



ANNUAL REPORT 2016



Welcome to our annual financial and operational review.

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Dear Members, Dear Readers,

2016 was another year of growth, records and important achievements. We would therefore like to start by thanking our members and partners for their trust in our scheme – and the dedicated PV CYCLE staff for their hard work.

With the creation of PV CYCLE BELGIUM in April 2016, we completed our transformation from a pan-European take-back and recycling programme to a vast network of national Producer compliance and waste management schemes, set up to assist manufacturing or importing companies in meeting their national WEEE obligations. PV CYCLE can now serve every single Member State with a tailor-made WEEE solution.

In line with our motto of simply being closer to waste and waste holders, PV CYCLE also continued to expand its unique expertise to other regions of the world. After the creation of PV CYCLE USA in summer 2015, PV CYCLE and its partners opened the first take-back and recycling service for discarded PV modules in Japan in March 2016. Both industrial and private waste holders can now dispose of their end-of-life modules within a dedicated infrastructure.

Another important milestone was reached with technological enhancements in our waste treatment operations. In February 2016, we were able to proudly announce a new world record in silicon PV recycling. Achieving a 96% recycling rate, a new process applied at one of our core partners now enables us to recycle silicon flakes in an economical as well as environmentally sound manner. In 2016, PV CYCLE also expanded its operations network by adding new partner companies and treatment methods.

Alongside R&D and business development, PV CYCLE also invested in its customer support service this year. With many more service agents and better diversified channels of communication, we feel we are poised to tackle the challenges of truly increasing waste volumes in our industry sector and to further expand our services to other waste products such as packaging or industrial waste. Looking forward to a successful 2017,



Axel Steuer
President



Jan Clyncke
Managing Director

OPERATING REPORT

With a total of 15,042 tonnes processed since the start of our operations in 2010 – or 1,803 tonnes in 2016 – PV CYCLE continued to retain its world-leading position in the collection and treatment of photovoltaic module waste. While we recorded a moderate increase in the traditionally high-volume waste markets of Germany, Italy and Spain, our operations rose by more than 60% in France and Belgium in 2016. At the same time, our membership more than doubled.

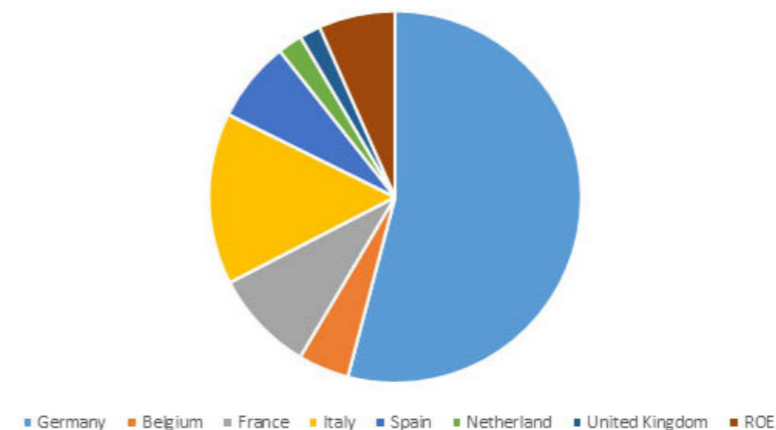
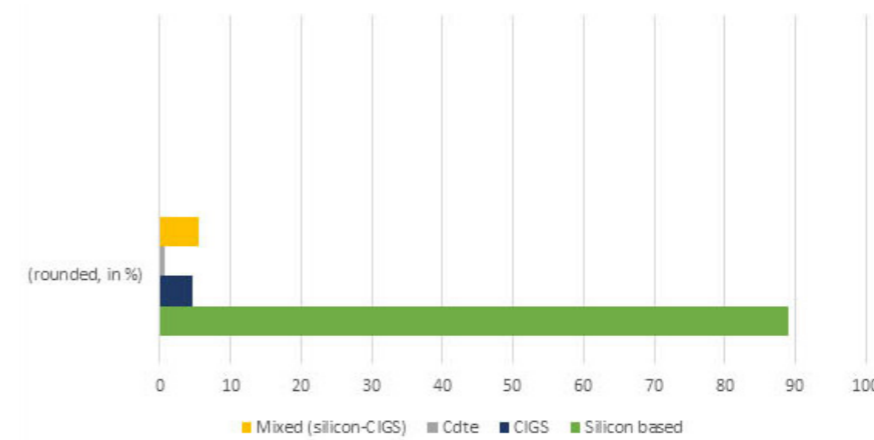
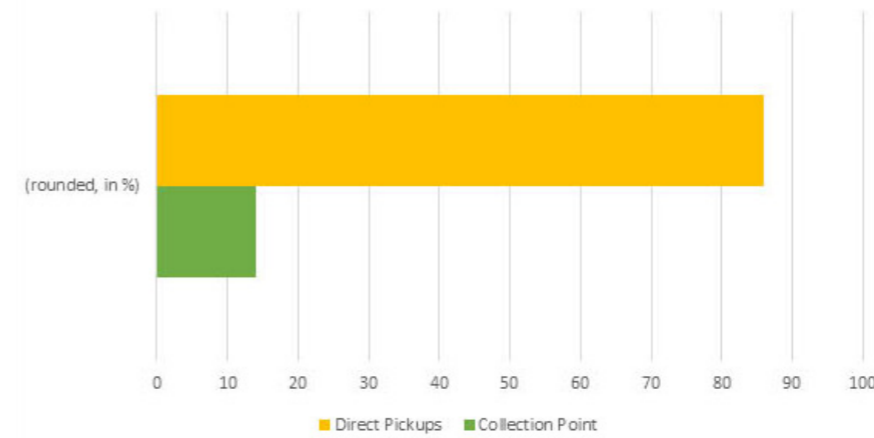
In February 2016, the Association announced a new record in silicon-based PV module recycling, achieving a 96% recycling rate. Enabling the recycling of silicon flakes – a combination of EVA laminate, silicon-based semiconductors and metals – in a way which is both economical and environmentally sound, the advanced process is currently being applied at one of PV CYCLE’s Europe-based recycling partners for silicon-PV.

A strong partner network is important to our success. We therefore reached new partnership agreements with several treatment facilities at the end of 2016. In November 2016, we launched a tender for additional treatment partners specifically for the French market. Technological enhancements and innovations are key to our waste treatment operations.

As part of our efforts to continuously improve and encourage investments in new, innovative waste treatment technologies, PV CYCLE is involved in a number of R&D projects. In March and November this year two PV CYCLE R&D projects came to a successful conclusion:

PV Morede, funded by the 2012 Eco Innovation Programme, researched the development and industrialization of a patented mobile recycling device. Compared with other industrial waste systems, PV Morede is able to treat PV modules directly where they are installed, thereby offering a cost-effective and easily accessible waste treatment solution for small quantities of PV panels. In a later stage, the project partners are set to work on a commercialization plan for the innovative recycling plant.

CU-PV is a pan-European R&D project under the European Union’s FP7 Programme. With the goal of improving the environmental profile of silicon-based PV modules, the CU-PV partners investigated the reduction of silver and lead in PV, ways to eco-design and high-value end-of-life treatment. Bringing research, production and waste treatment partners to this project, CU-PV covered the entire life cycle of a silicon based PV module.2



PV CYCLE COLLECTION CHANNELS

TREATED PV TECHNOLOGIES

TREATED VOLUME BY COUNTRY (t)

OPERATING REPORT

After important service expansions in 2014 and '15, we further increased our service portfolio this year. Especially in Germany and Italy, PV CYCLE now offers a broad range of add-on and new services to address the complex waste needs of our customers horizontally as well as vertically. In Italy we opened our waste management network to industrial companies, freeing them from their multifold administrative and operational waste obligations. In Germany, we have been successfully offering dismantling and packaging services in 2016 for the first time and are working on duplicating that service to other European Union countries and the USA. Ahead of upcoming changes in Italian WEEE legislation in 2017, PV CYCLE Italia srl underwent extensive reorganization, splitting the company into the independent member-compliance scheme PV CYCLE Italia Consorzio and the waste management company PV CYCLE Italia Service srl. As a result of our extensive business development in Italy, PV CYCLE Italia became a member of the Waste Coordination Centre for Batteries and Accumulators (CDC NPA).

In 2016, PV CYCLE invested in additional tools designed both to enhance our customer support and to serve our growing clientele around the globe.

To administer our steadily growing service portfolio, we brought on five new hires this year. Our membership and operations teams can now serve customers in 11 different languages – thanks to a more diversified set of communications channels: To better address urgent requests and provide more in-depth consultancy for customers and members, we implemented a live chat and technical support function. Our overhauled PV CYCLE websites - designed around the national needs of our industry - complement our continuous improvements in customer care and membership service. In line with our motto of simply being closer to waste and waste holders, our online services are now available through the national domains pvcycle.org, pvcycle.de, pvcycle.fr, pvcycle.be, pvcycle.org.uk and pvcyclegroup.it.

PV CYCLE IN THE WORLD

PV CYCLE offers collective and tailor-made waste management and legal compliance services for companies and waste holders around the globe – with national representations in all PV-relevant markets worldwide.

PV CYCLE started the year with the first, collective take-back and recycling scheme dedicated to the US PV market. Reflecting the increasing commitment of PV companies to Extended Producer Responsibility worldwide, PV CYCLE USA is a non-profit, non-stock corporation that serves social benefit goals. The primary purpose of PV CYCLE USA is to promote sustainable life cycle management in the PV industry, educate companies and communities about the benefits of sustainable waste management, and provide safe and sustainable options for discarded solar energy system products. While PV waste management has become a legal requirement in Europe, PV CYCLE USA wants to actively address the issue of abandoned waste and bring cradle-to-cradle value onto the industry's agenda.

In March 2016, PV CYCLE announced its first overseas partnership with Japan's one and only collection network for small quantities of PV module waste – JPV Collection. PV CYCLE supports JPV with its unsurpassed take-back and recycling expertise and the tailor-made PV CYCLE collection box. While the project started out as a regional test pilot, JPV is now active in all of Southern Japan.

In addition to helping JPV build up a collection network for small quantities of PV module waste, PV CYCLE contributes to accelerating sustainable waste management in Japan by directly offering its waste management service for B2B quantities too. The waste management service is a tailor-made company solution including an on-site pick-up service for large quantities of solar energy equipment waste and PV CYCLE's state-of-the-art recycling.

In summer 2016, PV CYCLE Association became the service provider for PV CYCLE BELGIUM – an independent, member-based compliance scheme for PV WEEE in Belgium – offering its unsurpassed administration and waste management solutions. While the Flanders region started enforcing WEEE in July 2016, Brussels-Capital and Wallonia continued to fail to implement the respective waste legislation for PV modules.

FINANCIAL REPORT

Independent as it is from investors and recyclers, PV CYCLE is a member association with non-profit status. Transparent prices, fair partnerships and sustainable solutions make us the preferred partner in the industry. Find our consolidated financial statement for the PV CYCLE Association here.

The 2016 financial report was audited and approved by Baker Tilly Belgium.

Fixed Assets	338	EQUITY	7562
- Intangible assets	220	Capital and Reserves	7140
- Tangible assets	84	Exchange Translation Adjustment	-4
• Property, plant & equipment	28	Result of the year	427
• Furniture & vehicles	20		
• Other tangible assets	36		
- Financial assets	34		
CURRENT ASSETS	8426	AMOUNTS PAYABLE	1201
- Amounts receivable < 1 year	2453	- Amounts payable < 1 year	1087
- Cash at bank & in hand	5951	- Amounts payable > 1 year	38
- Deferred charges and accrued income	22	- Accrued charges and deferred income	76
TOTAL ASSETS	8763	TOTAL LIABILITIES	8763

SUMMARY 2016 P&L (in thousand EUR)	
- Turnover	5743
- Services and miscellaneous goods	-1585
GROSS OPERATING MARGIN	4158
- Remuneration, social security and pensions (-)	-743
- Depreciation intangible and tangible fixed assets (-)	-151
- Amounts written off stocks; contracts in progress and trade debtors (+) (-)	-11
- Provisions for liabilities and charges (+) (-)	-2780
- Other operating charges (-)	-30
OPERATING RESULT	443
- Financial income (+)	33
- Financial charges (-)	-23
- Result for the period before taxes (+)	454
- Income taxes (+) (-)	-27
RESULT FOR THE PERIOD (+)	427

PV CYCLE & SOCIETY

Financing under WEEE remained the N° 1 concern of European PV companies in 2016. For that reason, PV CYCLE launched a video series explaining the different financial mechanisms under national WEEE legislation.

Starting with illustrating the visible fee in France, PV CYCLE wants to better equip industry players to educate customers and other stakeholders on PV waste financing and to bring the value of comprehensive lifecycle management closer to the market. Under WEEE, waste financing is based on historic, current and future obligations which are often independent from the actual waste arising in a country or company.

With respect to a potential EU Ecolabel for PV modules, PV CYCLE called on the European Commission to work towards promoting true excellence in all matters pertaining to end-of-life management and WEEE. While being the new status quo for the industry, WEEE compliance has not become the expected key indicator for excellence in corporate sustainability programmes – and hence a true facilitator for consumers to buy green. The reasons include the lack of standards, coupled with poor control and alternative compliance solutions that only cover administrative duties. PV CYCLE therefore advocates a (potential) EU Ecolabel that would promote all aspects of sustainability, from actively replacing hazardous materials and accelerating energy reduction to innovative design for recyclability and comprehensive end-of-life management.

As a member-based organization, a Board of Directors heads the PV CYCLE Association. During our Annual General Meeting in June 2016, PV CYCLE Members elected the following companies and individuals for another three-year term:

- **Trina Solar – Axel Steuer: President**
- **Aleo Solar – Wim DHooghe: Director**
- **Sustainable Consult – Jan Clyncke: Director**
- **Conergy – Stefan Froböse: Director**

Due to personnel change, the Conergy seat became vacant in December 2016 and will be open for an interim election during the 2017 General Meeting.



PV CYCLE & SOCIETY

EVENTS & SPEECHES AT A GLANCE

Representing our members' end-of-life commitment towards society and the authorities as it does, PV CYCLE also invests in public-awareness campaigns and speaks at numerous European and international events every year.

First Half of 2016

During the 31st Symposium for PV Energy in Kloster Banz, PV CYCLE delineated the new German law on PV module waste and its short- and long-term implications on the domestic market.

As official sponsor, PV CYCLE France contributed a presentation and round-table discussion to the conference on "Photovoltaic LCA & Recycling: Challenges, existing solutions and perspectives" organized by the French solar energy institute INES.

Together with representatives from government and business, Managing Director Nicolas Defrenne discussed the environmental impact of PV installations in France and Germany at the Franco-German Bureau for Energy Transition and presented end-of-life solutions to the waste challenges ahead of us.

At IRENA's 2016 PVSEC event "PV End-of-Life Management: Challenges and Opportunities" PV CYCLE, with speakers from industry, research and administration, presented the newest findings in life cycle management and PV waste treatment. During PVSEC, PV CYCLE also spoke on non-compliance with end-of-life legislation and its risks for the sustainable development of photovoltaic energy in Europe.

In June 2016, PV CYCLE's Head of Public Affairs & Communications, Pia Alina Lange, spoke at the Annual Wallonia-Brussels PV Industry Meeting about the new legal obligations for photovoltaic companies in Belgium.

Second Half 2016

In July 2016, PV CYCLE's Managing Director Jan Clyncke joined the Advisory Board of PVSITES to help drive sustainable BIPV technology forwards. PVSITES is a joint project financed under European Union grant agreement No 691768 to bring BIPV technology to a large market deployment. In this consulting role, Mr Clyncke brought PV CYCLE's longtime experience in PV module recycling to the project.

In September 2016, PV CYCLE brought its unsurpassed expertise in PV module collection and treatment to the BVSE "Annual General Meeting – FV Collection Networks for Discarded PV Modules".

To define policy recommendations for the European Commission on the development of circular economy and reuse, PV CYCLE France and other industry experts took part in the LITEN Institute FUTURING workshop.



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