



ANNUAL REPORT 2015





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FOREWORD

In 2015, all PV markets except Germany and Belgium experienced their first full year of national WEEE compliance. From Italy, Greece and Spain to the Netherlands, the UK and France, local PV companies, whether manufacturing, importing or rebranding PV modules for their home market, had to fully comply with national waste obligations in that year. Germany followed at the end of October with their revised ElektroG, making waste treatment a legally binding obligation for Germany-based companies too.

In 2015, PV compliance rates were not expected to exceed 60 per cent on average. PV CYCLE and leading PV companies therefore publicly spoke out against WEEE free-riders in order to advocate sustainable waste management and extended Producer responsibility.

For the purpose of promoting sustainable lifecycle management in the PV industry, educating companies and communities about the benefits of sustainable waste management, and providing safe

*Jan Clyncke,
Managing Director*



and sustainable options for discarded solar energy system products, PV CYCLE USA Inc. was created in September 2015. Our first overseas representation, PV CYCLE USA is a non-profit, non-stock corporation that serves social benefit goals. Waste treatment services are offered and managed by our headquarters in Brussels, Belgium.

While educating PV companies and waste holders on their legal requirements remained a major focus in 2015, our hard work of the past three years paid off with an expanded recycling network and continued market leadership in 2015.

To finish the year, PV CYCLE was successfully certified against ISO 9001 and 14001 standards, officially recognizing our internal quality and environment management systems.

A handwritten signature in blue ink, appearing to read "Jan Clyncke".



2 SUSTAINABLE WASTE MANAGEMENT

In 2015, the European Union Member States finalized their transposition of the WEEE Directive into national law. Of all the PV-relevant markets, only Germany, Belgium and Spain still had to implement new WEEE laws in 2015.

Spain transposed the WEEE Directive into national law in February 2015. While most other countries followed the dual-use notion (B2C classification) of the European Directive, the Spanish law now

2.1 | LEGAL LANDSCAPE

considers PV modules as a B2B (professional use) product. Only Austria also applied a B2B classification.

German ElektroG (WEEE) law came into force at the end of October 2015, with a three-month transition period for Producers (Germany-based manufacturers, importers or rebranders) of PV modules. **Germany** is the only country in the European Union to require a financial guarantee on the annual PV module sales.

The **United Kingdom** adopted a reclassification of PV modules into a B2C product, abolishing their initial B2B/B2C classification from January 2014. 2015 was also the first year with a government-set recycling target in the UK.

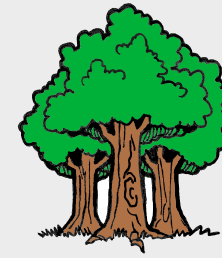
In **Italy**, the energy agency GSE published operative instructions for waste management of PV modules under Conto Energia I-V feed-in-tariffs.

To combat particularly low compliance rates in the **Netherlands**, the Dutch authorities conducted their first inspections in 2015, helping to raise the bar from 10 to 20% in 2014 to an estimated 75% in 2015.



Impact of recycling on CO₂ savings:

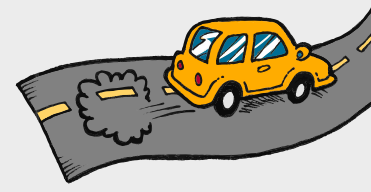
To recycle 1 tonne of silicon based PV modules can help to save approx. 1.2 tonnes of CO₂ emissions or:



6 trees planted



350 small cars
less per year



4,600 km not
driven in a year

In January 2015, **France** issued the mandatory government accreditations for WEEE compliance schemes under their new DEEE (WEEE) law. Only accredited schemes are authorized to offer WEEE compliance services on the French market, with strict regulations regarding the schemes' governance, administration, financing and operations.

PV waste management remained on the political agenda in **California** and **Japan** too. Neither territory has (yet) issued legal obligations for PV companies, but they have both continued to analyze the legal and environmental grounds for stringent regulations.

2.2 | COLLECTION & TREATMENT

PV CYCLE retained its leading position as regards collecting and treating PV modules in 2015. In 2015, the Association also treated products other than PV modules for the very first time, with the first customers being in Italy. In its portfolio, PV CYCLE now includes PV modules, inverters, batteries and other equipment falling under WEEE or Battery legislation.

More than 2,800 tonnes of PV module waste were treated under our scheme in 2015 alone, 33% more than in the previous year. For the second and fourth quarter, in particular, as well as for August, PV CYCLE recorded significant waste volumes. In total, approximately 13,300 tonnes had been handled by the PV CYCLE network by the end of 2015.

By the end of 2015, our recycling output also amounted to approximately 21 million clear-glass bottles, 102 million aluminum cans and many more products and materials. Since the start of our



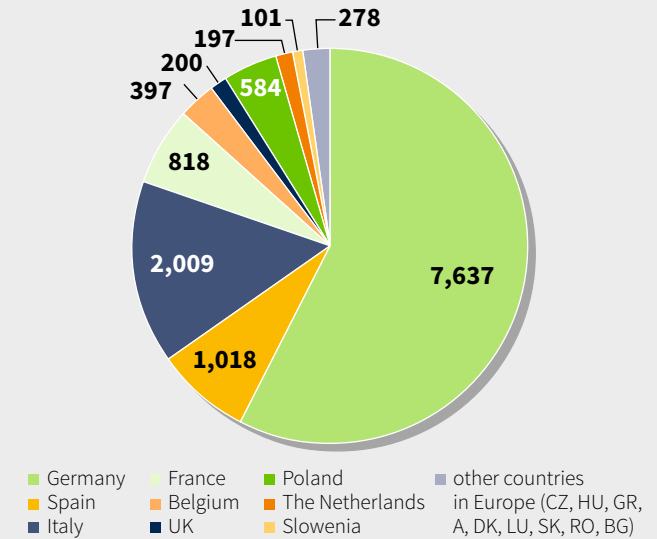
operations in 2010, PV CYCLE’s recycling activities¹ have contributed to saving approximately 12,800 tonnes of CO₂ emissions, equivalent to more than 76,000 new trees.²

While PV CYCLE closed its own collection points in Italy and the Netherlands in accordance with national WEEE implementation, the collection network as a whole increased. In Italy, B2C volumes are now collected via the nation-wide CDC RAEE network. For own collection activities, PV CYCLE contracted additional transport partners and signed a partnership for the collection of traditional electronic and electrical equipment as well as PV modules from municipal collection points. PV CYCLE also added new recycling partners to its Italian network. In the Netherlands, PV CYCLE signed a cooperation agreement with Wecycle for the collection of

¹ Silicon based PV technologies, calculated data
² EPA Greenhouse Gas Equivalences, Carbonify Carbon Calculator

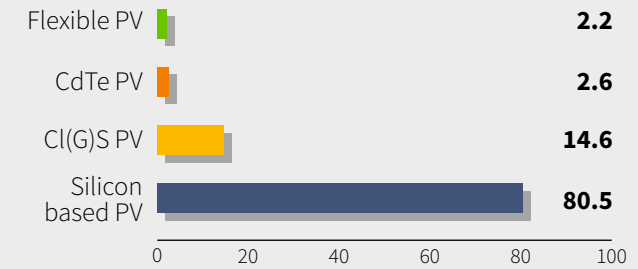
Treated waste tonnes by country

(cumulated figures, 2010-2015)



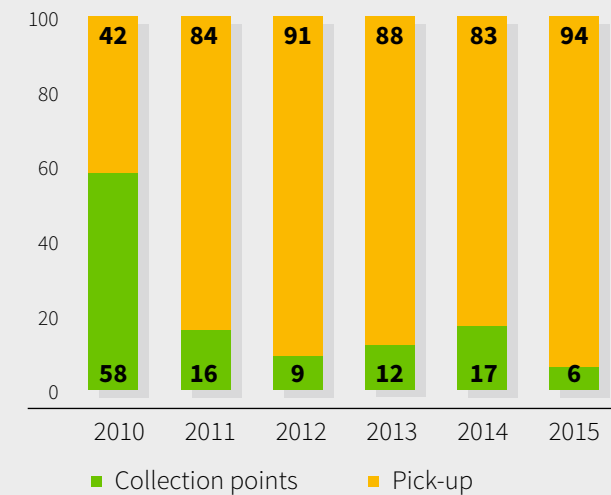
Treated PV technologies

(cumulated figures, 2010-2015, in %)



Collection from collection points

(rounded, in %)





PV modules via the municipal infrastructure. Together, PV CYCLE and Wecycle represent approximately 90% of the Dutch public collection network. A new recycling partner also joined in the Netherlands in 2015, meeting requirements effective July 1st, 2015 for Dutch WEEE recyclers.

In France, we were able to expand our own take-back network for small quantities of PV module waste to 133, compared to 62 in December 2014. In June 2015, to collect PV modules outside of metropolitan France more effectively, PV CYCLE France signed a cooperation agreement with SICR, the Federation of Importers and Merchants in La Réunion, for overseas collection. Later in the year, partnerships for Guadeloupe and Martinique followed. PV CYCLE France also expanded its transport network for mainland France and Corsica.

In 2015, PV CYCLE recorded a drop in collection from the PV CYCLE Collection Points network in Europe (small, household quantities). In previous years, about 14%³ was collected from PV CYCLE Collection Points. In 2015, household quantities accounted for only 6% of our total collection volume. The rest entered our network via the direct pick-up service, which applies to large quantities as from two transport units (e.g. pallets).

Germany, Italy and Spain remained Tier One countries for our collection activities. Nevertheless, on a year-to-year comparison, waste quantities⁴ doubled in France and the United Kingdom. In 2015, PV CYCLE collected 365 tonnes of PV module waste in France, compared to 185 tonnes in 2014. At a lower level, the United Kingdom more than doubled from 40 tonnes in 2014 to 100 tonnes by the end of 2015.

³ Average 2011-2014

⁴ Total waste collection, including production scrap, warehouses, etc.



2.3 | RESEARCH & DEVELOPMENT

In 2015, PV CYCLE laid the ground for material breakthroughs in PV module recycling. Already a participant in various international projects, PV CYCLE joined two new R&D projects in 2015.

RESOLAR

Working on optimizing performance in PV module recycling, ReSolar conducts research into improved collection and recycling by improving communication and alignment between waste recyclers and material processors. ReSolar is a joint initiative of ten Belgian companies, research institutes and the Flemish Waste Agency and is funded by the Flemish Government Agency for Innovation by Science and Technology.



*Olmina Della Monica,
Head of Operations & Treatment*

CABRISS

Focusing on the creation of a circular economy by using and re-using recycled waste materials from PV modules and other products, CABRISS is a joint initiative of 16 European companies and research institutes and received approval from the EU's Horizon 2020 – Research and Innovation Framework Program.



3 ASSOCIATION

A new company, WEEE-AR, Ltd. joined the PV CYCLE network to provide international companies or distance sellers (online shops) with a WEEE compliance solution. Headquartered in the UK, WEEE-AR offers Authorized Representative services for electrical and/or electronic equipment falling under WEEE legislation. PV CYCLE also created its first non-European company in summer 2015. PV CYCLE USA, Inc. is a non-profit, non-stock corporation that serves social benefit goals. The primary purpose of PV CYCLE USA is to promote sustainable lifecycle 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 CYCLE did not offer waste management services to the US market in 2015, our US subsidiary is open to any kind of natural or legal person interested in PV lifecycle management and, hence, in accelerating the transition to truly green energy generation from

the sun. The creation of PV CYCLE USA reflects the increasing commitment of PV companies to lifecycle management and extended Producer responsibility worldwide.

PV CYCLE was also awarded ISO 9001 and 14001 certifications in 2015 for the very first time. The Association's internal quality and environment management systems were successfully audited against the international standards. In Italy, the company was also positively audited by the WEEE coordination center CDC RAEE – of which PV CYCLE is member.

In the Netherlands, Producers as well as waste industry representatives, municipalities, retailer groups, the Ministry of Infrastructure and Environment and the WEEE Register set up a Monitoring Council to ensure the smooth functioning of the nationwide collection and recycling infrastructure. As the principal representative of registered Dutch PV Producers in 2015, PV CYCLE joined the Monitoring Council as a founder member.



As a member-based association, an elected Board of Directors heads the PV CYCLE organization for a three-year term.

3.1 | ORGANIZATION & GOVERNANCE

PV CYCLE's day-to-day business is managed through the headquarters in Brussels and national schemes in France, Germany, Italy, the Netherlands, the United Kingdom and the United States. Partner companies in Denmark, Sweden, Spain, the Czech Republic and Switzerland ensure an equally high level of service in other countries where PV CYCLE does not have its own offices. In 2015, PV CYCLE continued to chair negotiations with key stakeholders in Belgium on establishing an independent PV CYCLE branch for national WEEE compliance.

In December 2015, PV CYCLE Germany hired a new employee to support the team in its sales and compliance activities and moved offices from Munich to Düsseldorf. In France and Italy two new employees joined the team.

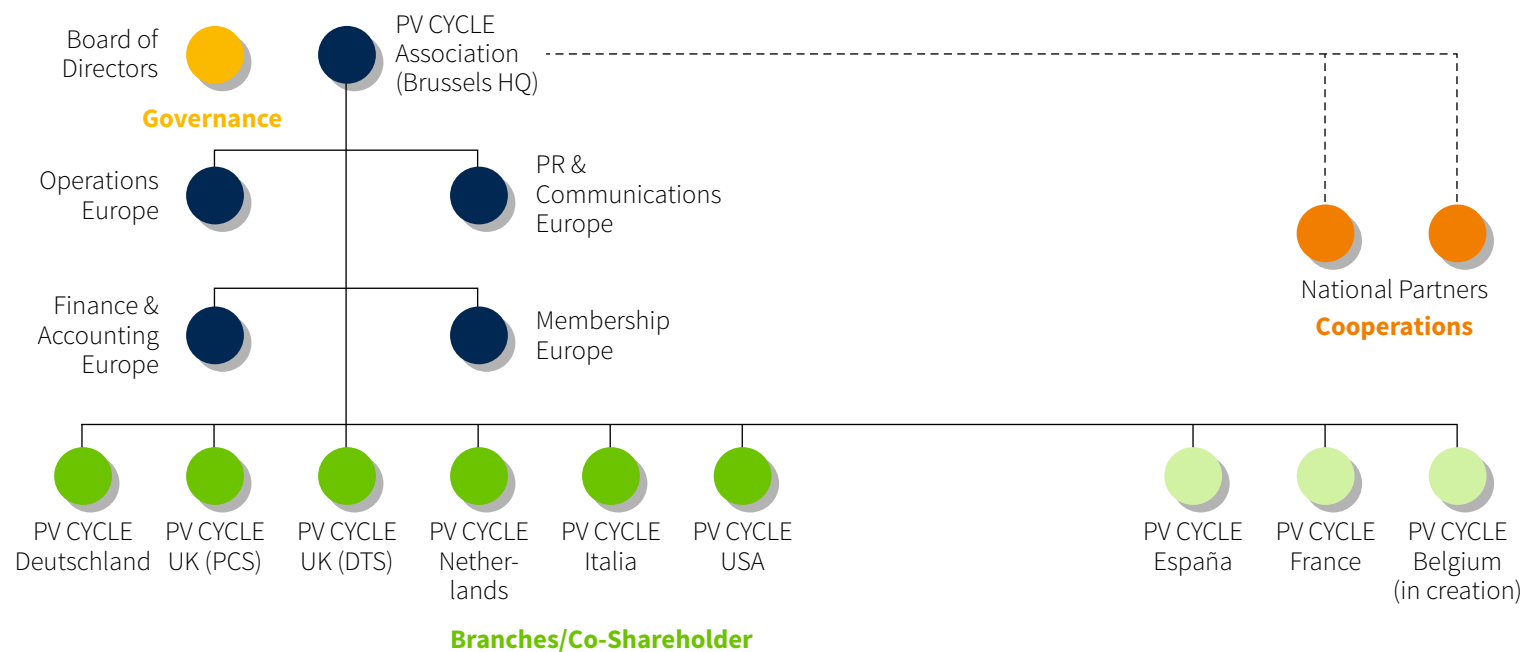




“PV CYCLE is the only scheme in the PV industry to give members a say in the organization’s strategic planning”.

Corporate structure

(Governance and management)



The following companies are represented on our Board of Directors:

- President / Trina Solar
- Vice President / Conergy
- Director (Interim) / Sunpower
- Director (Interim) / aleo solar



3.2 | PV CYCLE & SOCIETY

Representing the PV industry to society and the authorities, PV CYCLE also invests in public awareness campaigns. Concerned about companies' negligence as regards complying with the legal requirements of EU-wide WEEE legislation, informing PV companies and waste holders of their mandatory waste obligations remained a key activity for PV CYCLE in 2015. Together with leading companies in the industry, PV CYCLE called for more diligence and warned of the long-term threat of free-riders.

EVENTS

- Colloque Annuel Syndicat des Energies Renouvelables – Speaking, February 12, Paris
- Conférence – DEEE: Les obligations et solutions pour les acteurs photovoltaïques – Speaking, March 5, Lyon
- BePositive, ENR – Exhibition, March 4–6, Lyon
- Colloque ADEME – Speaking, April 14–15, Paris
- Intersolar – Exhibition, June 10–12, Munich
- BSW Recycling Workshop – Speaking, June 12, Munich
- Bavarian Round Table at the Environment Ministry – Speaking, June, Munich
- Bitcom ElektroG Roadshow – Speaking, various dates, Berlin, Munich, Düsseldorf
- BSW ElektroG Workshop – Speaking, September, Frankfurt
- WEEE Treatment Requirements – Speaking, November 3, Umweltbundesamt Berlin
- Forum Solarpraxis – Speaking, November 26, Berlin
- FRELP CONFERENCE: A recovery process for all usefull materials from end-of-life PV panels – Speaking, September 25, Laghetto Gabella di Curino



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PV CYCLE BRANCHES AT A GLANCE

On January 1st, 2015, PV CYCLE was the only scheme in France to receive government accreditation for managing category 11 products (PV modules) under the new WEEE law. While French WEEE

4.1 | FRANCE law entered into force in August 2014, full compliance was only possible as from the accreditation date.

A remarkably high compliance rate of approximately 83% was achieved in 2015 and is expected to pass the 85% mark after all 2015 declarations have been reported by the first half of 2016.

In France, we were able to expand our own take-back network for small quantities of PV module waste to 133 collection points, compared to 62 in December 2014. PV CYCLE France aims to reach 160 own collection points by mid-2016. To transact PV WEEE management outside of metropolitan France more effectively, PV CYCLE France signed a cooperation agreement with SICR, the Society of Importers and Merchants in La Réunion, to help identify local Producers and possible waste management partners. Later in the

year, similar partnerships for Guadeloupe and Martinique followed. To expand its transport network, PV CYCLE launched a call for tenders in autumn 2015 for collection, transport and pre-treatment in Metropolitan France, with four partners now serving six operational regions.

2015 was a particularly good year for take-back and recycling in France. With more than 360 tonnes in 2015, our operational figures nearly doubled on a year-to-year comparison. In total, more than 800 tonnes of PV modules have been treated in France so far. PV CYCLE France now collects all PV modules, regardless of their brand or age, ensuring that local PV module owners can discard their used equipment free of charge.

To manage the increasing business in France more efficiently, a new employee joined the local membership service in February 2015.



Nicolas Defrenne
Managing Director, PV CYCLE France

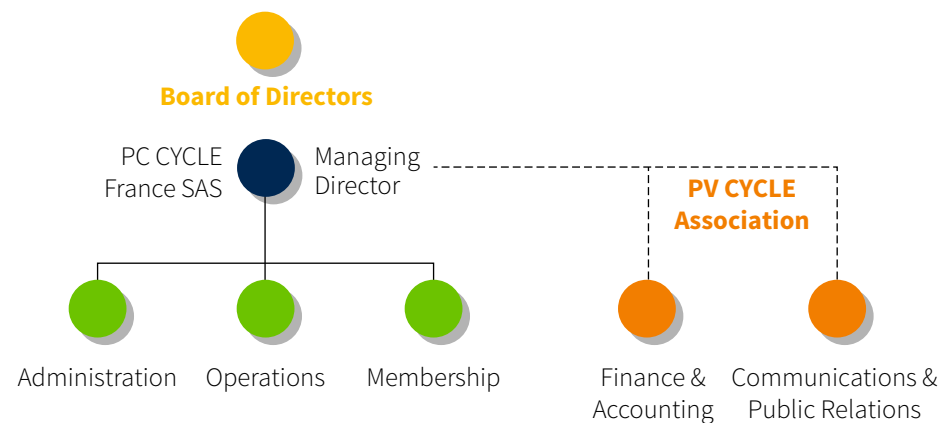


Last summer, Voltec Solar joined EDF ENR Solaire, EDF ENR PWT, Sillia VL, the Syndicat des Energies Renouvelables, Urbasolar and PV CYCLE aisbl as a shareholder of PV CYCLE France. Under French law, representation by industry players is required in collective take-back schemes.

As part of good governance under French WEEE law, a strategic committee was set up in 2015 to work on various fields of PV CYCLE France's operational, financial and corporate activities too. A first working group was set up by the Committee at the end of 2015 to work on a video communication tool for PV professionals.

The following companies participated in the strategic decision-making of PV CYCLE France in 2015: EDF ENR Solaire, ENERPLAN, Gensun, Sillia VL, SolarWatt France, the Syndicat des Energies Renouvelables, Urbasolar and Voltec Solar.

Both shareholders as well as non-shareholders can be members of the strategic committee and its working groups.

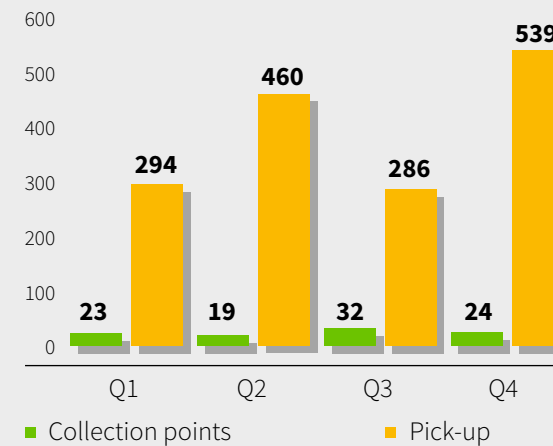




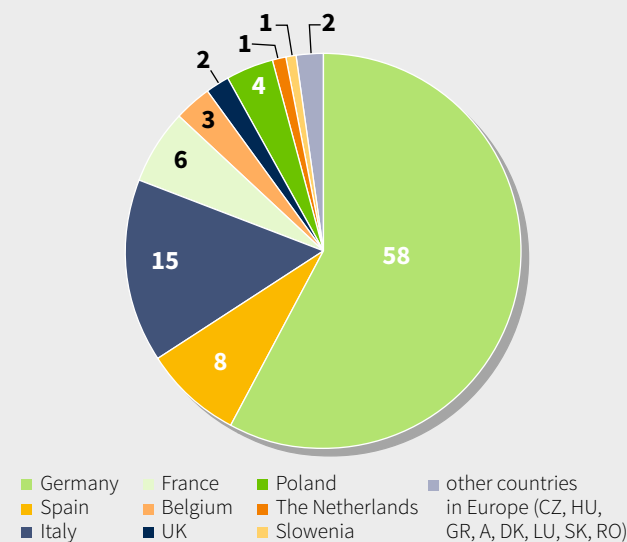
4.2 | GERMANY

On October 24, German ElektroG (WEEE) law came into force and will become fully applicable on February 1, 2016 for Producers of PV modules. Under German law, PV modules are classified as Product Category 4 – B2C Dual Use and collected separately within collection group 6. In contrast to other countries, German ElektroG provides for sales figures to be declared monthly. Also unique to German law is a mandatory financial guarantee on future waste management on top of financing current waste operations. A joint industry guide on the financial guarantee was published by PV CYCLE, BSW Solar and Stiftung ElektroAltgeräte-Register in summer 2015. Within ElektroG, collection can now be carried out via municipal collection points for household modules or the industry-led network of PV CYCLE. As part of the free-market principle governing WEEE services in Germany, *ad hoc* waste operators can also be assigned to collect and/or treat EEE waste.

Take-back – Collection points vs. direct pick-up (Germany 2015, in tonnage)



Treated waste tonnes (Germany vs. RoE in %)



Germany remained the leading country for our collection activities, with a total of 1,677¹ tonnes collected in 2015. The return rate through our network increased by nearly 40% compared to the previous year. In December 2015, PV CYCLE Germany hired a new employee to support the team in its sales and compliance activities. We also moved offices from Munich to Düsseldorf.

¹ Total waste collection, including production scrap, warehouses, etc.



4.3 | NETHERLANDS

To combat particularly low compliance rates in the Netherlands, the Dutch authorities conducted their first inspections in 2015, helping to raise the bar from 10 to 20% in 2014 to an estimated 75% in 2015.

To ensure the smooth functioning of the nationwide collection and recycling infrastructure, Producers as well as waste industry representatives, municipalities, retailer groups, the Ministry of Infrastructure and Environment and the WEEE Register set up a Monitoring Council in the Netherlands. As the principal representative of registered Dutch PV Producers in 2015, PV CYCLE joined the Monitoring Council as a founder member. In its leading role, PV CYCLE brings its long experience of PV waste management to the Council and will ensure that the priorities and needs of its members are reflected.

Approximately 44² tonnes were collected and treated in the Netherlands in 2015, amounting to a total of nearly 200 tonnes since the start of our operations in 2010.

Municipal collection and collection of small quantities make up a significant portion of our operational activities in the Netherlands. For that reason, PV CYCLE signed a cooperation agreement with Wecycle for the collection of PV modules via the municipal infrastructure. Together, PV CYCLE and Wecycle accounted for approximately 90% of the Dutch public collection network in 2015.

In July, WEEELABEX-certification became a mandatory requirement for recyclers treating waste from electronic and electrical equipment, including PV modules. PV CYCLE's Dutch network can comply with the new requirements for recycling facilities.

² Total waste collection, including production scrap, warehouses, etc.



In August 2015, Bruno Rebolini joined the team of PV CYCLE Italia as new Country Manager.

In December 2015 decree 49/2014 came into force requiring from the Italian energy agency GSE to bind feed-in-tariffs for PV modules under Conto Energia I-V to correct waste disposal.

4.4 | ITALY

Only upon receipt of disposal evidence would GSE disburse the corresponding amount set aside for waste management. GSE also published an operative instructions guide for the waste management of PV modules under Conto Energia feed-in-tariff schemes.

With inverters in its active portfolio, Italy for the first time treated products other than PV modules in 2015.

In 2015, PV CYCLE Italy contracted additional transport partners for their collection activities outside of the CDC RAEE network and signed a partnership agreement for the collection of electronic and electrical equipment from municipal collection points. PV CYCLE also enlarged its Italian recycling network.

In December 2015, PV CYCLE was given its first audit as operator for waste categories R4 and R5 (IT and Consumer Electronics, PED, PV modules, lamps and other) within CDC RAEE. The audit successfully confirmed the flawless handling of volumes registered to and operated by our scheme.

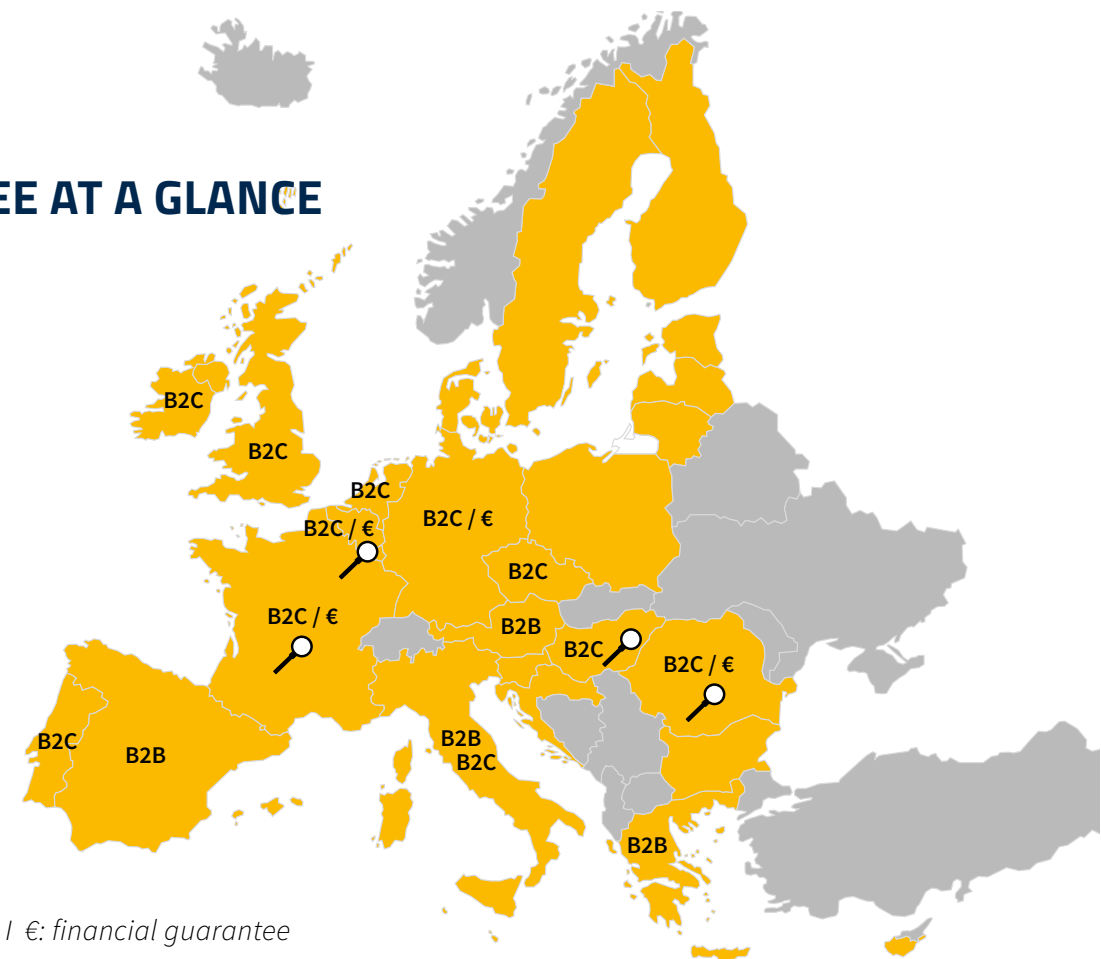



In 2015, the UK adopted a reclassification of PV modules into a B2C product, abolishing their initial B2B/B2C classification from January 2014. The alignment with the European interpretation of

4.4 | UNITED KINGDOM

PV modules as household products was expected to bring onerous responsibilities for PV Producers in the UK. PV CYCLE therefore focused its efforts on informing the market from an early stage. 2015 was also the first year with a government-set recycling target in the UK. PV CYCLE fulfilled its members' recycling obligations through its Producer Compliance scheme established in 2014, and a take-back network operating in addition to the municipal infrastructure.

4.5 | WEEE AT A GLANCE



 Visible fee 1 €: financial guarantee
 B2B/B2C: product classification PV modules



5 FINANCIAL REPORT

2015 BALANCE SHEET

Assets <i>in thousand EUR, rounded</i>	2015 Consolidated
Fixed assets	395
- Intangible assets	244
- Tangible assets	129
• Property, Plant & Equipment	73
• Furniture & Vehicles	15
• Other tangible assets	41
- Financial assets	22
Current assets	4,686
- Amounts receivable < 1 year	1,349
- Cash at bank & in hand	3,262
- Deferred charges and accrued income	75
Total Assets	5,081

2015 P&L <i>in thousand EUR, rounded</i>	2015 Consolidated
Turnover	4,965
- Services and miscellaneous goods	-1,717
Gross operating margin	3,248
- Remuneration; social security and pensions	-756
- Depreciation intangible and tangible fixed assets	-119
- Amounts written off stocks; contracts in progress and trade debtors	-59
- Provisions for liabilities and charges	-2,403
- Other operating charges	-42
Operating result	-131
- Financial income	19
- Financial charges	-28
Result for the period before taxes	-140
- Results 3 rd party shareholder interests	32
Result PV CYCLE Group	-172

Liabilities <i>in thousand EUR, rounded</i>	2015 Consolidated
Capital and Reserves	4,360
Exchange translation adjustment	-1
Result of the year	-140
Equity	4,219
- Minority interests	24
Amounts payable	838
- Amounts payable < 1 year	669
- Amounts payable > 1 year	
- Accrued charges and deferred income	169
Total Liabilities	5,081

The 2015 financial statement was audited and approved by Baker Tilly Belgium.



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