2017; earlier application is permitted. The EU has not yet endorsed the standard. Currently, Management is not able to finally assess what impact adoption of the standard will have – if endorsed by the EU in the current version.

AMENDMENTS TO IAS 7 – STATEMENT OF CASH FLOWS. On January 29, 2016 the IASB has published final amendments to IAS 7 "Statement of Cash Flows". The amendments are intended to clarify IAS 7 to improve information to users of financial statements about an entity's financing activities. They are effective for fiscal years beginning on or after January 1, 2017; earlier application is permitted. The EU has not yet endorsed the standard. Currently, Management is not able to finally assess what impact adoption of the standard will have – if endorsed by the EU in the current version.

The following new or amended standards are not expected to have any or any significant impact on the Group's consolidated financial statements and are not presented in detail:

Possible impact on consolidated finacial statements		
None. The standard is available only to first-time adopters of IFRSs.		
None. The amendments address issues that have arisen in the context of applying consolidation exception for investment entities.		
Not expected to have a significant impact. The amendments aim at clarifying IAS 1 to address perceived impediments to preparers exercising their judgement in presenting their final reports. The initiative is made up of a number of smaller measures aimed at improving the presentation and disclosure principles and requirements in existing Standards.		
None. As the amendments to IAS 27 concern an entity's separate financial statements, it does not have any impact on the Group's consolidated financial statements.		
<b>None.</b> SolarWorld group is not engaged in agricultural activities.		

#### Changes in accounting methods

SolarWorld AG has applied all accounting principles endorsed by the EU and compulsory for accounting periods beginning before or on January 1, 2015, if affecting these consolidated financial statements. We refer to our comments stated above.

#### 2.3 BASIS OF CONSOLIDATION AND GROUP STRUCTURE

#### 2.3.1 Subsidiaries

The consolidated financial statements incorporate the financial statements of SolarWorld AG and all domestic and foreign entities (including structured entities). Subsidiaries are fully consolidated once the group has control. Control is achieved when SolarWorld AG:

- · has power over the investee,
- is exposed, or has rights, to variable return from the investment with the investee and
- · has the ability to use its power to affect the returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that the there are changes to one or more of the three elements of control listed above.

Consolidation of a subsidiary begin when SolarWorld AG obtain control over the subsidiary and ceases when the Company loses control over the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of profit or loss and other comprehensive income from the date the Company gains control until the date the Company ceases to control the subsidiary.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with SolarWorld group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions of the Group are eliminated in full on consolidation.

The following additions apply with regard to recognition of project entities that were or are specially established for the construction, operation and marketing of solar parks: Amongst other things, SolarWorld group's operations include the development, construction and marketing of solar parks. For this purpose, special project entities are founded that are fully consolidated in the consolidated financial statements if SolarWorld group controls them in terms of IFRS 10. Deliveries and services rendered to the respective project entity by SolarWorld group within the consolidation period therefore do not result in revenue recognition but instead either result in an increase of inventories through work in progress or finished goods or of fixed assets in the case of external marketing not scheduled in the medium-term. Revenue recognition occurs at the time of deconsolidation, i.e. when SolarWorld group no longer controls the project entity. Since the construction and marketing of solar parks is part of SolarWorld group's operations, deconsolidation of project entities, from an economic point of view, equals the sale of a solar park that is therefore recognized as a revenue transaction on the income statement and shown in the cash flow from operating activities on the cash flow statement.

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

### a) Changes in SolarWorld group's ownership interest in existing subsidiaries

Changes in SolarWorld group's ownership interest in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. In the scope of an equity transaction, the additional acquisition only concerns the allocation of the owners' residual claims. Hence, recognition of assets and liabilities remain unchanged. Within equity, however, a shift in value takes place between majority owners and non-controlling owners.

When the Group loses control of a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between

- the aggregate of the fair value of the consideration received and the fair value of any retained interest and
- the previous carrying amount of the assets (including goodwill), and liablities of the subsidiary and any non-controlling interest.

All amounts previously recognized in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable IFRSs).

#### b) Business combinations

Business combinations are accounted for using the acquisition method. Costs 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. Acquisition-related costs are generally recognized in profit or loss as incurred.

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

Upon initial recognition, goodwill is measured at cost as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree - if any - over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after reassessment, a negative difference arises from the acquisition (badwill), the excess is recognized immediately in profit or loss as a bargain purchase gain.

If the initial accounting for a business combination is incomplete by the end of a reporting period, SolarWorld reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period, or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date. Measurement period cannot exceed one year from the acquisition date.

#### 2.3.2 INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint agreement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint Control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The Group's investments in associates and joint ventures are recognized in accordance with the equity method.

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

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

The financial statements of the investments are prepared as per the same balance sheet date as those of the parent. When necessary, adjustments are made to the financial statements of investments to bring their accounting policies into line with SolarWorld group's accounting policies.

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 investment in an associate or joint venture could be impaired. If this is the case, the difference between the recoverable amount of the investment in an associate or joint venture and the carrying amount of the investment is recognized in profit or loss.

#### 2.3.3 GROUP STRUCTURE

The consolidated financial statements of SolarWorld AG per December 31, 2015 include all entities listed below:



100% ►►► SolarWorld Africa (Pty.) Ltd. — Cape Town, South Africa

100% ►►► Solarparc GmbH — Bonn, Germany

100% >>> Solarparc Projekt VI GmbH & Co. KG — Bonn, Germany

100% ►►► Solarparc Projekt VII GmbH & Co. KG — Bonn, Germany

100% ►►► Solarparc Projekt VIII GmbH & Co. KG — Bonn, Germany

100% ►►► Solarparc Donau I GmbH — Bonn, Germany
100% ►►► Solarparc Donau II GmbH — Bonn, Germany

100% ►►► Go!Sun Verwaltungs GmbH — Bonn, Germany

100% ►►► Solarparc Deutschland I GmbH — Bonn, Germany

100% ►►► Solarparc Diamant Verwaltungs GmbH — Bonn, Germany

100% ►►► Solarparc Brillant GmbH — Bonn, Germany

100% ►►► Solarparc Rubin Verwaltungs GmbH — Bonn, Germany

100% ►►► SolarWorld Ibérica S.L. — Madrid, Spain

100% ►►► SolarWorld Czech s.r.o. — Teplice, Czech Republic

94.23% >>> SolarWorld AG & Solar Holding GmbH in GbR Auermühle — Bonn, Germany

29% ►►► Qatar Solar Technologies Q.S.C. — Doha, Qatar\*

<sup>\*</sup> Consolidated at equity

In January 2015, SolarWorld AG founded a sales company named SolarWorld Japan K.K., located in Tokyo/Japan.

In June 2015, SolarWorld AG founded a further sales company named SolarWorld UK [Salisbury] Ltd., located in Salisbury/UK. On November 4, 2015, the company was renamed to SolarWorld UK Ltd.

In the second quarter of 2015 both Solarparc Projekt VII GmbH & Co. KG and Solarparc Projekt VIII GmbH & Co. KG were founded. The entry in the entities' commercial register took place on April 1, 2015, each.

With contract dated September 3, 2015, Solarparc Projekt V GmbH & Co. KG was sold to a third party investor. The entity was deconsolidated in the reporting period, which made for revenue of  $k \in 2,105$ .

SolarWorld Czech s.r.o., Teplice/Czech Republic, a 100 percent subsidiary of SolarWorld AG, Bonn, is currently in liquidation. The liquidation was entered in the entity's commercial register per May 1, 2015.

Liquidation of Solar World Schalke GmbH has been completed in the reporting period and the company was deleted from the commercial register on May 29, 2015.

SolarWorld AG & Solar Holding GmbH in GbR Auermühle (hereinafter referred to as "Auermühle") was fully consolidated so far due to the existing option granted to SolarWorld AG or Solar Holding Beteiligungsgesellschaft mbH respectively to acquire or sell further 45 percent of the shares in the entity. In the fourth quarter of 2015 SolarWorld AG, however, decided to sell its shares in the entity or Auermühles' property held as business asset respectively ("transaction"), in order to improve the liquidity position of the SolarWorld group. Due to the changed circumstances and the measures taken in this respect, SolarWorld AG lost the ability to control Auermühle. Consequently, the company was deconsolidated as of November 30, 2015. From that date, the investment in Auermühle had to be qualified as a joint venture in the sense of IFRS 11.16. Thus, the investment in Auermühle pursuant to IFRS 11.24 was accounted for using the equity method in accordance with IAS 28.

Finally, the transaction was carried out by way of an asset deal with effect from December 31, 2015. This has led to an increase of SolarWorld AG's shares in Auermühle to 94.23 percent and SolarWorld AG resumed control over Auermühle. Consequently, Auermühle was fully consolidated as of December 31, 2015 again.

SolarWorld Industries Sachsen GmbH, Solarparc GmbH, SolarWorld Innovations GmbH, SolarWorld Industries Deutschland GmbH, Solarparc Ziegelscheune GmbH and SolarWorld Solicium GmbH utilize the disclosure and preparation facilitations provided by § 264 para. 3 HGB.

#### 2.4 CURRENCY TRANSLATION

The functional currency of SolarWorld group is the Euro (€). Financial statements of the consolidated companies that are presented in foreign currencies are translated into Euro (€) in accordance with the concept of functional currency as set forth by IAS 21. The functional currency of foreign companies is determined by the primary economic environment in which the company principally generates and uses means of payment. Within SolarWorld AG, functional currency basically equals the domestic currency with the exemption of SolarWorld Asia Pacific PTE Ltd. and Qatar Solar Technologies Q.S.C. whose functional currency is US\$.

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

The following exchange rates were used for currency translation:

		Closing rate		Average rate	
1 € =		Dec 31, 2015	Dec 31, 2014	2015	2014
U.S.	USD	1.09	1.21	1.11	1.32
South Africa	ZAR	16.99	14.04	14.17	14.34
Czech Republic	CZK	27.02	27.74	27.28	27.55
Japan	JPY	131.12	n/a	134.31	n/a
U.K.	GBP	0.74	n/a	0.73	n/a

## 2.5 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 estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results in future periods may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The following substantial judgments, estimates and assumptions were made when the Group's financial statements in 2015 were prepared:

The consolidated financial statements are based on the assumption of a going concern.

Furthermore, the most significant assumptions and estimations concern the measurement of inventories, usability of deferred tax assets, impairment tests for fixed assets, the accounting of long-term purchase agreements for silicon concluded in the past and measurement of provisions, especially provisions for litigation risks and warranties. These assumptions and estimations are based on premises that are, in turn, based on the respective state

of knowledge currently available. However, these circumstances and assumptions regarding future developments can change due to market fluctuations and the market situation as well as legal assessments to the contrary that lie outside the Group's influence.

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

The Group's impairment tests are based on calculations using the discounted cash flow method. The cash flows are derived from the finance plan of the next three years whereas future expansion investments that are not yet being implemented and will increase the earning power of the tested cash-generating unit are not included. The recoverable amount greatly depends on the discount rate used in the scope of the discounted cash flow method as well as on the expected future cash inflows and the growth rate used for extrapolation. More details on the basic assumptions for determining the recoverable amount for the cash-generating unit are provided in note 8.

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

With regard to long-term purchase agreements for silicon concluded in the past and the respective prepayments made, assumptions are made that relate to the legal validity of the agreements and, as regards to their extent, on the measurement of such prepayments. Such assumptions are subject to considerable uncertainties and are essentially based on estimations of the company's legal consultants, on market data and our own estimations.

With respect to the legal validity of the agreements, the company assumes, based on legal opinions prepared by third parties that purchase commitments from contracts in a total amount of some € 0.5 billion (calculated on the basis of originally agreed prices) most probably violate EU anti-trust laws and therefore are null and void. Thus, in the accounting, the company neither set up a provision for onerous contracts in terms of IAS 37 nor deducted it from prepayments made. With regard to the accounting of the respective prepayments made (carrying amount € 81.3 million), the company assumes that it is unrealizable. The prepayments were therefore completely written off already in the past. We refer to our comments in note 42.

Due to uncertainties in the scope of legal disputes as well as possible changes of strategy, the accounting and measurement of the long-term contracts is subject to periodic reestimation upon changing circumstances over time. The recognition and calculation of the impairments as at the balance sheet date is based on a scenario that the Management Board considers the most probable under the circumstances at balance sheet date.

The warranty provision is set up for specific individual risks, for the general risk of claims due to statutory warranties and performance guarantees granted with regard to sold solar modules. The latter are granted for a period of 25 and 30 years. Since SolarWorld AG has been producing and selling solar modules for less than 25 years, it is only partially possible to fall back on experience regarding the calculation of the performance guarantee provision. In addition, assumptions and estimations are required that are also subject to uncertainties. Their modification due to further 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 2.21 and 34.

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. Due to the loss history of the fiscal unity headed by SolarWorld AG and of SolarWorld Americas Inc., no deferred tax assets for tax loss carryforwards of these entities were recognized.

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

To the extent to that the fair value of financial assets and liabilities recognized on the balance sheet cannot be determined by way of active market data, it is primarily determined in application of measurement procedures including the discounted cash flow method. If possible, the factors included in the model are based on observable market data. For further details, we refer to note 40.

Expenses from postemployment defined benefit plans and the present value of pension obligations are determined on the basis of actuarial computations. The actuarial measurement is carried out on the basis of assumptions regarding discount rates, mortality and future increase in pensions. Due to the complexity of measurement, the assumptions used as a basis and their long-term nature, a defined benefit obligation shows very sensitive reactions to any modifications of these assumptions. All assumptions are subject to evaluation at each balance sheet date. When determining the appropriate discount rate, management keeps to the interest rates of corporate bonds with at least sound creditworthiness. The mortality rate is based on publicly accessible mortality tables. Further details regarding the applied assumptions can be found in notes 2.20 and 34.

#### 2.6 INTANGIBLE ASSETS

Intangible assets with finite useful lives are capitalized at cost and amortized on a straight-line basis generally over a period of 3 to 15 years, depending on their estimated useful lives. At SolarWorld group these mainly include concessions, industrial property and similar rights and assets as well as licenses in such rights and assets. Intangible assets with indefinite useful lives do not exist. Expenditure on research incurred upon generation of intangible assets is immediately recognized as an expense. The same applies as regards development expenditure because research and development are iteratively linked and reliable severability therefore generally does not exist.

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

All expenses for exploration and evaluation of natural resources are recorded as such and separately recognized as intangible assets. To the extent to that indications exist that point to impairment in terms of IFRS 6.20, the intangible asset is assessed for potential impairments. At balance sheet date, such indications were not at hand. After successful exploration and evaluation, the intangible

asset is subject to regular amortization for the duration of the production period. Depreciation of property, plant and equipment used for exploration and evaluation purposes is part of the expenses that are recognized as intangible asset.

Goodwill – especially from capital consolidation – is subjected to an annual impairment test in accordance with IFRS 3 and IAS 36 and 38. Impairment tests are also conducted if individual indications imply the necessity. We refer to our comments in note 2.8.

#### 2.7 PROPERTY, PLANT AND EQUIPMENT

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

Borrowing costs that can be directly attributed to acquisition, construction or production of a qualifying asset are capitalized as part of the cost of the respective asset if a period of at least one year is required to prepare the asset for its intended use or sale. All other borrowing costs are recognized as an expense in the period in which they are incurred. Borrowing costs are interest and other costs incurred by an enterprise in connection with the borrowing of funds. As a basic rule, the Group capitalizes borrowing costs for qualifying assets. As in the prior year, however, no qualifying assets were identified in the annual period 2015. Hence, all borrowing costs were recognized as expenses.

Ongoing maintenance and repair expenses that do not constitute material replacement investments are recognized as expense right away. Where 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 34.

With respect to own work capitalized we refer to note 4.

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

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

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

Investment grants and subsidies do not reduce the respective asset's cost but are subject to deferral on the liabilities side of the balance sheet. We refer to notes 2.19 and 33.

# 2.8 IMPAIRMENTS OF PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLE ASSETS

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

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

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

• For determining the value in use, the estimated future cash flows are discounted with a pre-tax interest rate, which considers both the current market assessment through time value of money and risks concerning the asset to the extent to that they are not yet accounted for in the scope of the cash flow estimation. The computations are based on forecasts that are based on financial plans for the next three years as authorized by management. This planning horizon shows the assumptions for short- and medium-term market developments. Free cash flows were discounted at weighted average costs of capital after corporation taxes between 10.8 percent and 11.0 percent (2014: 10.3 percent and 10.6 percent) at the balance sheet date. This discount rate is based on the risk-free interest rate determined in accordance with the reporting date-related interest structure at the bond market for which a value between 1.29 percent and 2.76 percent (2014: 1.17 percent and 2.51 percent) was applied and a general market risk premium before personal taxes – unchanged compared to the prior year - between 5.80 percent and 6.25 percent. Data of a representative peer group, in which SolarWorld AG is not considered because of the influence of the restructuring on past data from which the beta factor is derived, were used for determining the beta factor, borrowed capital surcharge and capital structure.

• The fair value less costs to sell was calculated on the basis of current market conditions and a general commercial use by market participants. For parts of fixed assets, expert estimates on the fair value less costs to sell were at hand. Evaluating machinery, prices and price indices for commercial products (based on the original value and current replacement value) as well as the variable factors time value and utility value were included in particular. The time value factor comprises the loss in value attributed to the age of the object as well as current market trends. The utility value factor is above all determined by the condition of the machinery as well as its location and its time and degree of utilization. For marketing assumptions, several scenarios were considered.

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

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

With regard to the results of the impairment tests conducted during the reporting year, we refer to note 8.

#### 2.9 INVESTMENT PROPERTY

Investment property is initially measured at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met and excludes the costs of day-to-day servicing of an investment property. In the scope of subsequent measurement, investment property is recognized at cost less straight-line depreciation and impairment expenses. With regard to measurement bases and useful lives we refer to note 2.7.

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 2.7 until the time of the change of use.

#### 2.10 OTHER NON-CURRENT ASSETS

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

#### 2.11 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-infirst-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 24.

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.

#### 2.12 TRADE RECEIVABLES

Trade receivables are accounted for at their nominal value. If there is doubt concerning the recoverability of the debt, the receivables are recognized at lower realizable value. In part, allowances are made using a contra account. The decision whether an allowance is made via contra account or by directly reducing the carrying amount depends on the probability of the expected loss. Receivables stated in foreign currencies are accounted for at closing rate.

Receivables from construction contracts will be accounted for in accordance with the percentage-of-completion-method as set forth by IAS 11. We refer to our statements in note 2.23.

#### 2.13 OTHER RECEIVABLES AND ASSETS

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

#### 2.14 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.

In cases where trade date and settlement date of purchases or sales of financial assets do not coincide, the trade date is used for initial recognition or derecognition.

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

Subsequent measurement of financial assets depends on their categorization.

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

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

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

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

The fair value of financial instruments traded in active markets is determined by the market price at balance sheet date without any deduction for transaction costs. The fair value of financial instruments not traded in an active market is determined in application of appropriate measurement methods. For further details on the applied measurement methods, we refer to note 40.

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

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

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

#### 2.15 LIQUID FUNDS

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

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

# 2.16 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.

#### 2.17 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 2.18 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.

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

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

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

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

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

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

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

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

At initial recognition and in subsequent measurement, derivative financial instruments are recognized at fair value. The recognized fair values of traded derivative financial instruments equal the market prices. Derivative financial instruments that are not subject to trade are calculated using accepted measurement methods based on discounted-cash-flow-analyses and by taking recourse to current market parameters. We refer to note 40.

#### 2.19 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. Here income-increasing reversals of the accrued investment grants occur income tax exempt to the extent to which they result from tax-free 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.

#### 2.20 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.

Two of SolarWorld AG's subsidiaries have defined benefit plans. In one of the subsidiaries the insolvency protection is secured via the pension insurance association (Pensionssicherungsverein). Plan assets do not exist. In the other subsidiary, there are plan assets pursuant to IAS 19. Pension provisions are measured in accordance with the projected unit credit method for defined benefit plans as required under IAS 19. The interest proportion included in the pension expenses is recognized in the item "interest and similar financial expenses".

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

#### 2.21 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 34.

If a provision cannot be set up because some criteria are not met while the possibility of a claim is all but remote, the respective obligations are recognized as contingent liabilities. In this context, we refer to note 42.

Provisions for expenses in connection with warranties 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. The original estimation of expenses in connection with warranties is subject to examination on a regular basis; in the reporting year it led to a change in accounting estimate.

Estimations used to measure warranty provisions were refined on the basis of improved experience. Specifically, the refinement consisted of adjustments regarding the input parameters cost structure, number of customer complaints and discount rate. The positive impact of this change in estimation amounted to  $\ensuremath{\in}$  10.9 million and has been recognized in other operating income in the reporting period.

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

Provisions for restoration obligations are recognized for contractually agreed obligations and are measured with the future expected costs for restoration.

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

#### 2.22 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.

#### 2.23 REVENUE AND EXPENDITURE RECOGNITION

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

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

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

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

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

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 calculation 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.

#### **2.24 TAXES**

#### a) Current taxes on income

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

#### b) Deferred taxes

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

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

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

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

The carrying amount of the deferred tax assets is subject to inspection at each balance sheet date and reduced to the extent to that it is no longer probable that 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 at the tax rates anticipated to be valid in the period in which the asset is realized or a liability is paid. The tax rates (and tax laws) effective at balance sheet date are used as a basis. Future tax rate changes are taken into account if, in the scope of a legislative procedure, substantial prerequisites for its future applicability are met.

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

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

#### c) VAT

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

- If VAT incurred upon the acquisition of assets or the utilization of services cannot be claimed by the tax authority, the VAT is recognized as part of cost of the asset or part of expenses.
- Receivables and liabilities are recognized with the respective VAT amounts

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

#### **COMMENTS ON THE INCOME STATEMENT**

#### 3. REVENUE

Revenue and its allocation to the business segments and regions can be taken from segment reporting (note 15) in these consolidated notes. Consolidated revenue consist of the following products and services:

in k€	2015	2014
Module- and assembly kit sales	737,788	550,345
Cells/wafers	11,555	8,214
Power generation	5,446	5,870
Project proceeds	5,170	3,458
Other revenue	3,506	5,495
Total	763,465	573,382

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

Other than in the prior year, ongoing projects exist at balance sheet date, the revenue of which was accrued in accordance with the POC-method pursuant to IAS 11. At balance sheet date, this makes for the following receivables resulting from business transactions in 2015:

in k€	2015	2014
Aggregate amount of costs incurred and recognized profits	2,958	0
Advances received/payments from partial billing	-1,138	0
Total	1,820	0
Receivables from construction contracts (note 25)	1,820	0

Other revenue primarily includes income from the operational management of solar and wind power plants, income from the sale of other intermediate products and income from recycling activities.

#### 4. OWN WORK CAPITALIZED

As in the prior year, own work capitalized mainly results from the implementation of a new ERP system.

#### 5. OTHER OPERATING INCOME

in k€	2015	2014
Income from other trade business	28,688	27,572
Gains from currency translation	26,244	11,631
Reversal of provisions and liabilities	22,056	13,096
Income from grants for research and development	8,015	7,373
Reversal of accrued investment grants	4,949	4,813
Income from deconsolidation	2,385	0
Income from revaluation of inventories	2,289	0
Income relating to other periods	1,296	1,977
Rental income	767	1,066
Compensation payments	51	3,377
Gain resulting from a business combination (badwill)	0	136,522
Reversal of advances received	0	18,279
Income from sale of photovoltaic operation	0	907
Miscellaneous other operating income	5,834	6,171
Total	102,574	232,784

Other trade income primarily results from sales of commodities, supplies and merchandise that do not constitute a component of ordinary activities. These are offset by corresponding other operating expenses (note 9) in the amount of  $\in$  27,739k (prior year  $\in$  27,291k).

Exchange rate gains are offset by exchange rate losses of  $\in$  19,094k (prior year  $\in$  4,175k) which are recognized in other operating expenses (note 9).

The increase in income from reversal of provisions and liabilities is attributable primarily to the reversal of warranty provisions. Please also refer to our comments in note 34.

With regard to the income from deconsolidation, please refer to note 2.3.3.

Research and development grants received are subject to a number of requirements. In accordance with our knowledge today, all of these requirements will be met. Hence, repayment obligations are not expected to arise.

The gain resulting from a business combination shown in the prior year resulted from the acquisition of a large part of the production lines and other assets from Bosch Solar Energy AG in Arnstadt, Thuringia, by SolarWorld Industries Thüringen GmbH, a wholly owned subsidiary of SolarWorld AG, Bonn, by way of an asset deal.

In the prior year, income from the reversal of received customer advances resulted from the lapse of the obligation to credit advances for wafer supplies against future supplies.

Prior year's compensation payments included in particular insurance payments for damages caused by a business interruption.

Income from sale of photovoltaic operation has been generated by Solarparc GmbH from the sale of its photovoltaic operation to a third party investor in the prior year.

#### 6. COST OF MATERIALS

in k€	2015	2014
Cost of commodities, supplies and merchandise	486,579	396,883
Cost of purchased services	32,564	26,055
Total	519,143	422,938

#### 7. PERSONNEL EXPENSES

in k€	2015	2014
Wages and salaries	135,215	119,078
Social security and pensions	22,774	19,202
Total	157,989	138,281

The increase in personnel expenses mainly resulted from the integration of the production in Arnstadt, Germany and the headcount growth at our site in Hillsboro due to the expansion of production there.

#### 8. AMORTIZATION AND DEPRECIATION

#### a) Regular amortization and depreciation

The combination and classification of regular amortization and depreciation for intangible assets, property, plant and equipment and investment property of € 44,966k (prior year € 41,609k) can be taken from the fixed asset movement schedule. We refer to note 16.

# b) Impairment test for property, plant and equipment and intangible assets and non-scheduled amortization and depreciation

Following the successful financial restructuring, SolarWorld has returned to the growth path in the reporting period. However, the solar industry remains in a state of consolidation, even if tendencies for a trend reversal in market are recognizable. Hence, we assessed possible impairments of all assets on the lowest possible aggregation level.

In the reporting period, there was no need for an impairment of property, plant and equipment and intangible assets (prior year: an impairment amounting to  $\in$  3.8 million). Prior year's impairment losses were not offset by any non-scheduled reversals of accrued investment grants.

As in the prior year, no reversals of impairment losses on property, plant and equipment were recorded in the reporting period.

#### aa) Basic assumptions for the calculation of the recoverable amount

#### Value in use

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

- · Continuation of the trend in growth of sales
- On short-term predominantly stable, in medium term differentiated by markets – slightly declining sales prices
- Further increase in the efficiency levels of solar cells
- · further reduction of material costs ratio
- · Increased productivity and production capacity utilization

In consideration of the on-going continuous growth of revenue as well as, although the market situation is currently still characterized by overcapacities, an improvement of said market situation, an earnings level extrapolated with a growth rate of 1.0 percent on the basis of the last detailed planning year is considered in the free cash flows in the period of perpetuity.

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

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

**GROSS PROFIT MARGINS.** Gross profit margins result from the scheduled transfer and sales prices and the planned cost development. For the development of step costs, we assumed an output quantity that does not include expansion investments. In addition, we expect increases in productivity and mainly decreases in cost of materials (in part cyclical increase in commodity prices). Over the course of the next two years, SolarWorld AG expects the market prices for solar modules to stabilize or fall slightly and a cyclical development of sustainable improvements in the level of earnings.

**DEVELOPMENT OF PRICES FOR COMMODITIES AND MATERIALS.** The estimations include the published price indices for important commodities like silicon and silver. Actual past developments of commodity and

material prices are used as an indicator for future price developments and - to the necessary extent – amended by management's estimations.

**ASSUMPTIONS REGARDING OUTPUT QUANTITY.** For the determination of the value in use in the scope of the impairment tests, SolarWorld AG assumes an almost full utilization of production capacity in the annual periods 2016 and 2018. An increase is expected with respect to the output quantity in watt peak due to technological progress (increasing efficiency) and efficiency increase programs.

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

**ESTIMATIONS OF THE SUSTAINED GROWTH RATE.** Unchanged to the prior year, the growth rate used as a uniform basis in the phase of sustained growth amounts to 1.0 percent for all CGUs.

#### Fair value less costs to sell

Calculations of the fair value less costs to sell for parts of machinery and equipment as at the qualifying date of the financial statements are in principle based on the comparative value method and thus on market prices, comparative transactions or comparative multipliers. When no comparative values were available, the asset value method was applied. Value assessment derives from replacement values less depreciation and reductions because of economic or technical excess of age. The earnings value method was not used for the value assessment of machinery, because a reliable forecast of future earnings is not possible due to the particularities in the solar industry, above all the discontinuation of incentives and aggressive competition by state-subsidized providers from China.

#### bb) Results of impairment tests

In the reporting period no recognition of an impairment loss was necessary. In the prior year an impairment loss of  $\in$  0.7 million was recognized in the CGU "Wafer USA" that produces mono-crystalline wafers at the Hillsboro (Oregon, USA) site and that is part of the "Production U.S." segment.

In the reporting period, no impairment charges (prior year: impairment charges of  $\in$  3,138k) had to be recognized for individual assets due to a revaluation of its future usability either.

#### 9. OTHER OPERATING EXPENSES

in k€	2015	2014
Expenses incurred in connection with other trade business	27,739	27,291
Outside staff expenses	24,926	15,865
Selling expenses	19,738	14,642
Losses from currency translation	19,094	4,175
Maintenance expenses	16,829	14,624
Legal fees, consultancy and audit expenses	10,280	12,837
Marketing expenses	6,528	8,014
Data processing expenses	4,983	3,942
Travel expenses	4,900	4,231
Expenses for insurances and fees	3,580	3,665
Rent and lease expenses	3,347	2,873
Research and development expenses (third party)	3,141	2,525
Expenses from sewage and waste disposal	3,004	2,265
Other taxes	2,971	2,173
Expenses relating to other periods	2,799	2,795
Expenses from additions to warranty provision	1,750	1,923
Expenses for phone, stamps and internet	1,689	1,510
Expenses from derivative financial instruments	1,192	312
Losses from disposal of assets held for sale	444	1,514
Expenses from the addition to other provisions	60	4,189
Impairment losses on prepayments and repayment claims	0	30,321
Miscellaneous other operating expenses	17,462	13,211
Total	176,456	174,898

Exchange rate losses are offset by exchange rate gains of  $\le 26,244k$  (prior year  $\le 11,631k$ ) which are recognized in other operating income (note 5).

Rent and lease expenses include minimum lease payments from operating lease agreements in an amount of  $\in$  1,561k (prior year  $\in$  1,919k).

Expenses relating to other periods primarily concern a value adjustment on claims from electricity tax refunds according to the German Electricity Tax Act in amount of € 1,539k. In the prior year, it mainly included an adjustment on accrued investment subsidies that were subject to adjusted notices in that period.

The impairment loss or loss of prepayments reported in the prior year exclusively resulted from the remeasurement or renegotiation of long-term silicon purchase agreements concluded in the past and prepayments made in this respect. We refer to our comments in note 2.5.

In the reporting period, legal fees, consultancy and audit expenses are characterized by consultancy expenses in connection with the introduction of new ERP software. In the prior year legal fees, consultancy and audit expenses to a large extent contained expenses for the financial restructuring completed in 2014. The anti-dumping complaint of SolarWorld in the U.S. had another significant impact on prior year's legal fees, consultancy and audit expenses.

#### 10. RESEARCH AND DEVELOPMENT EXPENSES

Research and development costs of SolarWorld group were accounted for a total of  $\le$  23,339k (prior year  $\le$  28,995k) in the reporting period.

#### 11. FINANCIAL RESULT

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

in k€	2015	2014
Income from investments measured at equity	0	20
Expenses from investments measured at equity	-12,877	-9,598
Total	-12,877	-9,578

In the reporting year, expenses from investments measured at equity concern Qatar Solar Technologies Q.S.C. and, for a one month period, Auermühle (prior year exclusively concerned Qatar Solar Technologies Q.S.C.). With regard to Auermühle, please refer to note 2.3.3.

#### b) Interest and similar income

in k€	2015	2014
Interest income	77	103
Other financial income	51	393
Total	128	496

Income from interest includes interest from interest-bearing securities, fixed term deposits and other bank balances categorized as "loans and receivables".

#### c) Interest and similar expenses

in k€	2015	2014
Interest expenses	27,568	30,532
Other financial expenses	1,119	7,821
Total	28,687	38,353

Interest expenses exclusively consist of interest payable for financial liabilities categorized as "measured at amortized cost". They essentially result from credit facilities and bonds newly issued within prior year's financial restructuring and in the prior year additionally from old financial liabilities that existed prior to the completion of the financial restructuring process.

In the prior year, other financial expenses included expenses in connection with the restructuring of financial liabilities from compensation and restructuring fees for creditors in an amount of  $\leqslant$  6.347k.

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€	2015	2014
Net gains and losses from		
financial assets and financial liabilities designated as measured at fair value	-598	-988
financial assets held for trading	0	-103
financial liabilities measured at amortized costs	0	555,726
Gains/losses from currency translation	1,340	3,074
Total	742	557,709

As in the prior year, the net result of the category "designated at fair value through profit or loss" is not influenced by changes of the credit risk.

In February 2014, the financial restructuring of SolarWorld AG was finalized. As a result, the financial liabilities of SolarWorld AG were reduced from around  $\in$  1 billion by  $\in$  570 million to  $\in$  427 million and the financial restructuring which began in January 2013 was completed. The resulting restructuring profit of  $\in$  555.7 million was recognized and disclosed in other financial result.

Derivatives that are part of a hedging relationship are not taken into account when it comes to the presentation of net gains and losses. Derivatives that are not accounted for as hedging instruments are included in the measurement category "financial assets held for trading".

#### 12. INCOME TAXES

The following chart shows the composition of recognized tax expenses and income:

in k€	2015	2014
Actual domestic tax income (-)/ expenses (+)	-15	2,642
Actual foreign tax expenses	759	431
Total actual tax expenses	744	3,073
Deferred domestic tax income (-)/expenses (+)	-12,139	105,393
Deferred foreign tax income/ expenses	-168	19
Total deferred tax income/ expenses	-12,307	105,412
Total recognized tax result	-11,563	108,485

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

Both in the reporting period and in prior years, tax losses were incurred by the German entities included in the fiscal unity headed by SolarWorld AG as well as in the U.S. entities. IAS 12 sets high standards when it comes to recognizing deferred taxes on loss carryforwards if there is a recent loss history. These requirements were not met at reporting date. Thus, as in the prior year, no deferred tax assets were set up with regard to loss carryforwards of the German fiscal unity as well as of the U.S. entities in 2015.

In the fiscal unity headed by SolarWorld AG the trade tax loss carry-forwards amount to € 37 million per December 31, 2015. Corporate tax loss carryforwards do not exist. The loss carry forwards of the German fiscal unity are generally not subject to expiration.

With regard to "Federal tax", the tax loss carryforwards of the U.S. entities amount to an equivalent of some € 639 million (prior year € 574 million). They can be offset with tax gains until at least 2024 and will then gradually be forfeited in the years 2025 to 2035. These loss carryforwards concern some € 198 million (prior year € 178 million) in deferred tax assets. With regard to "State tax", the tax loss carryforwards amount to some € 581 million (prior year € 550 million) and concern the Federal states of California € 242 million (prior year € 229 million), Oregon € 307 million (prior year € 299 million) and other states € 32.3 million (prior year € 21.7 million). In California, they can be offset with tax gains until at least 2018. An amount of roughly € 38 million (prior year € 35 million) will then gradually be forfeited in the years 2019 to 2021. The remaining € 204 million (prior year € 194 million) will forfeit in 2035. In Oregon, the loss carryforwards will gradually be forfeited starting in 2022. In the other states, the loss carryforwards of € 32.3 million (prior year € 21.7 million) will be forfeited starting in 2025. Overall, deferred tax assets of some € 48 million (prior year € 46 million) are attributable to these loss carryforwards.

The following chart shows non-netted and netted deferred tax assets and liabilities with regard to accounting differences in the different balance sheet items and tax loss carryforwards:

in k€	Deferred t	ax assets	Deferred tax liabilities		
	Dec 31, 2015	Dec 31, 2014	Dec 31, 2015	Dec 31, 2014	
Intangible assets and property, plant and equipment	96,985	122,295	23,031	27,151	
Other non-current assets	0	0	17,285	10,284	
Current assets	6,089	7,577	2,141	1,973	
Assets held for sale	156	0	250	689	
Accrued investment grants	666	997	489	696	
Other non-current liabilities	3,601	3,636	28,500	29,253	
Current liabilities	12,218	10,270	2,351	4,366	
Tax loss carryforwards	159	177	0	0	
Allowances on deferred tax assets	-93,622	-123,381	0	0	
Total	26,252	21,571	74,047	74,412	
Offsetting	-23,980	-20,004	-23,980	-20,004	
Recognized deferred taxes	2,272	1,567	50,067	54,408	

At reporting date, as in the prior year no deferred tax assets and no deferred tax liabilities were recognized in equity due to the lack of hedging relationships.

As in the prior year, no deferred tax liabilities for temporary differences in connection with investments in subsidiaries or associates in accordance with IAS 12.39 were recognized per December 31, 2015. The corresponding temporary differences make for a total of  $\leqslant$  11,945k (prior year  $\leqslant$  10,627k).

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

in k€	2015	2014
Result before taxes	-44,845	572,649
Expected income tax rate (incl. trade tax)	30.0%	30.0%
Expected result from income tax	-13,454	171,795
Deviating domestic and foreign tax burden	948	-2,043
Actual taxes relating to other periods	158	1,552
Taxes from non-deductible expenses	1,233	1,374
Tax reductions due to tax-exempt income	-1,699	-18,893
Effect from gain resulting from a business combination (badwill)	58	-41,680
Utilization of deferred tax assets impaired in previous years	-3,301	-10,740
Allowances on deferred tax assets	-621	3,670
Subsequent taxation as per § 2a EStG	0	0
Other deviations of tax expenses	5,114	3,450
Recognized income tax result	-11,563	108,485
Effective income tax rate	25.8%	18.9%

#### 13. FARNINGS PER SHARE

Earnings per share are calculated as ratio of the consolidated net result and the weighted average of the number of shares in circulation during the business year. As in the prior year, the key figure "diluted earnings per share" was not applicable as option rights or conversion privileges are not outstanding. The consolidated result for the year results exclusively from continued operations. The weighted average of the shares in circulation used as a basis for the determination of earnings per share was recalculated per reporting date and now amounts to 14,896,000 (prior year 12,794,495).

#### 14. 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 or allocated to cost of non-financial assets and the profits and losses not shown through profit or loss including any tax effects are presented in the statement of comprehensive income, no further disclosures are required at this point.

#### 15. SEGMENT REPORTING

#### a) Segment disclosures

The presentation of segment reporting follows the "full management approach". As in the prior year, the following reportable segments were identified:

- · Production Germany,
- · Production U.S.,
- Trade

This is due to SolarWorld AG's prevailing internal organization, reporting and steering structure that focuses on the production and distribution of solar systems and solar modules. The greater objective of the Group is to increase the existing synergy and efficiency potentials of the entire value added chain and thus achieve strategic competitive advantages for the marketing of solar systems.

For the purpose of the segment reporting the operating segments "Production Freiberg" and "Production Arnstadt" have been aggregated to form the aforementioned reportable operating segment "Production Germany". Each of the two production segments combines regionally related and fully integrated manufacturing activities in Germany and the U.S. and each include the manufacturing areas of the entire value added chain.

The operating segment "Trade" comprises the worldwide distribution of solar systems and solar modules, the sale of wafers and cells and the operations of Solarparc GmbH.

The category "all other segments" includes various business activities of the Group that did not materially affect the Group's financial position and financial performance in 2015.

As in the prior year, the accounting principles applicable for the consolidated entity also apply for the individual segments.

#### INFORMATION ON OPERATING SEGMENTS FOR THE REPORTING PERIOD 2015

in m€	Production Germany	Production U.S.	Trade	All other segments	Reconciliation	Consolidated
Revenue						
External revenue	6	2	755	0	0	763
Inter-segment revenue	436	240	138	2	-816	0
Total revenue	442	242	893	2	-816	763
EBITDA	11	9	9	9	3	41
Scheduled depreciation	-26	-11	-2	-6	0	-45
Operating result (EBIT)	-15	-2	7	3	3	-4
Financial result						-41
Result before taxes on income	• • • • • • • • • • • • • • • • • • • •	***************************************	•••••••••••••••••••••••••••••••••••••••			-45
Taxes on income			· ·			12
Result from continued operations	• • • • • • • • • • • • • • • • • • • •		•••••••••••••••••••••••••••••••••••••••			-33
Consolidated net result	• • • • • • • • • • • • • • • • • • • •	***************************************			***************************************	-33
Material non-cash income	9	6	13	3		31
Material non-cash expenses	-2	-2	-1	0		-5

#### INFORMATION ON OPERATING SEGMENTS FOR THE REPORTING PERIOD 2014

in m€	Production Germany	Production U.S.	Trade	All other segments	Reconciliation	Consolidated
Revenue						
External revenue	13	0	560	0	0	573
Inter-segment revenue	330	175	4	14	-523	0
Total revenue	343	175	564	14	-523	573
EBITDA	121	-9	-13	11	-2	108
Scheduled depreciation	-25	-9	-2	-6	0	-42
Impairment charges	0	-4	0	0	0	-4
Operating result (EBIT)	96	-22	-15	5	-2	62
Financial result						511
Result before taxes on income	•	•••••	•••••••••••••••••••••••••••••••••••••••	•••••••••••••••••••••••••••••••••••••••	•••••	573
Taxes on income						-109
Result from continued operations	•	••••••	•••••••••••••••••••••••••••••••••••••••	•••••••••••••••••••••••••••••••••••••••		464
Consolidated net result	•		•••••••••••••••••••••••••••••••••••••••			464
Gain resulting from a business combination (badwill)	137	0	0	0		137
Other material non-cash income	22	0	0	1		23
Material non-cash expenses	-36	-1	-2	0	•	-39

With regard to inter-segment revenue, the reconciliation column includes eliminations from expense and income consolidation.

Reconciliation of the balance of the segment results to the consolidated result is mainly attributable to intra-group profit elimination and other immaterial consolidation entries affecting profit or loss.

Revenue of the category "All other segments" in an amount of € 2 million (prior year € 14 million) primarily includes intra-group income from the rental of PV installations. In the prior year, it primarily resulted from intra-group research and development services.

The material non-cash income includes the income from reversal of provisions and liabilities, the income from deconsolidation, the income from revaluation of current assets and reversals of accrued

investment grants. The prior year's figure also included reversals of advances received. The material non-cash expenses primarily comprise value adjustments on inventories and receivables. The prior year's figure also included value adjustments on prepayments made.

#### b) Disclosures on group level

With respect to the breakdown of revenue in accordance with products, we refer to the information provided in note 3.

No external customer accounts for more than 10 percent of SolarWorld group's revenue at once.

Allocation of revenue to individual countries or regions is carried out on the basis of invoicing. Revenue is considered generated in the country in which the addressee of the invoice is domiciled.

in m€	Revenue		Intangible assets, property, plant and equipment and investment property		
	2015	2014	Dec 31, 2015	Dec 31, 2014	
Germany	133	97	256	301	
Rest of Europe	170	157	0	0	
Asia	36	71	0	0	
U.S.	394	225	87	72	
Others	30	23	0	0	
Total	763	573	343	373	

### **COMMENTS ON THE CONSOLIDATED BALANCE SHEET**

#### 16. DEVELOPMENT OF INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT AND INVESTMENT PROPERTY

Composition and development of intangible assets, property, plant and equipment as well of investment property can be taken from the following chart:

in k€		·		·	Cost	·	·		
	As at Jan 1, 2015	Additions from business combination	Reclassifi- cations	Addition	Reclassifications to assets held for sale	Disposal	Currency difference	Changes in scope of consolidation	As at Dec 31, 2015
I. Intangible assets									
Concessions, industrial property and similar rights and assets as well as licenses in such rights and assets	32,620	0	5,729	11,003	0	3,978	693	0	46,067
2. Goodwill	39,524	0	0	0	0	0	0	0	39,524
3. Exploration and evaluation	1,862	0	0	40	0	0	0	0	1,902
4. Prepayments	5,834	0	-5,729	1,063	0	105	0	0	1,063
	79,840	0	0	12,106	0	4,083	693	0	88,556
II. Property, plant and equipment									
1. Land and buildings	425,214	0	785	818	0	3,248	14,193	22,427	415,335
2. Technical equipment and machinery	1,000,068	0	2,391	16,394	0	113,545	41,972	1,914	945,366
3. Other equipment, factory and office equipment	35,086	0	159	1,644	0	1,950	570	282	35,227
Construction in progress     and prepayments	10,648	0	-9,722	19,756	0	42	771	760	20,651
	1,471,016	0	-6,387	38,612	0	118,785	57,506	25,383	1,416,579
III. Investment property	16,245	0	6,387	5	0	0	0	22,637	0
	1,567,101	0	0	50,723	0	122,868	58,199	48,020	1,505,135

in k€				Cost				
	As at Jan 1, 2014	Additions from business combination	Reclassifications	Addition	Reclassifications to assets held for sale	Disposal	Currency difference	As at Dec 31, 2014
I. Intangible assets								
Concessions, industrial property and similar rights and assets as well as licenses in such rights and assets	32,177	539	23	1,711	0	2,644	814	32,620
2. Goodwill	39,524	0	0	0	0	0	0	39,524
3. Exploration and evaluation	1,560	0	0	302	0	0	0	1,862
4. Prepayments	902	0	-23	4,955	0	0	0	5,834
	74,163	539	0	6,968	0	2,644	814	79,840
II. Property, plant and equipment								
1. Land and buildings	365,688	58,844	0	346	9,296	5,721	15,352	425,214
2. Technical equipment and machinery	962,558	8,051	1,825	6,729	0	23,153	44,057	1,000,068
3. Other equipment, factory and office equipment	38,290	878	39	1,102	0	5,929	707	35,086
Construction in progress     and prepayments	9,081	0	-1,864	5,564	0	2,687	554	10,648
	1,375,617	67,773	0	13,741	9,296	37,490	60,670	1,471,016
III. Investment property	16,245	0	0	0	0	0	0	16,245
	1,466,025	68,312	0	20,709	9,296	40,133	61,485	1,567,101

			Amortization a	nd depreciation					Carrying	amounts
As at Jan 1, 2015	Reclassifications	Scheduled additions	Impairment charges	Reclassifications to assets held for sale	Disposal	Currency difference	Changes in scope of consolidation	As at Dec 31, 2015	As at Dec 31, 2015	As at Dec 31, 2014
26,411	0	2,668	0	0	3,977	629	0	25,731	20,336	6,209
39,524	0	0	0	0	0	0	0	39,524	0	(
0	0	0	0	0	0	0	0	0	1,902	1,862
105	0	0	0	0	105	0	0	0	1,063	5,72
66,040	0	2,668	0	0	4,082	629	0	65,255	23,301	13,800
266,417	0	6,152	0	0	3,118	11,164	2,456	278,159	137,176	158,79
828,208	239	33,493	0	0	112,296	37,121	691	786,074	159,292	171,860
27,924	-239	2,224	0	0	1,856	503	159	28,397	6,830	7,162
3,732	0	0	0	0	0	392	0	4,124	16,527	6,916
1,126,281	0	41,869	0	0	117,270	49,180	3,306	1,096,754	319,825	344,73
1,450	0	429	0	0	0	0	1,879	0	0	14,795
1,193,771	0	44,966	0	0	121,352	49,809	5,185	1,162,009	343,126	373,330

				Carrying am	ounts				
As at Jan 1, 2014	Reclassifications	Scheduled additions	Impairment charges	Reclassifications to assets held for sale	Disposal	Currency difference	As at Dec 31, 2014	As at Dec 31, 2014	As at Dec 31, 2013
26,214	0	1,921	93	0	2,541	725 0	26,411	6,209	5,963
39,524							39,524	1.862	1,560
0	0	0	105	0	0	0	105	5,729	902
65,738	0	1,921	198	0	2,541	725	66,040	13,800	8,425
254,792	0	5,687	2,904	2,904	5,843	11,780	266,417	158,797	110,896
776,989	0	31,976	0	0	19,634	38,877	828,208	171,860	185,569
30,771	0	1,714	693	0	5,871	617	27,924	7,162	7,519
6,199	0	0	36	0	2,645	143	3,732	6,916	2,882
1,068,751	0	39,377	3,633	2,904	33,993	51,417	1,126,281	344,735	306,866
1,139	0	311	0	0	0	0	1,450	14,795	15,106
1,135,628	0	41,609	3,831	2,904	36,535	52,141	1,193,771	373,330	330,397

The changes in scope of consolidation result from the deconsolidation of Auermühle as of November 30, 2015. The additions from a business combination shown in the prior year resulted from the acquisition of a large part of the production lines and other assets from Bosch Solar Energy AG in Arnstadt, Thuringia, by SolarWorld Industries Thüringen GmbH, a wholly owned subsidiary of SolarWorld AG, Bonn, by way of an asset deal.

#### 17. INTANGIBLE ASSETS

"Exploration and evaluation" of € 1,902k (prior year € 1,862k) included in intangible assets relate to the exploration of the Eastern Ore Mountains in the search of lithium reserves. These expenses were capitalized in accordance with IFRS 6. No other self-generated intangible assets were capitalized.

#### 18. PROPERTY, PLANT AND EQUIPMENT

With respect to development and composition of property, plant and equipment please refer to the asset movement schedule in note 16.

Leases in accordance with IAS 17 that would lead to capitalization of an asset do not exist.

#### 19. INVESTMENT PROPERTY

Other than in the prior year, there was no investment property at the reporting date.

The building complex Auermühle reported here in the prior year was partially leased to third parties. The respective parts of the building were therefore classified investment property.

With contract dated December 11, 2015 Auermühle transferred a portion of its property held as business asset to Solar Holding Beteiligungsgesellschaft mbH against reduction of their company shares with effect from December 31, 2015. The remaining part of property after this transaction was sold to a related party also with effect from December 31, 2015. Please also refer to our comments in note 2.3.3

Rental income of € 571k (prior year € 659k) was generated with investment property in the annual period while the leased parts accounted for expenses of € 173k (prior year € 170k). Expenses of € 279k (prior year € 162k) were incurred with regard to the unrented

parts. The disclosures for the reporting period take into account Auermühle until its deconsolidation date, November 30, 2015. Please also refer to our comments in note 2.3.3.

In the prior year, independent experts had determined the market value of the property. Due to the type of the property and the lack of comparative data, no observable market transactions had been used as a basis for the assessment of the fair value of the property. Instead, the fair value had been determined using the capitalized earnings method in application of the following assumptions.

	2014
Market rent	11.30 €/sqm
Loss of rent risk	4%
Capitalization rate	5.80%
Residual useful life	infinite

In the prior year, the market value of these leased building parts amounted to  $\in$  14.7 million and, thus, falls short of their carrying amount by  $\in$  0.1 million.

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 16.

Limitations regarding the disposability of investment property, contractual obligations to acquire, establish or develop investment property did not exist.

In the prior year, future minimum rent payments from the leased parts were as follows:

in k€	2014
Twelve months or less	641
2 to 5 years	160
Total	801

#### 20. INVESTMENTS MEASURED AT EQUITY

in k€	Dec 31, 2015	Dec 31, 2014
Qatar Solar Technologies Q.S.C. (29%)	8,986	10,583

SolarWorld AG holds a 29 percent investment in the assets and results of Qatar Solar Technologies Q.S.C. domiciled in the Emirate

Qatar. Together with Qatar Foundation and Qatar Development Bank, SolarWorld AG is constructing a production facility for polysilicon.

With regard to related party disclosures we refer to note 43.

The following chart includes summarized financial information regarding the investment measured at equity.

in k€		2015		2014
	Total	SolarWorld group´s share	Total	SolarWorld group's share
Assets	1,306,783	378,967	948,062	274,938
Of which current	74,096	21,488	92,928	26,949
included 'cash and cash equivalents'	57,292	16,615	9,524	2,762
Of which non-current	1,232,687	357,479	855,134	247,989
Liabilities	1,286,108	372,971	917,401	266,046
Of which current	102,658	29,771	74,677	21,656
Of which non-current	1,183,450	343,201	842,725	244,390
included 'non-current financial liabilities'	0	0	0	0
Net assets	20,675	5,996	30,661	8,892
Equity contribution	11,984	3,475	1,194	346
Others		-485		1,345
Carying amount of the investment		8,986		10,583
Revenue	668	194	153	44
Interest income	4,370	1,267	3,105	900
Interest expenses	-2,029	-589	-1,197	-347
Share in net result for the year	-40,502	-11,746	-33,095	-9,598

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

Other financial assets contain the non-current portion of the receivable from negative purchase price in the amount of € 3,000k (prior year € 5,200k). The negative purchase price has been agreed for the acquisition of a large part of the production lines and other assets from Bosch Solar Energy AG in Arnstadt, Thuringia, by SolarWorld Industries Thüringen GmbH, a wholly owned subsidiary of SolarWorld AG, Bonn, by way of an asset deal in the prior year. The current portion is recognized in other current financial assets (compare note 28).

#### 22. DEFERRED TAX ASSETS

In part, deferred tax assets result from accounting policies for recognition and measurement of assets and liabilities that differ from tax principles and current loss carryforwards. The development of deferred tax assets is included in the comments on tax expenses (note 12).

#### 23. OTHER NON-CURRENT ASSETS

The item concerns the non-current portion of prepayments made on raw materials.

#### 24. INVENTORIES

in k€	Dec 31, 2015	Dec 31, 2014
Finished goods and merchandise	61,583	53,027
Work in progress	54,185	48,047
Commodities and supplies	40,358	35,062
Prepayments (current)	15,437	21,927
Total	171,563	158,063

For the purpose of the breakdown above, only solar modules were qualified as finished goods of the Group.

In the reporting year, inventory impairments of  $\in$  3,804k (prior year  $\in$  6,486k) were recognized as expenses. Other than in the prior year, reversals of impairment losses amounting to  $\in$  2,289k were recorded in the reporting period.

Almost all inventory items are assigned by way of collateral for the credit facilities and notes. Please refer to our comments under note 32.

#### 25. TRADE RECEIVABLES

Trade receivables amounting to € 94,700k (prior year € 66,765k) are assigned as collateral for loan obligations.

in k€	Dec 31, 2015	Dec 31, 2014
Trade receivables	95,582	75,851
Receivables from contruction contracts	1,820	0
Total	97,402	75,851

The following chart illustrates the aging structure of receivables:

in k€	Dec 31, 2015	Dec 31, 2014
Neither past due nor impaired	69,197	57,859
Past due but not impaired		
- up to 30 days	15,103	10,746
- between 31 and 60 days	4,465	1,483
- between 61 and 90 days	2,286	366
- between 91 and 180 days	1,248	378
- between 181 and 360 days	310	77
- exceeding 360 days	4,650	4,878
Impaired	143	64
Total	97,402	75,851

With regard to trade receivables that were not impaired, an indication for the recognition of impairment losses did not exist or impairment losses did not have to be recognized due to existing collaterals. The receivables included in the "between 1 and 90 days" cluster were almost completely redeemed within the preparation period of the consolidated financial statements. The majority of the receivables included in the "between 91 to more than 360 days" cluster result from wafer sales that mostly originate from long-term agreements. With regard to respective default risks, we refer to note 40.

The following chart illustrates the development of the bad debt allowance:

in k€	2015	2014
As at Jan 1	18,943	27,749
Utilization	-15,820	-9,625
Net release/allocation	208	786
Currency translation	67	33
As at Dec 31	3,398	18,943

#### **26. INCOME TAX ASSETS**

Tax assets of € 187k (prior year € 809k) are especially due to creditable investment income tax.

#### 27. OTHER RECEIVABLES AND ASSETS

in k€	Dec 31, 2015	Dec 31, 2014
VAT receivables	7,452	15,274
Electricity tax refund	2,664	5,487
Deferred items	2,495	2,364
Receivables from research and development investment subsidies	1,578	2,657
Receivables from investment subsidies	0	1,634
Other prepayments	412	505
Other	2,909	4,109
Total	17,510	32,030

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

#### 28. OTHER CURRENT FINANCIAL ASSETS

in k€	Dec 31, 2015	Dec 31, 2014
Sub-participation Solarparks of Extremadura S.L., Spain	13,834	13,834
Claim from debt assumption	6,439	0
Security deposits	2,202	2,003
Receivable from negative purchase price	2,200	33,800
Other financial assets	178	784
Total	24,853	50,420

The sub-investment in Solarparks of Extremadura S.L., Spain, results from a cooperation agreement with a wholly owned subsidiary of Deutsche Bank AG (DB), in which DB grants Solarparc GmbH the right to participate in the result from marketing or alternatively the operation of solar parks in Extremadura (Spain). The recognized carrying amount of the sub-investment offsets an amount payable to DB of  $\ensuremath{\in} 12,667k$  (compare note 32), which DB can claim at any time.

With contract dated December 11, 2015 SolarWorld AG & Solar Holding GmbH in GbR Auermühle sold its property held as business asset with effect from December 31, 2015. Please also refer to note 2.3.3. As part of this transaction, financial liabilities related to the property in an amount of about € 6,439k have been transferred to the purchasers. This bank loan included in financial liabilities (note 32) is set against a claim from debt assumption in an equal amount.

Other financial assets primarily included amounts for re-insurances that were accounted for in accordance with IFRIC 14 and IAS 19. The re-insurance contracts were concluded in connection with early retirement obligations and netted with the outstanding wage payments at reporting date.

#### 29. LIQUID FUNDS

Liquid funds almost entirely concern bank balances. At reporting date, these were invested in fixed term deposits and day-to-day money with different banks. Bank accounts with a credit balance of € 155k (prior year € 475k) are subject to pledge agreements.

#### 30. ASSETS HELD FOR SALE

At reporting date, assets held for sale mainly include unused production facilities of the segment "Production Germany". The decline in this item compared with the prior year is primarily due to the sale of an unused piece of land of the segment "Production U.S." in the reporting period. Assets held for sale were not subject to a write-down (prior year write-down of € 325k) in the reporting year.

#### 31. EOUITY

#### a) Subscribed capital

At reporting date, the capital stock amounts to € 14,896k (prior year € 14,896k) and similar to the prior year solely includes common shares, namely 14,896,000 non-par bearer shares.

#### b) Authorized capital

At SolarWorld AG's first Annual General Meeting since the completion of financial restructuring that was held on May 30, 2014, shareholders authorized the Management Board to increase the company's capital stock by to a maximum total of € 7,448,000.00 once or several times in accordance with the Supervisory Board until May 30, 2019 by issuing new, no-par bearer shares or registered shares in exchange for cash contributions or contributions in kind. The aim is to enable a flexible and rapid response to market conditions in the future while minimizing the negative impact on the company's share price.

#### c) Conditional capital

SolarWorld AG does not have any conditional capital.

#### d) Treasury shares

As in the prior year, no treasury shares were held by SolarWorld AG on the balance sheet date.

In the prior year SolarWorld AG sold 6,164 treasury shares in total for an amount of  $\in$  177k. The effects from this disposal on the individual items in equity are shown in the consolidated statement of changes in equity.

#### e) Other reserves

#### Currency translation reserve

The currency translation reserve contains differences arising from currency translation in the scope of translating annual financial statements of foreign subsidiaries.

#### f) Non-controlling interests

As in the prior year, non-controlling interests do not exist.

#### g) Dividend distribution

No dividend was distributed for 2014.

#### 32. NON-CURRENT AND CURRENT FINANCIAL LIABILITIES

in k€	Dec 31, 2015	Dec 31, 2014
Bonds	185,577	199,385
Senior Facility Agreement	142,186	157,990
Super Senior Facility Agreement	50,309	50,000
Payment obligation sub- investment Solarparks of Extremadura S.L., Spain	12,667	12,667
Bank loans	7,748	8,056
Deposits from toll manufacturers Derivative financial instruments	5,309	0
Purchase price obligation Auermühle	0	17,825
Other	1,288	3,956
Total	405,849	449,879

Since the financial restructuring in 2014 the financial liabilities consist of two publicly-traded bonds and a senior credit facility (Senior Facility Agreement or short SFA). In addition, SolarWorld took out a Super Senior credit facility (Super Senior Facility Agreement or short SSFA) from Qatar Solar Technologies Q.S.C. in the amount of € 50 million in the prior year.

In connection with these financial liabilities, SolarWorld AG and its affiliates SolarWorld Industries Sachsen GmbH, SolarWorld Innovations GmbH, SolarWorld Industries Deutschland GmbH, Solarparc Ziegelscheune GmbH, Solarparc Verwaltungs GmbH, SolarWorld Americas Inc., SolarWorld Industries America LP, SolarWorld France SAS and SolarWorld Asia Pacific PTE Ltd. provided all their material assets as transaction collaterals. In detail, this concerns the pledging of all current and future receivables, bank accounts, inventories, moveable fixed assets and current assets, IP-rights and Internet domains. In addition, all shares in subsidiaries were pledged.

The payment obligation for the sub-investment Solarparks of Extremadura S.L., Spain, is connected with the sub-investment in Solarparks of Extremadura S.L., Spain, recognized in other financial assets. We refer to our comments in note 28.

Deposits from toll manufacturers are payments received from toll manufacturers at balance sheet date regarding SolarWorld products that are to be processed and will be returned after complete processing. The purchase price obligation Auermühle shown in the prior year resulted from concluded options that entitled SolarWorld AG to acquire another 45 percent of the shares in Auermühle. By agreement dated November 30, 2015 the option has been terminated.

#### 33. 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.

#### 34. NON-CURRENT AND CURRENT PROVISIONS

in k€	As at Jan 1, 2015	Utilization	Reversal	Addition	Reclassifications	Currency translation	As at Dec 31, 2015
Warranties	24,653	1,512	12,278	2,354	0	592	13,809
Pensions	10,704	639	898	192	0	0	9,359
Litigation risks	9,190	270	4,443	188	0	404	5,069
Restoration obligations	377	259	0	0	79	38	235
Other provisions	4,522	40	3,022	486	-79	16	1,883
Total	49,446	2,720	20,641	3,220	0	1,050	30,355

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 allocation to provision for the risk of being called upon for performance guarantees has previously been set up in an amount of 0.25 percent of all of Solar-World group's module revenue. This rate represented the estimation of the discounted total expenses over the entire term of the performance guarantee (performance guarantee is granted for a period of 25 to 30 years). In the reporting period, estimations used for the warranty provisions were refined on the basis of improved experience. Accordingly, the historical provision allocations have been adjusted in the reporting period. This resulted in a release of provision amounting to € 10,868k, which is included in other operating income (compare note 5). The provision is subject to compounding at a matched maturity interest rate. In the reporting

period, this made for interest expenses of  $\in$  609k (prior year  $\in$  746k), which are included in other financial expenses (compare note 11.)

Changes in the used discount rate would have an impact on the total provision amount, which would be recognized in profit or loss. If the discount rate would increase by 100 basis points, the provision for performance guarantees would decline by  $\in$  1.5 million. If the discount rate would decrease by 100 basis points, the provision for performance guarantees would rise by  $\in$  1.8 million.

As in the prior year, provisions for litigation risks primarily include claims for damages in connection with pending legal proceedings with current and former employees in the U.S. on account of alleged violations of labor law regulations and the risk of possible additional tax payments in the U.S. and Germany. The provision for possible tax payments in the U.S. has been reduced, as a material issue has been

solved in favor of SolarWorld. The provision for possible additional tax payments in Germany results from an ongoing tax field audit. In the prior year, it also included claims for damages in connection with a possible infringement of trademark rights by SolarWorld AG. This legal dispute was settled in the reporting period.

The provision for restoration obligations mainly concerns leasehold improvements that have to be removed by SolarWorld group after expiration of the lease term. As in the prior year that provision is fully current in the reporting period.

Other provisions include provisions in connection with disposal obligations for PV modules in an amount of  $\in$  1,602k (prior year  $\in$  1,177k). It is subject to compounding at matched maturity interest rate. In the reporting period, this makes for interest expenses of  $\in$  221k (prior year  $\in$  83k), which are included in other financial expenses (compare note 11).

#### PENSION PROVISIONS

Pension provisions include promises of retirement benefits to employees of the Group on the basis of direct commitment. The pension claims earned depend on the amount of pay at the time of retirement.

The following measurement parameters were uniformly used as a basis for calculating the defined benefit obligation (DBO):

in %	Dec 31, 2015	Dec 31, 2014
Discount rate	2.06	1.6 to 2.2
Future salary increase	3.0	3.0
Rate of pension progression	1.5 to 1.75	1.0 to 1.5

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

The amount included in the consolidated financial statements arising from defined benefit obligation is as follows:

in k€	Dec 31, 2015	Dec 31, 2014
Present value of defined benefit obligation	9,466	10,848
Fair value of plan assets	-107	-144
Pension provision	9,359	10,704

Movements in the present value of the defined benefit obligation in the current year were as follows:

in k€	2015	2014
Extent of obligation as at Jan 1	10,848	8,772
Addition from business combination	0	401
Interest cost	176	299
Current service cost	19	38
Pension payments and other utilizations	-437	-432
Transfers	-270	-44
Gains (-) and losses (+) from the remeasurement:		
- Actuarial gains/losses due to changes in the financial assumptions	-571	1,669
- Actuarial gains/losses from experience adjustments	-299	145
Extent of obligation as at Dec 31	9,466	10,848

Movements in the fair value of the plan assets in the current year were as follows:

in k€	2015	2014
Opening balance as at Jan 1	144	0
Contributions from the employer	55	0
Transfer of plan assest (portability)	-92	0
Addition from business combination	0	144
Interest income	3	4
Gains (+) and losses (-) from the remeasurement:		
- Actuarial losses from experience adjustments	-3	-4
Closing balance as at Dec 31	107	144

The plan assets have been deposited in cash into an appropriate Contractual Trust Arrangement.

Alternative discount rates and rates of pension progression would result in the following changes in the defined benefit obligation and the corresponding reverse changes in equity (before taking into account deferred tax effects):

Measurement parameter in k€	Sensitivity	Change in th	ne DBO 2015	Change in the DBO 2014		
Discount rate	+/- 1.00 %	-1,100	1,355	-1,346	1,678	
Rate of pension progression	+/- 0.50%	529	-487	617	-566	

In 2016, the Group expects contributions to its defined benefit plans of  $\ensuremath{\in}$  195k.

#### **DEFINED CONTRIBUTION PLANS**

The Group also maintains domestic and foreign pension plans through state or private pension funds. Amounts contributed by the Group under such plans are based upon the employees' salary or the amount of contributions made by the employees. In 2015, the employer's contribution to statutory pension insurance schemes amounted to  $\in$  9.6 million (prior year  $\in$  8.7 million). In addition, there were a further  $\in$  1.2 million (prior year  $\in$  0.8 million) expenses for contributions to private pension funds.

#### 35. OTHER NON-CURRENT AND CURRENT LIABILITIES

in k€	Dec 31, 2015	Dec 31, 2014
Outstanding invoices	16,388	15,902
Customer advances	13,983	6,650
Other personnel obligations	12,376	11,836
Equity contribution obligation	11,984	1,051
VAT	5,251	5,990
Creditors with debit accounts	1,865	298
Other	8,623	6,834
Total	70,470	48,561

Customer advances mainly concern advances from long-term wafer purchase agreements and, additionally in the reporting period, from the module business.

Other personnel liabilities substantially consist of variable compensation claims of employees, outstanding wages and salaries and holiday entitlements. In the prior period, interest payable on parts of the variable compensation claims of employees in the amount of € 16k incurred, which were included in interest expenses (note 11 c)).

The claimed obligation to contribute equity concerns capital increases called for by Qatar Solar Technologies Q.S.C. in November 2013 and in January 2015 that were based on a corresponding shareholder agreement. According to the agreements from the financial restructuring, the obligations claimed will be paid by Qatar Solar S.P.C. and granted to SolarWorld AG as a further loan. Payment of both obligations is deferred until March 31, 2016. We refer to our comments in note 20.

#### 36. 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 12).

#### 37. INCOME TAX LIABILITIES

The item includes corporation, trade and capital yields tax assessed by the tax authorities and calculated or estimated by the consolidated entities as well as corresponding foreign taxes resulting from tax laws.

#### OTHER DISCLOSURES

#### 38. OTHER FINANCIAL LIABILITIES

in m€	Dec 31, 2015	Dec 31, 2014
Order commitments from commodity and license agreements		
- within one year	106	87
- between 1 and 5 years	64	105
- more than 5 years	43	47
Order commitments from investments in fixed assets		
- within one year	7	5
- between 1 and 5 years	0	0
- more than 5 years	0	0
Obligations from perennial rent agreements		
- within one year	4	2
- between 1 and 5 years	10	3
- more than 5 years	16	0
Total	250	249

The obligations from multi-year rental agreements mostly concern office buildings and vehicles. The terms of the lease agreements for buildings and vehicles run from 3 to 14 and 3 to 4 years, respectively. The lease agreements for vehicles do not include any significant purchase or extension options. One lease agreement for a building includes the option to extend the contract twice by five years each. The contracts do not impose any restrictions on SolarWorld AG.

## 39. CONTINGENCIES AND EVENTS AFTER BALANCE SHEET DATE

A comprehensive presentation of corporate risks and events after balance sheet date is included in the group management report which, in accordance with German laws and regulations, is to be prepared and published at the same time as these consolidated financial statements. Amongst others, the group management report goes into detail with regard to the expectations for future development of selling prices and the overall market.

#### APPROVAL OF THE FINANCIAL STATEMENTS

These financial statements are expected to be approved and authorized for issue by the Supervisory Board in its meeting on March 16, 2016.

### 40. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS

#### a) Management of capital structure

SolarWorld group's capital management is especially aligned to ensure the Group's financing. This includes the safeguarding of a constant level of minimum liquidity that is available. Directly managed by the executive board, SolarWorld AG is responsible for planning and monitoring the Group's liquidity as well as the raising of capital. Short-term liquidity management is carried out with a planning horizon of 13 weeks. Generally, the corresponding planning is updated twice a month. Thus, in the scope of the financial restructuring successfully completed in the prior year, SolarWorld AG was able to reduce its financial liabilities from some € 1 billion to € 427 million and to adapt loan obligations to the earning power and financial requirements of the company. Since then, financial liabilities consist of two publicly-traded bonds and a senior credit facility. Also in the prior year, SolarWorld received a Super Senior credit facility of € 50.0 million from Qatar Solar Technologies Q.S.C. in the scope of the financial restructuring process as well. All credit facilities have terms until early 2019. Hence, SolarWorld Group has a solid capital structure with an equity ratio of 24.0 percent (prior year 26.1 percent).

#### b) Principles and objectives of financial risk management

In its capacity as an internationally operating group, SolarWorld AG is exposed to market, credit and liquidity risks with regard to its assets, liabilities and future transactions already set and planned. Objective of financial risk management is the limitation of these risks by way of operating and finance-oriented activities.

Main features of financial policies are agreed upon in the board of directors and with the respective subsidiaries on a regular basis. Selected derivative and non-derivative financial instruments are utilized to limit or take risks in a controlled way, depending on the respective risk assessment, planning ability regarding future transactions and current market situation. As a basic principle, however, only those risks are addressed that have short- to medium-term consequences on the Group's cash flow. Implementation of financial policies as well as risk management is handled by the respective departments, which report to the board of directors on a regular basis.

Derivative financial instruments are regularly used as hedging instruments but not for trading or speculation purposes. To exploit short-term market fluctuations, possibly existing hedging instruments are closed out economically. To minimize default risks, hedging agreements are only concluded with leading financial institutions that have a credit rating in the investment grade area.

With regard to the investment of liquid funds, it is SolarWorld group's primary objective to minimize risks from the change of market prices or the creditworthiness of creditors and to obtain a positive return rate in the process. SolarWorld group therefore invests uncommitted liquid funds in demand deposits (fixed-term deposits and day-to-day money) predominantly in Euro, U.S. dollar and the British pound. To limit the default risk, demand deposits are only placed with leading financial institutes with 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.

#### aa) Currency risks

SolarWorld group's currency risks mainly result from operating activities. Intra-group transactions are, partially, concluded in a foreign currency. Foreign currency risks are in principal only hedged to the extent to which they influence the Group's cash flows. On principle, risks that result from the translation of assets and liabilities of foreign subsidiaries into the group reporting currency and influence the Group's cash flow only upon disposal of the subsidiary are not hedged. However, hedging of these risks is not entirely ruled out in the future.

With regard to operating activities, the individual group companies mostly handle their operations in utilization of the respective functional currency. For the rest, SolarWorld group is exposed to foreign currency risks in connection with foreign currency transactions already set and planned. These mainly concern transactions in US\$ in connection with the procurement of raw materials as well as intragroup transaction in US\$ in connection with the sale of modules. As in the prior year, no hedging relationships existed for these transactions at balance sheet date.

Aside from a proportion of liquid funds and trade receivables and liabilities, the material financial instruments are mainly denominated in functional currency. Hence, exchange rate changes basically influence the result only with regard to these foreign currency items.

If the Euro revalues (devalues) towards the US\$ by 10 percent, this will make for a negative (positive) effect on earnings before income tax of  $\in$  10,304k ( $\in$  12,390k). The corresponding data for the prior year was  $\in$  7,214k ( $\in$  8,540k). If the Euro revalues (devalues) towards the British pound by 10 percent, this will make for a negative (positive) effect on earnings before income tax of  $\in$  1,123k ( $\in$  1,372k). The corresponding data for the prior year was  $\in$  276k ( $\in$  338k). With regard to all other changes in exchange rates, the Group's currency risk is insignificant.

#### bb) Interest risks

At reporting date, all borrowed capital of the Group basically bears variable interest on the basis of the EURIBOR, whereas an EURIBOR rate of at least one percent is applicable. Presently, borrowed capital is therefore de facto subject to fixed interest rates. As uncommitted liquid funds are mainly invested for the short-term, SolarWorld faces an interest risk on the deposit side. Moreover, the Group is subject to interest risks in connection with an interest rate limit transaction in form of a maximum rate agreement (cap), which is not designated into a hedging relationship.

If the market interest rate level would increase by 10 basis points, the positive effect on earnings before tax would amount to € 189k (prior year € 177k). If the market interest rate level would decrease by 10 basis points, the negative effect on earnings before tax would amount to € 189k (prior year € 177k).

#### cc) Other price risks

In addition, SolarWorld group concluded commodity derivatives to hedge the risk of increasing silver prices. As the derivatives are not integrated in a valid hedging relationship, changes in the derivatives' value affect the earnings before tax.

If the silver price rate increased or decreased from – at reporting date – some US\$ 14/kg to US\$ 20/kg or US\$ 10/kg, the earnings before tax would be  $\in$  3,971k higher or  $\in$  2,625k lower, respectively.

#### d) Credit risks

For the most part, SolarWorld group's uncommitted liquidity is invested in demand deposits with well-known banks rated in the investment grade area. Thus, the default risk is considered marginal in this respect.

With regard to supplies to non-group customers, depending on type and amount of the respective service, collateral is required, credit ratings/references are collected or historical data from previous business relations — especially as regards payment behavior — is used for avoiding default in payment.

To further limit credit risks, receivables from non-group module sales are mostly secured via credit insurances. Hence, the respective credit risk is regarded rather remote.

With respect to receivables from wafer sales that originated from long-term contracts, credit insurances do not exist for the most part as these customers have paid extensive advances, which are non-refundable especially in the event of insolvency. Thus, the respective credit risk is economically provided for.

For the rest, the maximum credit risk results from the carrying amounts.

#### e) Liquidity risks

For SolarWorld group, liquidity risks arise from the obligation to redeem liabilities in full and in due time. It is therefore the task of the cash and liquidity management to assure the individual group companies' liquidity at any time.

Cash management for operating activities is carried out in a decentralized manner within the individual business units. SolarWorld AG predominantly balances the respective requirements and surpluses regarding the individual units' means of payment in a centralized way by both cash pooling agreements or granting and accepting intra-group loans. Central cash management determines the group-wide financial resources requirements on the basis of business planning.

In February 2014, the financial restructuring of SolarWorld AG was finalized. As a result, the financial liabilities of SolarWorld AG were reduced from some  $\in$  1 billion by  $\in$  570 million to  $\in$  427 million and the financial restructuring which began in January 2013 was completed.

Financial liabilities reorganized in the course of the financial restructuring now consist of two publicly-traded bonds with a nominal value as at December 31, 2015, of € 48.1 million and € 137.4 million (December 31, 2014: € 51.7 million and € 147.7 million) and a senior credit facility (Senior Facility Agreement or short SFA) of € 142.2 million (December 31, 2014: € 158.0 million). In addition, SolarWorld took out a Super Senior credit facility (Super Senior Facility Agreement or short SSFA) from Qatar Solar Technologies Q.S.C. in the amount of € 50.0 million in 2014.

All new financial liabilities fall due within 5 years and include a so-called "cross-default clause", which gives the creditors an extraordinary right to give notice if SolarWorld AG does not meet its obligations from other borrowed funds.

The SFA and SSFA include provisions that entitle the creditors to extraordinary termination of the contract and demand premature repayment of the loans if certain covenants are not met. The covenants are mainly indicators regarding the debt-equity and interest cover ratio that have to be complied with from December 31, 2015 and indicators regarding the minimum liquidity and maximum debt. SolarWorld believes that the interpretations made are in accordance with the contractual basis and all contractual obligations and conditions have been complied with. Therefore, it has not infringed any loan agreements. However, individual creditors of borrowed funds come to different interpretations regarding the methods for determining the covenants. Based on the company's current business planning, the Management Board expects to be

able to meet these covenants also for the full year 2016. In the first and second quarter of 2016, headroom for deviations is more limited than in the second half of the year, increasing the risk of breaching covenants during this period.

In addition, creditors of borrowed funds in a nominal amount of € 377 million (prior year € 407 million) can demand early repayment of the loans in the event of a change of control at SolarWorld AG.

These regulations are supplemented by further standard provisions on termination.

The following chart shows the future undiscounted cash flows of the financial liabilities (interest and repayment), as they would contractually result without taking into account any unscheduled repayments. Unscheduled repayments are contractually agreed if certain liquidity or cash flow indicators are met or certain material cash flow-relevant transactions took place.

#### UNDISCOUNTED CASH FLOWS OF FINANCIAL LIABILITIES

in k€	Total	2016	2017	2018	2019	2020	2021 et seqq.
Bank loans	-1,448	-321	-310	-299	-287	-165	-66
Bonds	-223,697	-27,573	-11,932	-11,932	-172,260	0	0
Senior Facility Agreement	-170,738	-26,024	-8,911	-8,911	-126,892	0	0
Super Senior Facility Agreement	-60,496	-3,517	-3,508	-3,508	-49,963	0	0
Total	-456,379	-57,435	-24,661	-24,650	-349,402	-165	-66

#### f) Fair values, carrying amounts and residual terms of financial instruments in accordance with categories

The following chart shows fair values and carrying amounts of financial assets and liabilities included in the individual line items:

Assets Dec 31, 2015	Measure	Measurement categories IAS 39			
in k€	Held for trading	Loans and receivables	Available for sale	Derivatives in hedging relationships	Total carrying amounts
Trade receivables	-	97,402	=	-	97,402
Other receivables and assets	-	1,278	-	-	1,278
Other financial assets	=	14,081	13,834	=	27,914
Liquid funds	-	188,642	-	-	188,642
Total	0	301,403	13,834	0	315,236

Assets Dec 31, 2014	Measure	Measurement categories IAS 39			
in k€	Held for trading	Loans and receivables	Available for sale	Derivatives in hedging relationships	Total carrying amounts
Trade receivables	-	75,851	-	-	75,851
Other receivables and assets	-	291	-	-	291
Other financial assets	53	41,787	13,834	-	55,674
Liquid funds	-	177,097	-	-	177,097
Total	53	295,026	13,834	0	308,913

Liabilities Dec 31, 2015	Measurement ca	tegories IAS 39			
in k€	Financial liabilities recognized at amortized cost	Financial liabilities designated as at fair value	Purchase price commitment from business acquisition	Total carrying amounts	
Financial liabilities	405,084	765	-	405,849	
Trade payables	77,771	=	=	77,771	
Other liabilities	-	-	-	-	
Total	482,855	765	0	483,620	

Liabilities Dec 31, 2014	Measurement ca	tegories IAS 39		Total carrying amounts	
in k€	Financial liabilities recognized at amortized cost	Financial liabilities designated as at fair value	Purchase price commitment from business acquisition		
Financial liabilities	431,147	907	17.825	449,879	
Trade payables	42,291	-	-	42,291	
Other liabilities	-	=	=	-	
Total	473,438	907	17,825	492,170	

	Residual terms				
exceeding 5 years	between 1 and 5 years	up to 1 year	Total carrying amounts	IFRS 7 not applicable	Total fair values
-	-	97,402	97,402	-	97,402
-	-	17,510	17,510	16,233	1,278
-	3,062	24,853	27,914	=	27,914
-	=	188,642	188,642	=	188,642
0	3,062	328,407	331,468	16,233	315,236
	Residual terms				
exceeding 5 years	between 1 and 5 years	up to 1 year	Total carrying amounts	IFRS 7 not applicable	Total fair values
	-		75,851	-	75,851
-	-	32,030	32,030	31,739	291
-	5,254	50,420	55,674	-	55,674
-	-	177,097	177,097	-	177,097
0	5,254	335,398	340,652	31,739	308,913
	Residual terms				
exceeding 5 years	between 1 and 5 years	up to 1 year	Total carrying amounts	IFRS 7 not applicable	Total fair values
-	348,627	57,223	405,849	-	317,645
-	-	77,771	77,771	-	77,771
-	18	70,452	70,470	70,470	-
0	348,645	205,446	554,090	70,470	395,416
	Residual terms				
exceeding 5 years	between 1 and 5 years	up to 1 year	Total carrying amounts	IFRS 17 not applicable	Total fair values
	391,582	58,297	449,879	-	317,645
=			42.201		42,291
-	-	42,291	42,291	-	72,231
-	111	42,291 48,450	42,291	48,561	-

The fair value of financial assets and financial liabilities needs to be presented in the amount that could be generated if the respective instruments were exchanged in the scope of a current transaction (with the exception of forced sale or liquidation) between business partners willing to contract. The methods and assumptions used for determining fair values are:

- Trade receivables, other receivables and assets, liquid funds, trade liabilities and the material proportion of the other liabilities in terms of IFRS 7 are subject to short residual terms. Thus, their carrying amounts at reporting date approximately equal fair value.
- The fair value of other financial assets and financial liabilities is determined on the basis of stock market prices on active markets if available.
- The fair value of unlisted other financial assets is estimated in application of appropriate measurement methods or on the basis of conducted transactions.

- The fair value of unquoted SFA and SSFA is estimated at a uniform 60.45 percent (prior year 67.54 percent) of the nominal value. This equals the mid-market rate of the two SolarWorld AG bonds traded on the capital market. This does not apply for bank loans or parts thereof if collateral is provided. These parts are recognized in full.
- The fair value of derivative financial instruments with existing
  observable input parameters on the market is estimated by
  discounting future cash flows in application of these input
  parameters. The used input parameters concern yield curves,
  commodity spot and forward rates as well as volatilities. The fair
  value of liabilities from terminable non-group investments in a
  fully consolidated partnership was determined on the basis of the
  proportionate annual result at amortized cost as no significant
  value-impairing factors existed.

Financial instruments accounted for at fair value at the reporting date can be attributed to Level 1, 2 or 3 (note 2.1) for measurement and presentation of fair values as follows:

	Dec 31, 2015				Dec 31, 2014			
in k€	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Financial assets measured at fair value								
- held for trading	-	-	-	-	53	=	53	=
- available for sale	13,834	-	-	13,834	13,834	-	-	13,834
Financial liabilities measured at fair value								
- held for trading	-765	-	-765	-	-	-	-	-
- from terminable partnership interests	=	-	-	-	-907	-	-	-907
Total	13,068	-	-765	13,834	12,980	0	53	12,927

The following chart shows the development of financial instruments included in stage 3 over the course of the business year:

in k€	2015	2014
As at Jan 1	12,927	12,992
Losses recognized in other financial result	-17	-65
Deconsolidation	924	0
As at Dec 31	13,834	12,927

The financial instruments still held at balance sheet date that were assigned to stage 3 made for a netted loss of € 0k (prior year € -65k) in 2015. Regarding the effect from deconsolidation please refer to note 2.3.3.

#### g) Net gains and losses by measurement category

To the extent to that they are assignable to financing or investment activities, net gains and losses of the measurement categories "financial assets designated as at fair value through profit or loss" and "financial assets held for trading" are included in other financial result (note 11). In addition to results from market value measurement, they also include interest and currency effects. Furthermore, net gains and losses from "financial assets held for trading" that are assignable to operations have to be taken into account as well. In total, the net loss from "financial assets held for trading" amounts to € -1,139k (prior year € -168k).

In addition to the exchange gains mentioned below, net gains and losses of the measurement category "loans and receivables" mainly contain impairment losses in an amount of € 234k (prior year € 435k). The latter are included in other operating expenses.

With respect to the measurement categories "loans and receivables" and "financial liabilities measured at amortized cost", net gains and losses need to take losses from currency effects into account, which were not subdivided for reasons of efficiency. The netted exchange gains for the reporting period amount to  $\in$  8,490k (prior year  $\in$  10,529k). To the extent to that they concern transactions in the scope of operations and financing transactions, they are recognized in other operating income or other operating expenses and other financial result, respectively.

Apart from a portion of the mentioned currency effects, the net result of "financial liabilities measured at amortized cost" in the prior year included the restructuring profit of € 555.7 million that was recognized and disclosed in other financial result. We refer to note 11.

Thus, net income from the measurement categories "loans and receivables" and "financial liabilities measured at amortized cost" amount to a total of € 8,256k (prior year € 565,821k)

As in the prior year, neither interest income nor additions to the AfS reserve were recognized with regard to "financial assets available for sale" in the reporting year.

#### h) Hedging

Hedging that required hedge accounting did not exist in the reporting period.

#### 41. COMMENTS ON THE CASH FLOW STATEMENT

#### a) Cash flow from operating activities

Cash flow from operating activities was prepared in accordance with the indirect method. At first, the pretax result used as a starting point is adjusted by significant non-cash earnings and expenses. This makes for the cash flow from operating results. Cash flow from operating activities takes the changes of net current assets into account.

Non-cash expenses and income of the business year essentially include the income from reversal of provisions and liabilities, the income from deconsolidation, the income from revaluation of current assets and impairment losses of inventories and receivables. In the prior year, it also included a gain from initial purchase accounting, income from the reversal of advances received and impairment losses on prepayments made.

Interest paid and interest received is included in cash flow from financing activities and cash flow from operating activities, respectively.

#### b) Cash flow from investing activities

The cash flow from investing activities includes payments for asset investments as well as investment grants received for this purpose. Cash receipts from the disposal of fixed assets are also included. Cash receipts from Bosch Solar Energy AG arising from the negative purchase price agreed are also included under this heading. The negative purchase price has been agreed for the acquisition of a large part of the production lines and other assets from Bosch Solar Energy AG in Arnstadt, Thuringia, by SolarWorld Industries Thüringen GmbH, a wholly owned subsidiary of SolarWorld AG, Bonn, by way of an asset deal in the prior year.

The payments for asset investments contain € 43k (prior year € 322k) for "Exploration and evaluation" included in intangible

#### c) Cash flow from financing activities

Cash flow from financing activities is characterized from the repayments of financial liabilities. The most substantial components are various scheduled repayments agreed within the financial restructuring program. In the reporting period also one unscheduled repayment has been made. Finally, the item shows interest paid and in the prior year also restructuring expenses incurred with regard to compensation and restructuring fees for creditors.

In addition to the repayment of financial liabilities that can be taken from the cash flow, it could be reduced further because of derecognition of another loan within the context of the deconsolidation by  $\in 1.2$  million. Likewise, in the prior year in addition to the repayment of financial liabilities that can be taken from the cash flow, the sale of Solarparc GmbH's photovoltaic operations further reduced the financial liabilities by  $\in 1.0$  million while the deconsolidation of Solarparc Projekt IV GmbH & Co. KG further reduced it by  $\in 1.7$  million. These were non-cash transactions, as each purchaser assumed the corresponding liability.

#### d) Cash and cash equivalents

As in the prior period, cash and cash equivalents at the end of the period exclusively consist of liquid funds as recognized on the consolidated balance sheet. In the prior year, cash and cash equivalents whose availability was restricted for more than 3 months were included in financial assets. Bank accounts with a credit balance of € 155k (prior year € 475k) are subject to pledge agreements.

#### 42. CONTINGENT LIABILITIES

Our subsidiary SolarWorld Industries Sachsen GmbH (formerly Deutsche Solar GmbH) is currently the defendant in court proceedings with the silicon supplier Hemlock Semiconductor Corp. The subject of the court proceedings is the non-acceptance of silicon from long-term silicon contracts concluded with this silicon supplier. Due to the non-acceptance, the silicon supplier claims an amount of USD 585 million on the basis of a "take or pay" obligation and in damages. Furthermore, interest claims have been asserted on this. Projected up to the balance sheet date, these would amount to USD 171 million. According to external legal opinions there are anti-trust concerns under European law regarding the effectiveness of the underlying supply contracts, which could mean that the purchasing obligations are null and void. From SolarWorld's

perspective, the supplier is therefore not entitled to claim damages. In addition, SolarWorld Industries Sachsen GmbH has further substantial lines of defenses against the validity of the claims. However, the District Court for the Eastern District of Michigan, in which the case is unfolding at first instance, ordered on October 28, 2015, to deny a motion to allow illegality under European antitrust law as a line of defense in the proceedings. The partial decision of the court is of technical nature and is no assessment that the underlying agreements do not violate EU antitrust law. All other lines of defense remain allowed.

In case of a negative ruling in the first instance, there will still be the possibility of appeal in the United States, and the defense of illegality under EU antitrust law can be reconsidered at that stage. In addition, a potential U.S. ruling has to comply with the essential principles of the German law in order to be recognized and enforced in Germany. Thus, a German court would have to reassess a potential ruling, if it were to be enforced in Germany. At the latest at this stage, the illegality of the underlying agreements due to infringement of EU antitrust law would become relevant again. Therefore, even in case of a negative ruling in the U.S., SolarWorld continues to assess the probability of enforcement of such ruling as low. Nevertheless, at this point in time the outcome of the proceedings cannot be finnally estimated. Depending on the outcome, therefore it is possible that SolarWorld Industries Sachsen GmbH might be liable for damages up to the claimed amount.

#### 43. RELATED PARTY DISCLOSURES

The following material transactions involving related parties were conducted in the reporting period 2015:

With contract dated December 11, 2015 SolarWorld AG & Solar Holding GmbH in GbR Auermühle sold its property held as business asset to companies related to Dr.-Ing. E.h. Frank Asbeck with effect from December 31, 2015. The transaction was carried out in two stages. In a first step a portion of the property was transferred to Solar Holding Beteiligungsgesellschaft mbH against reduction of its company shares. SolarWorld AG's shares in SolarWorld AG & Solar Holding GmbH in GbR Auermühle thereby increased to 94.23 percent. In a second step the remaining part of property after this transaction was sold also in December 2015. The purchase price was € 22.4 million. With the transactions the financial liabilities related to the property in an amount of € 6.4 million were transferred to the purchasers.

Administration and commercial property in Bonn as well as a solar park in Freiberg were rented and leased from Dr.-Ing. E.h. Frank Asbeck and close family members. The annual rent and lease payments amounted to € 1.4 million (prior year € 1.3 million). For other services and on-charges of costs incurred especially in connection with the management of solar parks, a net amount of € 289k (prior year € 354k) was invoiced to Dr.-Ing. E.h. Frank Asbeck and his individual enterprise. At the end of the period, all receivables (prior year € 148k) were settled.

SolarWorld AG & Solar Holding GmbH in GbR Auermühle took out a € 900k loan on October 22, 2014 and a further loan of € 300k on February 22, 2015 from an entity directly controlled by Dr.-Ing. E.h. Frank Asbeck. At reporting date the loan liability did not exist any longer. Please refer to note 41. c). In the reporting period 2015, the respective interest for 11 month amounts to € 63k (prior year € 11k). Liabilities from this transaction do not exist at reporting date (prior year € 11k).

In the period of time after its derecognition SolarWorld AG & Solar Holding GmbH in GbR Auermühle generated rental income in an amount of  ${\rm \,\,^{c}}$  153k from properties leased to SolarWorld group. No receivables from this transaction are unsettled at the end of the period.

Project services and module deliveries in the net amount of  $\leqslant$  475k (prior year  $\leqslant$  0k) were rendered or supplied to entities indirectly and directly controlled by Dr.-Ing. E.h. Frank Asbeck. At the end of the period, all receivables were settled. At reporting date, however, there was a payment received in the amount of  $\leqslant$  158k (prior year  $\leqslant$  0k) for the supply of modules not delivered till that date.

Services and on-charges of costs incurred in the amount of € 261k (prior year € 312k) were rendered to entities indirectly and directly controlled by Dr.-Ing. E.h. Frank Asbeck. As already in the prior year, no receivables from this transaction are unsettled at the end of the period.

On February 25, 2014, SolarWorld took out a loan (Super Senior Facility Agreement or short SSFA) from Qatar Solar Technologies Q.S.C., Qatar, amounting to of  $\in$  50.3 million including interest on balance sheet date. Several collaterals were provided for the loan. Please refer to note 32. The respective interest expenses for the reporting period amounted to  $\in$  3,441k (prior year  $\in$  2,575k).

SolarWorld group has entered into contracts regarding the construction of solar parks for Qatar Solar Technologies Q.S.C., Qatar, amounting to  $\in$  3.8 million. At reporting date, advances received in the amount of  $\in$  0.5 million resulted from this transaction. Furthermore, SolarWorld group reacquired assets from Qatar Solar Technologies Q.S.C. of  $\in$  1.3 million due to higher demand on the US solar market. Services related to this transaction amounted to  $\in$  0.1 million. Liabilities of  $\in$  1.3 million were outstanding at reporting date which shall be off-set against trade receivables from the project contracts.

On the basis of a corresponding shareholder agreement, Qatar Solar Technologies Q.S.C., Qatar, called in equity contributions of US\$ 1,450k in November 2013 and of US\$ 11,603 in January 2015. According to the agreements from the financial restructuring the obligation claimed in January 2015 will be paid by Qatar Solar S.P.C. and granted to SolarWorld AG as a further loan. Payment of both obligations is deferred until March 31, 2016. We refer to our comments in note 35.

Employee representatives to the Supervisory Board, who are in employment with SolarWorld AG or one of its subsidiaries, have received remunerations (excluding the remuneration for the Supervisory Board) in the total amount of € 147k during their activity in the Supervisory Board.

The partnership Schmitz Knoth Rechtsanwälte, Bonn, — a party related to the former chairman of the Supervisory Board, Dr. Claus Recktenwald, in terms of IAS 24 — handles SolarWorld group's legal issues. Upon approval of the Supervisory Board, in the prior year a total fee of  $\leqslant$  0.4 million was rewarded for these services until his resignation on May 30, 2014.

Remuneration and share ownership of members of the executive and Supervisory Board is listed in note 45 and presented in the remuneration report of the management report.

All transactions were carried out at arm's length.

#### 44. FMPLOYEES

The average number of employees amounted to 2,838 (prior year 2,701) and falls upon the entity's areas of operations and segments as follows:

Number	2015	2014
Production Germany	1,721	1,751
Production U.S.	658	503
Trade	349	327
Other	110	120
Total	2,838	2,701

Per December 31, 2015, the number of employees amounted to 2,932 (prior year 2,701) and included 49 trainees (prior year 44).

## 45. EXECUTIVE BOARD MANAGEMENT BOARD AND SUPERVISORY BOARD

For assuming their duties in both parent company and subsidiaries in 2015, the members of the Management Board received total remuneration payments of € 2,719k (prior year € 2,276k), which includes variable remuneration of € 877k (prior year € 554k).

Mr. Klebensberger's board function as Chief Operations Officer ended in February 2013. On the basis of his still ongoing contract, he received continued payment of remuneration amounting to € 285k in 2014. In the reporting period no payments had to be made.

For assuming their duties in both parent company and subsidiaries in 2015, the members of the Supervisory Board received remuneration payments including reimbursements in a total amount of € 518k (prior year € 312k), each plus statutory VAT. As in the prior year, the total does not include any variable remuneration.

Individualized disclosures regarding the remuneration of the board of directors' members are included in the entity's management report.

As in the prior year, the appointed members of the Management Board are:

- Dr.-Ing. E. h. Frank Asbeck (Chief Executive Officer)
- Dipl.-Kfm. tech. Philipp Koecke (Chief Financial Officer)
- · Dipl.-Wirtschaftsing. Frank Henn (Chief Sales Officer)
- Attorney at law Colette Rückert-Hennen (Chief Information, Brand & Personnel Officer)
- Dipl.-Ing. Jürgen Stein (Chief Product Officer)

At reporting date, the chairman of the Management Board, Dr.-Ing. E.h. Frank Asbeck, indirectly and directly owned unchanged to the prior year 20.85 percent of the shares in SolarWorld AG.

As in the prior year, members of the Supervisory Board are:

- Dr. Georg Gansen (Chairman), attorney-at-law/corporate legal counsel of Deutsche Post AG, Bonn
- Heiner Eichermüller, Scottsdale/Arizona, United States (Deputy Chairman until June 2, 2015), freelance senior business consultant
- · Dr. Khalid K. Al Hajri, Doha, Qatar
- · Faisal M. Al Suwaidi, Doha, Qatar
- · Dr. Andreas Pleßke, Herrsching am Ammersee, Germany
- · Jürgen Wild, Vaucresson, France

The chairman of the Supervisory Board, Dr. Georg Gansen, does not hold office in any other boards of directors and similar supervisory bodies to be established according to law.

On June 2, 2015, the following employee representatives were appointed by court upon the Management Board's application:

- Gerald Voigt, Chemnitz, Germany (Deputy Chairman since June 2, 2015), trade union Industriegewerkschaft Bergbau, Chemie, Energie (IG BCE) district manager for Dresden/Chemnitz
- Wolfgang Lemb, Frankfurt am Main, Germany, member of the management board of trade union Industriegewerkschaft Metall (IG Metall)
- Dr. Ute Mareck, Freiberg, Germany, manager of technology and process at SolarWorld Industries Sachsen GmbH
- Peter Finger, Bonn, Germany, Chairman of the Works Council of SolarWorld AG
- Joachim Götz, Erfurt, Germany, Chairman of the Works Council of SolarWorld Industries Thüringen GmbH
- Anke Martin-Heede, Weißenborn, Germany, Chairwoman of the Group Works Council and of the Works Council of SolarWorld Industries Sachsen GmbH

These Supervisory Board members were serving on an interim basis until the election by direct vote of the employee representatives on September 29/30, 2015, by the employees at the German sites.

Thus, the following six employee representatives have been members of the Supervisory Board since the election by direct vote and therewith since October 2015:

- Gerald Voigt, Chemnitz, Germany (Deputy Chairman since June 2, 2015), trade union Industriegewerkschaft Bergbau, Chemie, Energie (IG BCE) district manager for Dresden/Chemnitz
- Albrecht Handke, Dresden, Germany, press and public relations officer, member of the works council of SolarWorld Industries Sachsen GmbH
- Wolfgang Lemb, Frankfurt am Main, Germany, member of the management board of trade union Industriegewerkschaft Metall (IG Metall)
- Dr. Ute Mareck, Freiberg, Germany, manager of technology and process at SolarWorld Industries Sachsen GmbH
- Alexander Richter, Freiberg, Germany, member of the works council of Solar-World Industries Sachsen GmbH and member of the group works council of SolarWorld AG
- Olaf Zirr, Erfurt, Germany, team manager QHSE and deputy chairman of the works council of SolarWorld Industries Thüringen GmbH

The deputy chairman of the Supervisory Board, Gerald Voigt, is also member of the Supervisory Board of envia Mitteldeutsche Energie AG, Chemnitz.

#### 46. AUDITOR'S FEES

In 2015, total fees invoiced by the auditor of the consolidated financial statements, BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg/Bonn, including reimbursement of costs, amount to:

- a) Year-end audit € 0.7 million (prior year € 0.7 million)
- b) Other certification services € 0.0 million (prior year € 0.2 million)
- c) Tax consulting € 0.0 million (prior year € 0.0 million)
- d) Miscellaneous services € 0.1 million (prior year € 0.2 million)

Furthermore, in the prior year transitory items in an amount of € 1.0 million have been recharged in the scope of the financial restructuring.

Bonn, March 15, 2016

SolarWorld AG The Management Board

#### 47. CORPORATE GOVERNANCE

In November 2015, Supervisory Board and Management Board issued the statement required by § 161 AktG, stating that, with a few exceptions, the recommendations of the "Deutscher Corporate Governance Kodex" (German Corporate Governance Code) issued on May 5, 2015, were and are complied with. Both the declaration of compliance and explanations for exceptions are published on the Solar World AG website (www.solarworld.de/investorrelations/ entsprechenserklaerung).

Dr.-Ing. E. h. Frank Asbeck

Chief Executive Officer (CEO)

Dipl.-Wirtschaftsing. Frank Henn

Chief Sales Officer (CSO)

Dipl.-Kfm. tech. Philipp Koecke

Chief Financial Officer (CFO)

RAin Colette Rückert-Hennen

Chief Information,

Brand & Personnel Officer (CIBPO)

Dipl.-Ing. Jürgen Stein

Chief Product Officer (CPO)

# **AUDIT OPINION**

We have audited the consolidated financial statements – comprising the statement of financial position, statement of profit and loss, statement of comprehensive income statement of changes in equity, statement of cash flows and notes to the consolidated financial statements – of SolarWorld Aktiengesellschaft, Bonn, for the period January 1, 2015 to December 31, 2015. The preparation of the consolidated financial statements and the group management report in accordance with IFRS, the additionally applicable requirements of the German commercial law (§ 315a sec. 1 HGB [Handelsgesetzbuch – German Commercial Code]) and the supplementary provisions of the articles of association are the responsibility of the company's legal representatives. Our responsibility is to express an opinion on the consolidated financial statements and the group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB [Handelsgesetzbuch - German Commercial Code] and German generally accepted standards for the audit of annual financial statements promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of financial position, financial performance and cash flows 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 accounting information of the consolidated subdivisions, definition of the consolidated entity, applied accounting and consolidation principles and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and 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 IFRS as applicable in the EU, the additionally applicable requirements of the German Commercial Code (§ 315a sec. 1 HGB) and the supplementary provisions of the articles of association and give a true and fair view of the financial position, financial performance and cash flows of the group. The group management report is consistent with the consolidated financial statements and, as a whole, provides a true and fair view of the group's position and suitably presents the opportunities and risks of future developments.

Without qualifying this assessment, we refer to the comments in the group management report. The group management report's section "forecast," subsection "risk report" and there, in particular, "overall conclusion of the management board regarding the risk situation of the group" states that the ability of the company and the group to continue as a going concern materially depends on achieving the expected positive results from the adopted operational measures, the expected increase in sales revenue and the non-occurrence of any extraordinary termination exercised by the creditors of borrowed funds. To the extent to that the company's assumptions regarding the calculation of agreed financial covenants as well as possible transactions requiring approval prove to be inaccurate or if the actual developments differ from those expected by the legal representatives thereby resulting in a violation of contractually agreed financial covenants, the creditors of borrowed funds will be entitled to extraordinary termination, the consequence of which will be an insufficient cash position, which will endanger the ability of the company to continue as a going concern.

Bonn, March 15, 2016

BDO AG Wirtschaftsprüfungsgesellschaft

**signed Lubitz**Wirtschaftsprüfer
(German Public Auditor)

signed Ahrend Wirtschaftsprüfer (German Public Auditor)

# RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements 2015 give a true and fair view of the assets, liabilities, financial position and profit or loss of the group, and the group management report

2015 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 15, 2016

SolarWorld AG Board of Management

Dr.-Ing. E. h. Frank Asbeck

Chief Executive Officer (CEO)

Dipl.-Wirtschaftsing. Frank Henn

Chief Sales Officer (CSO)

Dipl.-Kfm. tech. Philipp Koecke

Chief Financial Officer (CFO)

RAin Colette Rückert-Hennen

Chief Information, Brand & Personnel Officer (CIBPO) Dipl.-Ing. Jürgen Stein

Chief Product Officer (CPO)



177 GLOSSARY

**182 ACRONYMS AND ABBREVIATIONS** 

183 FINANCIAL AND EVENT CALENDAR 2016

## **GLOSSARY**

#### Α

**Active patent** – A granted patent is considered to be active so long as the maximum patent duration of 20 years has not expired and the patent is not abandoned before then.

**Albedo** – The albedo, or albedo coefficient, refers to reflectivity of a surface. It describes the ratio of light reflected from the surface to the light falling on the surface. For example, an albedo of 0.7 means that 70 percent of incident light is reflected back by the surface.

#### R

**Bifacial solar cell** – With bifacial ► <u>solar cells</u>, both sides of the solar cell generate electrical power by harnessing both direct and indirect sunlight.

**Bill of materials** – Detailed and exact list of all components required to manufacture a product unit

**Branding** – Strategic marketing activity intended to create a strong, effective identity for the brand and so raise the profile of a company's products

**Busbar** – A busbar is an extremely thin metallic strip used to conduct electric current. During the manufacturing of crystalline solar power modules, busbars are soldered onto the solar cells to connect them electrically. These contacts are visible as thin vertical stripes on the cell surface.

#### C

**Capital stock** – Total of the par value of all stocks issued by a company

**Carbon dioxide (CO<sub>2</sub>)** – Odorless, invisible gas consisting of carbon and oxygen. The increase of its concentration in the atmosphere is caused by the use of fossil energy sources and contributes to global warming.

Carbon Disclosure Project (CDP) — Global cooperation between more than 820 institutional investors with investment capital with about US\$ 100 trillion. The goal is to disclose ► greenhouse gas emissions by companies and their respective strategies concerning action on climate change. The CDP is the world's largest freely available emissions inventory for corporate ► CO₂ emissions. SolarWorld AG has been regularly participating in this project since 2006.

**Cash flow statement** – Identification and reporting of income and expenditure generated or consumed by a company within a specific period of time from ongoing business, investment and financing activities

**Cell** ► *Solar cell* 

**CO₂** ► <u>Carbon dioxide</u>

#### **CO**, **emissions** ► *Greenhouse gas emissions*

**CO**<sub>2</sub>-equivalent (**CO**<sub>2eq</sub>) – Contribution of a greenhouse gas to the greenhouse effect. The greenhouse gas potential of  $\succ$  <u>carbon</u> <u>dioxide (CO</u><sub>2</sub>) is used as a comparative value to describe the global warming effect of different greenhouse gases uniformly over a certain period of time.

**Commercial** — In the photovoltaic industry, commercial refers to mid-sized systems installed on company buildings, community roofs or similar facilities. Cf ► *Residential* and ► *Utility* 

**Compliance** – Observing laws, regulations, internal and external guidelines and codes which are followed on a voluntary basis. The goal is to avoid illegal and/or illegitimate activities.

**Corporate culture** – The fundamental beliefs, values and attitudes shared by the members of a company concerning the purpose of the company. Corporate culture expresses, for example, the value notions that management holds and the way they deal with one another and with employees.

**Corporate Governance** > <u>German Corporate Governance Code</u> **Covenants** – Agreements that, for example, require a borrower to achieve defined financial ratios

#### D ...

**Declaration of compliance** – Declaration by the Management Board and the Supervisory Board pursuant to § 161 German Stock Corporation Act (AktG) stating the extent to which they follow the recommendations of the • German Corporate Governance Code

**Deferred taxes** – Result from differences in tax burdens where taxable profit differs from earnings in the commercial-law financial statements due to tax rules

**Depreciation** – The annually increasing decline in the value of fixed assets and equipment is taken into account by systematically setting off the original cost against tax over the years of their use. Depreciation is treated as an expense for accounting purposes.

**Direct material** – Material that is incorporated directly into the product cf. ► *Indirect material* 

**Direcotors' Dealings** — Securities transactions by managers or persons/companies close to them involving stocks in their own listed companies.

**Dividend** – Portion of the earnings of a stock corporation distributed to the shareholders on an annual basis. The distribution of these earnings is resolved by the Annual General Meeting.

#### E

**Earnings per share** – Group earnings divided by the weighted number of stocks

**EBIT** – Earnings Before Interest and Taxes. Result after deduction of all operating costs. EBIT is usually used to evaluate a company's earnings position, particularly for international comparisons as it does not include national taxes.

**EBITDA** – Earnings Before Interest, Taxes, Depreciation (on property, plant and equipment) and Amortization (of ► <u>intangible assets</u>). This indicator facilitates international comparisons as it does not include national taxes.

#### **EEG** ► Renewable Energy Sources Act

**Efficiency** — Efficiency describes the ratio of usable energy to input energy. For solar power modules, the efficiency indicates the amount of solar irradiance that is converted into electrical output.

**Einstein Award** – Award presented by SolarWorld since 2005 to persons who have rendered outstanding services in the area of solar energy. In addition, young scientists have been awarded the SolarWorld Junior Einstein Award since 2006 for their scientific work in specialist areas relating to ► *photovoltaics*.

**Employer branding** – Activities of a company to create a brand image as an attractive employer both internally and externally

Energy payback time/CO<sub>2eq</sub> payback time—The amount of time it takes the ► <u>solar power system</u> to produce as much energy as was used to manufacture it. Accordingly, the CO<sub>2</sub> payback time refers to the time it takes to compensate for the greenhouse gases that were emitted during manufacturing.

**Equity** − Balance sheet item consisting of the ► <u>capital stock</u>, reserves and accumulated results that are available to the company to be used for investments (for example)

**Equity ratio** – Measures ► <u>equity</u> as a proportion of the total ► <u>capital</u> stock. Used to assess the creditworthiness of a company

**ERP system** – Enterprise Resource Planning System. Application software to support all business processes running within an enterprise. Using various units for different functional areas (e.g. sales, controlling, HR), enterprise resource planning is implemented with the aid of a common database.

#### F

Fair disclosure principle — Equal treatment of all shareholders and other stakeholder groups in the disclosure of information

Feed-in tariff — In Germany, for example, utilities are obliged to buy electricity from renewable sources and pay for it at a current rate. This is regulated by the ► <u>Renewable Energy Sources Act</u>.

#### G

**German Corporate Governance Code (GCGC)** – The code comprises the rules applying to corporate management and supervision in Germany. Furthermore, it provides recommendations and suggestions. Thus, the GCGC is to promote the trust of international and national investors, of customers, employees and the public as stakeholders in the management of German companies.

**Gigawatt (GW)** – One gigawatt equals one billion (1,000,000,000) ▶ watts

**Global Compact (GC)**—Also "United Nations Global Compact"; is concluded between companies and the UN with the objective of making globalization more ecologically and socially compatible

**Global reporting initiative (GRI)** – Global multi-stakeholder network of experts to define a global standard for the preparation of sustainability reports. The GRI reporting framework serves to ensure systematic presentation of the economic, ecological and social performance of companies in order to facilitate comparisons between companies and a transparent presentation of the development over time.

Greenhouse gas emissions – Greenhouse gases interfere with the natural balance of the atmosphere, which may lead to climate change. The most important man-made greenhouse gases are ► <u>carbon dioxide (CO<sub>2</sub>)</u> from the combustion of fossil energy sources (about 60 percent) and methane from agriculture and mass animal husbandry (about 20 percent).

**Grid parity** – Parity between the price of solar-produced power and domestic electricity prices. This is achieved when the purchase price of solar power is the same as normal domestic electricity from the wall socket.

**Impairment** – Adjustment item to cover the impairment of a fixed or current asset item carried under assets in the balance sheet **Income statement** – Period-related comparison of the incomes and expenditures of a company

**Indirect material** – Material or services that are not required for directly manufacturing a product. cf. ► *direct material* 

Ingot ► solar ingot

**Intangible assets** – Include concessions, commercial property rights, licenses, corporate goodwill, patents etc.

International accounting standards (IAS) — Collection of uniform international standards and interpretations in which the rules of external reporting for capital-market-oriented companies are listed International accounting standards board (IASB) — Internationally staffed independent body of accounting experts that develops the ► International Financial Reporting Standards (IFRS) and revises them as and when required

International financial reporting interpretations committee (IFRIC) — Discusses current accounting issues that are differently or incorrectly treated because of insufficient guidance concerning the IAS and IFRS standards. Furthermore, it deals with new sets of conditions that have not yet been covered by IAS/IFRS.

**International financial reporting standards (IFRS)** – Collection of internationally applicable standards and their official interpretations that lists the rules guiding the external reporting of capital-market-oriented companies

Inverter – Converts the direct current generated by ► <u>solar modules</u> into the alternating current required by the grid. It also monitors the grid connection.

**ISO 14001**—International environmental management standard that lays down requirements to be met by an environmental management system

**ISO 9001** – International standard on quality management that determines the generally accepted requirements to be met by a ► quality management system

#### K

Kilowatt (kW) - One kilowatt equals 1,000 watts

#### L

**Large-scale project** − Large ► *solar power system,* mostly ground-mounted installations. Primarily, these are plants with a rated output of more than 100 kW.

**Lock-up period** – Designates a period of time, agreed between the issuer and shareholder, in which shares acquired by the shareholder may not be sold

#### M

Margin – Difference or market margin between producer (production) price and sales (consumer) price of a tradable product. The margin allows the overhead costs included in production and distribution to be covered.

**Market capitalization** – Valuation of a company at the stock exchange. Measurement referring to the number of stocks times the stock price

Megawatt (MW) - Equals one million (1,000,000) watts

**MENA** – Acronym for the Middle East & North Africa region. It extends from Morocco in the west to Iran.

Module ► Solar module

Monocrystalline – Conditions prevailing during crystallization result in the solidification of the ► <u>solar-grade silicon</u> in a single large and homogeneous cylindrical crystal. Cf. ► <u>multicrystalline</u>

Multicrystalline – The conditions prevailing during crystallization cause the ► <u>solar-grade silicon</u> to solidify into a silicon block consisting of several small crystals which overall does not show a completely homogeneous arrangement of atoms. Cf. ► monocrystalline

#### Ν

**Natural hedging** – Export-oriented companies can hedge themselves against exchange rate risks by site selection, purchasing policy and/or determination of contractual currency.

#### 0

**Off-Grid** – Solar power systems not directly connected to the power grid. The power generated is consumed directly or stored locally. **On-Grid** – Solar power systems connected to the regional power grid. The operator of the system can feed electricity into the grid when electricity production is high (strong solar radiation) and can also take electricity from the grid if necessary.

#### P

PERC (passivated emitter rear cell) — A passivated emitter and passivated rear of the ► <u>solar cells</u> reduce optical and electrical losses. In conventional ► <u>solar cells</u>, the back of the cell is screen-printed with an aluminum coating, which acts as a contact. But in PERC cells, the rear is given a dielectric coating (e.g. silicon dioxide). The contacts for carrying electricity are formed individually by laser. PERC technology increases the efficiency of the ► <u>solar cell</u>. Apart from higher output, PERC also improves the cell's low-light performance. Photovoltaics — Describes the direct conversion of solar radiation into electrical energy

**Polysilicon** – Silicon crystals with a high degree of purity sufficient for solar applications. The chemical element silicon is a semiconductor that forms crystals with a stable diamond structure. For use in the solar industry, the raw silicon has to be purified into polysilicon.

**Primary sources of energy** – Naturally occurring energy sources such as the sun, wind, water, coal, crude oil, natural gas, and nuclear fuels, which have to be converted (e. g. in power plants) to generate usable energy for end consumers

**Prime Standard** – Legally regulated listing segment of the Frankfurt Stock Exchange for companies meeting particularly stringent international transparency standards. Precondition for admission to DAX, MDAX, TecDAX or SDAX

**Provisions** – Balance sheet items in which amounts are accrued for uncertain future liabilities that can, however, already be estimated at the present time (e.g. pension payments, taxes)

#### Q

**Quality management** – Application of measures serving to improve products, processes or services of any kind. It is considered part of functional management, aiming to enhance the efficiency of a transaction or workflow.

#### R

Renewable Energy Sources Act – Law promoting renewable energies in Germany (Erneuerbare-Energien-Gesetz, EEG). It regulates the preferred purchase, transmission and compensation of electricity from renewable sources. ► <u>feed-in tariffs</u> are fixed for twenty years. Residential — Segment in the solar market for small systems ► Commercial and ► Utility

**RISE** – Describes the four-dimensional corporate mission of SolarWorld AG. An acronym for Responsibility, Innovation, Sustainability, Engagement. These provide guidance for all HR strategy measures.

**Risk management** – Procedure for the identification, measurement and avoidance/reduction of risks or the implementation of corresponding measures

#### S

SAP – Name of software manufacturer, with headquarters in Baden-Württemberg, Germany. Main product is a ► <u>ERP system</u>.

Self-consumption – Self-generated power can be consumed directly, the rest can be fed into the public grid. In both cases, the ► <u>feed-in tariff</u> for solar power is guaranteed by the German state for 20 years through the ► <u>Renewable Energy Sources Act</u>. The more power is used straight from the roof, the higher the return on investment from a solar array will be. The self-consumed rate can be boosted to more than 90 percent with intelligent products for consumption control. People who produce their own power are more independent of increasing electricity prices. At the same time, the strain on the grid is reduced since solar power generation and consumption occur together in the same building.

Shop-floor management – Effective approach aimed at continuous process improvements at the site of value creation through collaboration between employees and executives directly in production Silicon ► Polysilicon

**Solar2World** – In this program, SolarWorld supports aid projects in developing countries with ► <u>off-grid solar power systems</u> that promote sustainable economic development.

**Solar cell grid** − To collect and transport electrical current in the • <u>solar cell</u>, an extremely fine grid made up of metallic conductive material is applied on the cell surface area. This is called a solar cell grid. To impact solar cell performance as little as possible, the solar grid should cover the minimum area of the cell possible and have low electrical resistance. Solar cell – Solar cells interconnected in a ► <u>solar module</u> allow sunlight to be turned into electricity via the photovoltaic effect. The cell consists of two layers that are deliberately contaminated (doped). At the interface of the two layers, an electric field is formed. When a light beam hits an electron in the upper layer, it can move freely and migrates to the outside. This creates a voltage that can be tapped via external contacts.

Solar ingot – Block made from a semiconductor material such as silicon, with either a ► monocrystalline or ► multicrystalline structure
Solar module – Consists of interconnected ► solar cells, which are sealed with silicone behind glass in an aluminium frame to make the module weather-resistant

**Solar power system/solar power plant** – Complete system of ► <u>solar modules</u>, racking system etc. generating direct current through the photovoltaic effect; an ► <u>inverter</u> converts the power into alternating current before it is fed into the grid. More and more solar power systems comprise components that facilitate ► <u>self-consumption</u>.

**Solar wafer**—Thin slice made of ► <u>solar-grade silicon</u>, used to produce ► <u>solar cells</u>. They can be either ► <u>monocrystalline</u> or ► <u>multi-crystalline</u>.

**Stakeholder** – Groups or individuals who may influence the goals achieved by a company or who are affected by these goals. The key stakeholder groups include employees, shareholders, investors, suppliers, customers, consumers, authorities and non-governmental organizations.

**Supply chain management** – Involves planning and managing all tasks across the entire value-creation process, from supplier selection and procurement to logistics

**Supply chain** – Network of organizations with involvement upstream and downstream of various value creation processes and activities

**Sustainability** – 1. Characteristic of a system that continues to exist in the long term; 2. Scientific concept concerning the objective limits to environmental exploitation; 3. A concept in ethical standards at the core of which is the issue of justice and balance

#### Τ

"Take or pay" obligation – Contractual "payment guarantee" agreed between supplier and buyer which requires the buyer to pay a fixed amount regardless of whether the agreed quantity is taken or not. Consequently, if the agreed minimum quantity is not purchased, the payment is still due.

#### U

**Utility** – Large ground-mounted systems for the large-scale production of solar power to be fed into the grid. In general, these solar power stations have a capacity greater than one ► megawatt. Cf. ► Commercial and ► Residential

#### V

Value chain – Term used to designate the entirety of all production processes in which value is added to a product. The stages of Solar World's value chain range from ► polysilicon to ► solar modules.

#### W

#### Wafer ► solar wafer

Wafering – The step in the ► <u>solar wafer</u> manufacturing process in which ► <u>solar ingots</u> are sawn into bars and then into thin slices Watt – International measuring unit for power output, named after James Watt, standard sign "W"

Watt-peak (Wp) – Unit of measurement commonly used in ► <u>photovoltaics</u> to specify the electrical power output of ► <u>solar cells</u> or ► <u>solar modules</u>

**Working capital** – Inventories plus trade receivables minus trade payables. It provides information about the company's financial stability and flexibility.

# **ACRONYMS AND ABBREVIATIONS**

IfW - Institute for the World Economy **AG** – German Stock Corporation Inc. - Incorporated AktG - German Stock Corporation Act ISIN - International Securities Identification Number ISO - International Organization for Standardization IT - Information technology **B2B** – business to business ITC - Investment Tax Credit **B2C** – business to consumer K -----Benelux - Belgium/Netherlands/Luxembourg **k€** – Thousand € K.K - Kabushiki kaisha (Japanese Stock Corporation) **CEO** - Chief Executive Officer kW - Kilowatt CFO - Chief Financial Officer kWh - Kilowatt-hour CIBPO - Chief Information, Brand and Personnel Officer CO<sub>2eq</sub> – CO<sub>2</sub> equivalent coo - Chief Operating Officer **LLC** – Limited Liability Company **CPO** - Chief Product Officer LP - Limited Partnership cso - Chief Sales Officer Ltd. - Limited Company **D&O** – Directors and Officers **MW** – Megawatt **EBIT** – Earnings Before Interest and Taxes **Q.S.C.** – Qatari Shareholding Company EBITDA – Earnings Before Interest, Taxes, Depreciation and Amortization **EEG** – German Renewable Energy Sources Act PERC - Passivated Emitter and Rear Cell **E. h.** – Honorary degree PTE Ltd. - Private Limited ERP - Enterprise resource planning **R&D** – Research and development GbR - Company under civil law RoCE - Return on capital employed GCGC - German Corporate Governance Code GmbH - Company with limited liability GW - Gigawatt S.à r.l. – Société à responsabilité limiteé **GWh** – Gigawatt-hour (French company with limited liability) S.P.C. - Segregated Portfolio Company **HGB** – German Commercial Code VorstAG - German Act on the Appropriateness of Management **Board Remuneration** IAS - International Accounting Standards IASB - International Accounting Standards Board IFRIC - International Financial Reporting Interpretations Committee WpHG - German Securities Trading Act

IFRS - International Financial Reporting Standards

# FINANCIAL AND EVENT CALENDAR 2016

MARCH 17, 2016 ▶►► Publication of Annual Group Report 2015 www.solarworld.de/financial-reports Press Conference on Financial Statements, Bonn (Germany) Analysts' Conference Call ►►► Mostra Convegno Expocomfort, Milan (Italy) MARCH 15-18, 2016 MARCH 15–16, 2016 Power and Electricity World Africa, Johannesburg (South Africa) MARCH 16−17, 2016 ►►► Solar Solutions, Haarlemmermer (Netherlands) APRIL 25-29, 2016 ►►► Hannover Messe, Hanover (Germany) MAY 12, 2016 ▶►► Publication of Consolidated Interim Report 1st quarter 2016 www.solarworld.de/financial-reports Analysts' Conference Call Mexican International Renewable Energy Congress, Mexico City (Mexico) MAY 16-20, 2016 ->> African Utility Week, Cape Town (South Africa) MAY 17-19, 2016 >>> Annual General Meeting, Bonn (Germany) JUNE 22-24, 2016 PPP Intersolar Europe, Munich (Germany) JULY 11-14, 2016 >>> Intersolar North America, San Francisco (U.S.) ▶▶▶ Publication of Consolidated Interim Report 1st half 2016 www.solarworld.de/financial-reports August 15, 2016: Analysts' Conference Call SEPTEMBER 7−9, 2016 ►►► PVExpo Osaka, Osaka, (Japan) SEPTEMBER 11−15, 2016 ►►► Solar Power International, Las Vegas (U.S.) SEPTEMBER 12–16, 2016 >>> Electra Mining, Johannesburg (South Africa) SEPTEMBER 21–22, 2016 ►►► East Africa Power Industry Convention (EAPIC), Nairobi (Kenya) OCTOBER 4-5, 2016 --- All Energy Australia, Melbourne (Australia) NOVEMBER 14, 2016 Publication of Consolidated Interim Report 3rd quarter 2016 www.solarworld.de/financial-reports Analysts' Conference Call

#### **IMPRINT**

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