EUROPEAN ASSOCIATION FOR THE RECOVERY OF PHOTOVOLTAIC MODULES

ANNUAL REPORT 2010

ASSOCIATION PV CYCLE

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Foreword

01

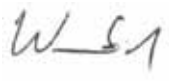
KARSTEN WAMBACH, PV CYCLE'S PRESIDENT

2010 was a year of expansion and growth for PV CYCLE, the association for the voluntary take-back and recycling scheme for photovoltaic (PV) modules in Europe. The commitment of our members remained strong and we hope this will continue in the near future.

Last year was one of many firsts: the first containers were delivered, the first modules were collected and taken to a recycling plant, collection points were established in several countries and many new members joined.
We are optimistic about what 2011 will bring us and hope it will serve to consolidate all the work completed since PV CYCLE was founded in 2007.

Thanks to the work done through PV CYCLE, our members have anticipated the future need for an adequate disposal and recycling system for the modules they put on the market. It is this forward-thinking that characterises such a young industry, which is truly committed to the concept of producer responsibility and putting in place the necessary system to reduce the environmental impact of their products.

May PV CYCLE's first-ever annual report serve to showcase the efforts of all our members in joining forces and creating a truly 'DoubleGreen' energy source, capable of powering the world. May this be the first of many more to come.



Karsten Wambach
PV CYCLE's President

What is PV CYCLE?

02

PV CYCLE is a non-profit association founded in 2007 to implement the photovoltaic (PV) industry's commitment to set up a voluntary take-back and recycling programme for end-of-life PV modules. The entrepreneurs at that time were Avancis, Conergy, Isofoton, SCHOTT Solar, SolarWorld, Sulfurcell, BSW and EPIA.

Our members have embraced the concept of producer responsibility by putting in place a system to reduce the environmental impact of their end-of-life products.

The creation of PV CYCLE and the implementation of the take-back programme are excellent examples of how an industrial sector in Europe can voluntarily organise itself to guarantee the collection and recycling of its products once they reach their end-of-life. The future of our initiative relies on all the members of the value chain being engaged in the process.

The coordination and voluntary commitment of the photovoltaic industry through the work of PV CYCLE offer a number of advantages also compared to a mandatory system:

Harmonisation

The system developed by PV CYCLE avoids creating a different solution for each individual country.
It offers a single operational platform tailored to the real needs of the European PV industry.

Economy of scale

Collecting and recycling end-of-life PV modules in a coordinated manner results in lower costs and maximum geographical outreach.

Research and innovation

A more economical solution allows to have more financial means to continue investment in more efficient and sustainable technologies, both for the production and recycling of PV modules.

Ambitious goals

PV CYCLE members have set the highest recycling target compared to all other recycling schemes in Europe.

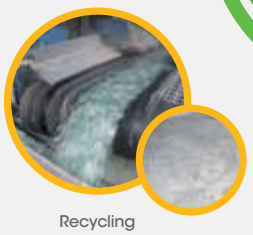
Environmental protection

With a technical lifetime of 30 years, the PV industry is preventing the end-of-life phase of the product. Moreover, the significant reduction of incineration in favour of a larger percentage of the weight of the modules being recycled will contribute to the recovery of precious raw materials, thus conserving our valuable natural resources.

02 1 - OUR MISSION AND OBJECTIVES

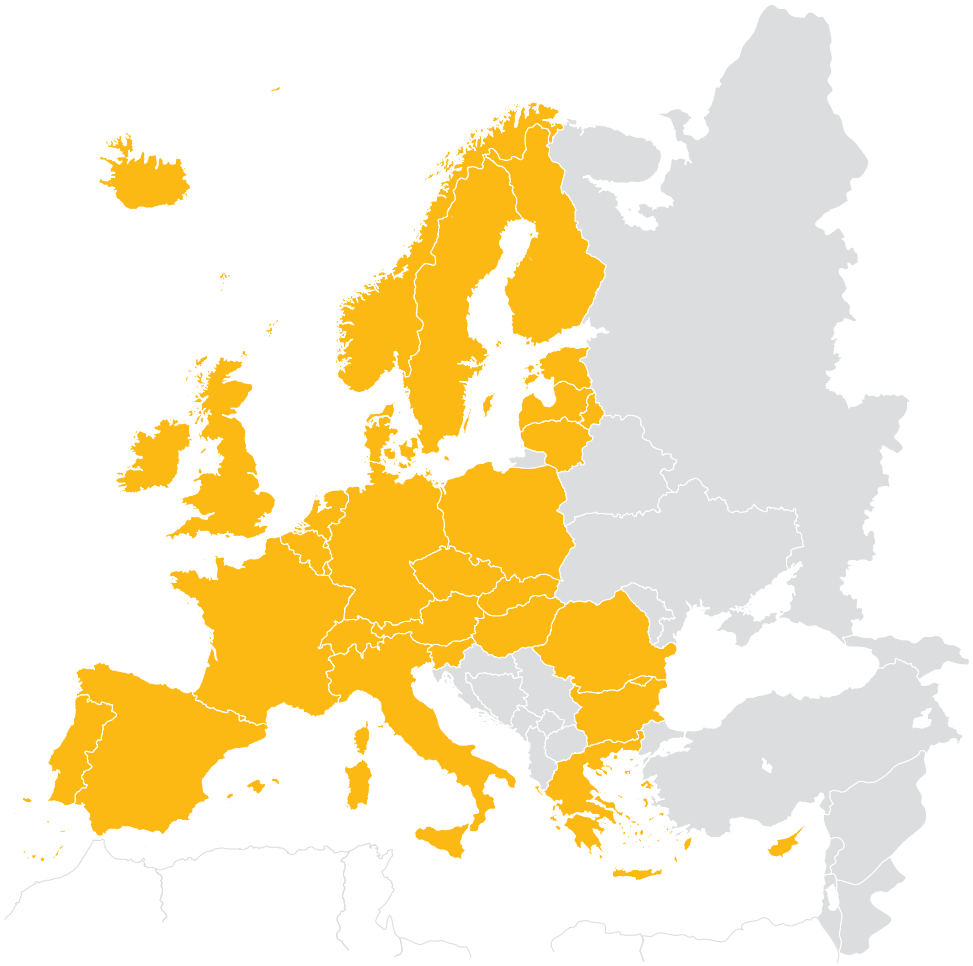
Generating energy

End of life



Recycling

Collection



MISSION

PV CYCLE's mission is to map all the end-of-life PV modules in Europe.
The definition of end-of-life refers to modules that are:

- Discarded by the end-user;
- Damaged during transportation or installation; or
- Guarantee or warranty cases.

OBJECTIVES

On behalf of its members, PV CYCLE is organizing and stimulating the collection and recycling of the end-of-life PV modules. PV CYCLE is implementing their extended producer responsibility by creating a collection and recycling scheme throughout Europe. The transportation and recycling market are extremely volume-driven. With higher quantities, the final costs are lower, therefore, appropriate organisation and encouragement of PV module collection is needed.

Another important objective of the members is to cement their will by signing an Environmental Agreement to be presented to the European Institutions.
In practice, the operational scheme is operational in the 27 Member States and the EFTA countries (Switzerland, Liechtenstein, Norway and Iceland).

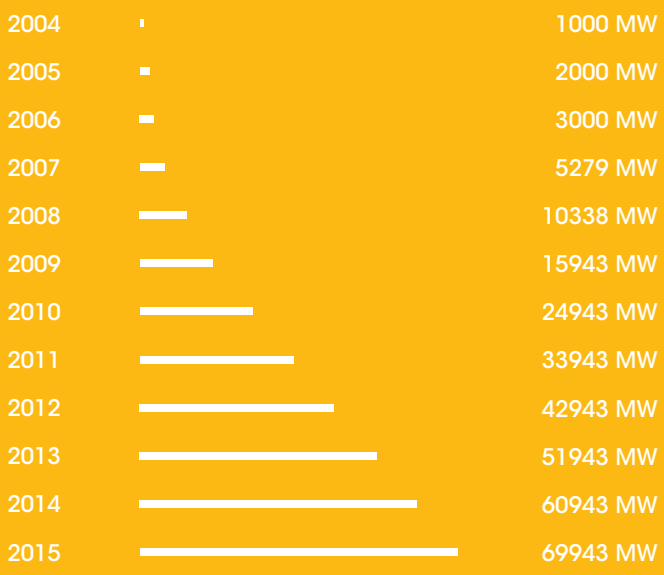
02 2 - PV MARKET OVERVIEW

The PV market experienced an explosion during 2008. Interesting feed-in-tariffs were implemented across different European countries to boost the use of renewable energy sources.

Inevitably, longer established PV markets will encounter the challenge of proper recycling end-of life PV modules sooner than more recent and less densely distributed markets. At the same time, new PV markets with expected high installation will also exhibit amounts of premature end-of-life PV modules due to damage from transport and installation.

The graph below shows the European Photovoltaic Industry Association's (EPIA) analysis of the cumulative installed PV capacity in the 27 EU Member States and the forecast for the next few years. Figures are in power (MW).

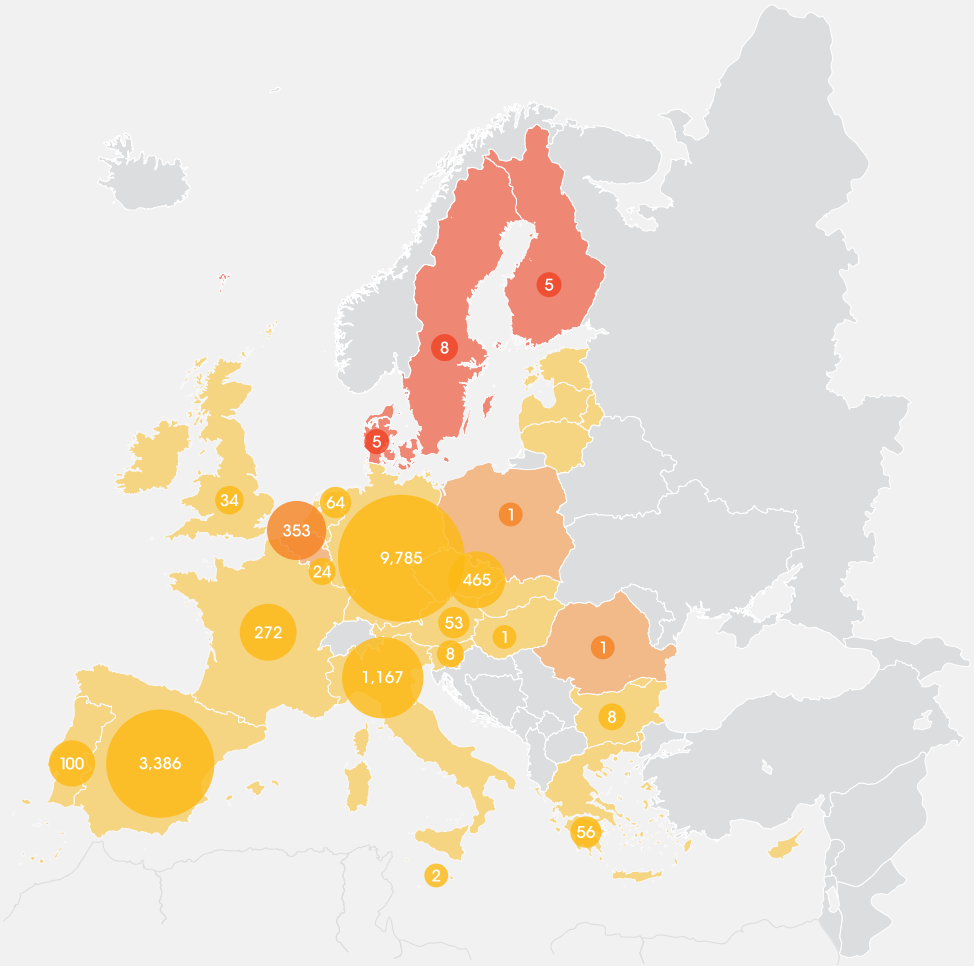
Total installed PV capacity in EU-27



Source : EPIA

The latest edition of the Solar Generation Report VI , published by EPIA in collaboration with Greenpeace, shows the European countries with the largest installed PV capacity. Germany is the undisputed leader followed by Spain and Italy. Consequently, these countries will be the ones generating larger quantities of end-of-life modules in the coming decades.

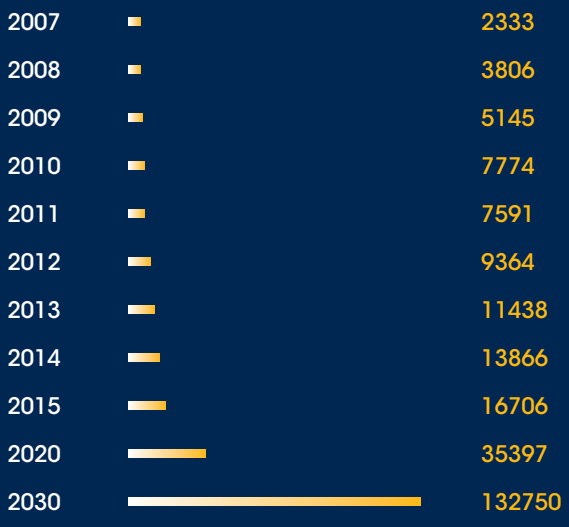
PV POWER INSTALLED BY THE END OF 2009 (MW)



Source : EPIA

02 3 - END-OF-LIFE PROGNOSIS

Estimated volumes of photovoltaic waste in Europe in tonnes (status 2007)



Study commissioned by BMU, BSW and EPIA on the development of a take-back and recovery system for photovoltaic modules.

The first question PV CYCLE had to address was related to the expected amounts of end-of-life PV modules, which would help to determine the extent of the scheme. In 2007, funded by the German Ministry of Environment, BSW, EPIA and PV CYCLE, Ökopol evaluated the amount of end-of-life PV modules to be generated in Europe based on installation and market development figures.

The resulting forecast showed that 6,000 tonnes would already be available for recycling in Europe in 2010, with steep growth expected up to the year 2030 and taking into account an annual growth of the PV market of 17% (see graph above).

The conclusion was that treating those amounts under the Environmental Agreement framework was more advantageous for the producers compared to being guided by legislation.

With these numbers in mind, PV CYCLE started operations in June 2010 by opening the first collection point in Germany. In 2010, only a small amount of end-of-life PV modules was available for recycling, indicating that the installations were lasting longer than expected and that the end customers are waiting long before they discard their modules.
This more accurate information has lead PV CYCLE to adapt the prognosis prepared three years ago. The quantities of end-of-life PV modules available for recycling in a year are calculated based on an estimated 65% of PV modules reaching their end-of-life after 30 years from their installation. Therefore, it is not until 2020 that some old installations will stop being operational. The quantity of damaged PV modules due to transport and installation has been estimated as 0.1% of what was installed the previous year.

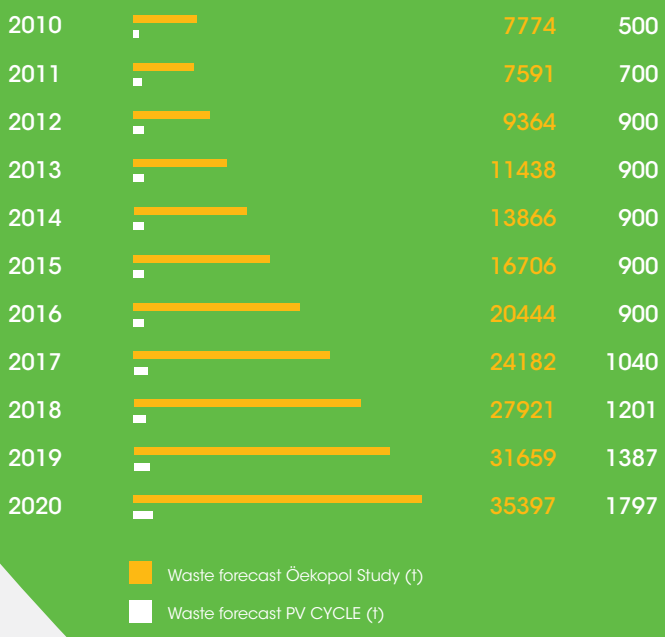
The technical lifetime of 30 years has been accepted by the scientific community as stated in the Methodology Guidelines on Life Cycle Assessment of Photovoltaic Electricity developed by the International Energy Agency.

In the graph below, a comparison of both forecasts, by Ökopol and by PV CYCLE, is shown.

Full-scale recycling is still another 10-15 years away. Nevertheless, the PV industry is already working to create truly sustainable solutions across all stages of the product life cycle, from raw material sourcing to end-of-life collection and recycling.

It is evident that the PV industry is already prepared well ahead of time, for when significant amounts of End-of-Life modules are generated. The fact that it is organising itself also helps to boost the barely existing recycling market for this product. The manufacturers responsible for their products are preparing a robust network and system for the years to come.

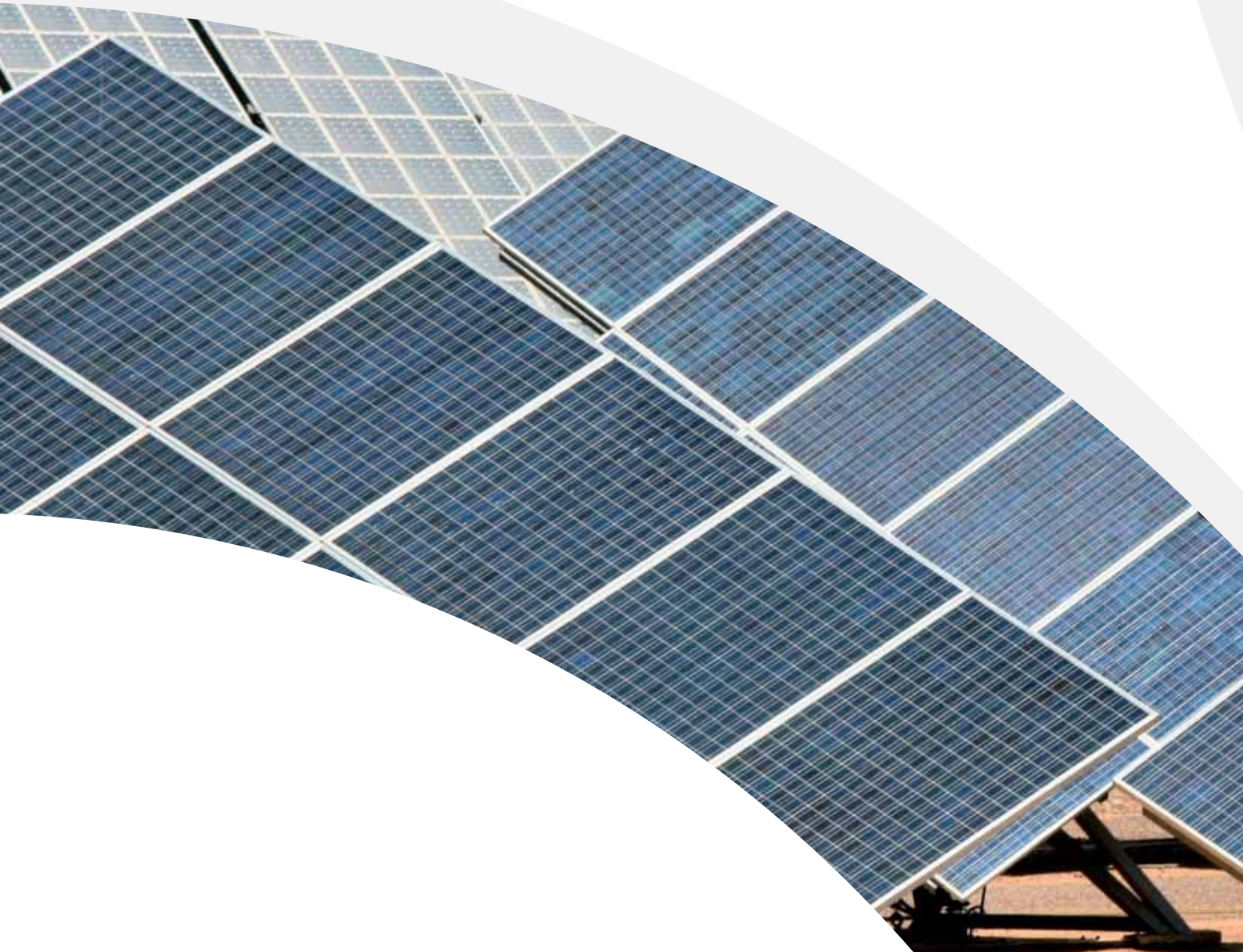
Comparison of the Ökopol Study (status 2007) and PV CYCLE waste forecasts (status December 2010)



PV CYCLE Structure

What started as a niche initiative has evolved until being followed by an overwhelming majority of companies and organisations working in the field of photovoltaics. In only four years, PV CYCLE has exponentially increased its membership.

03



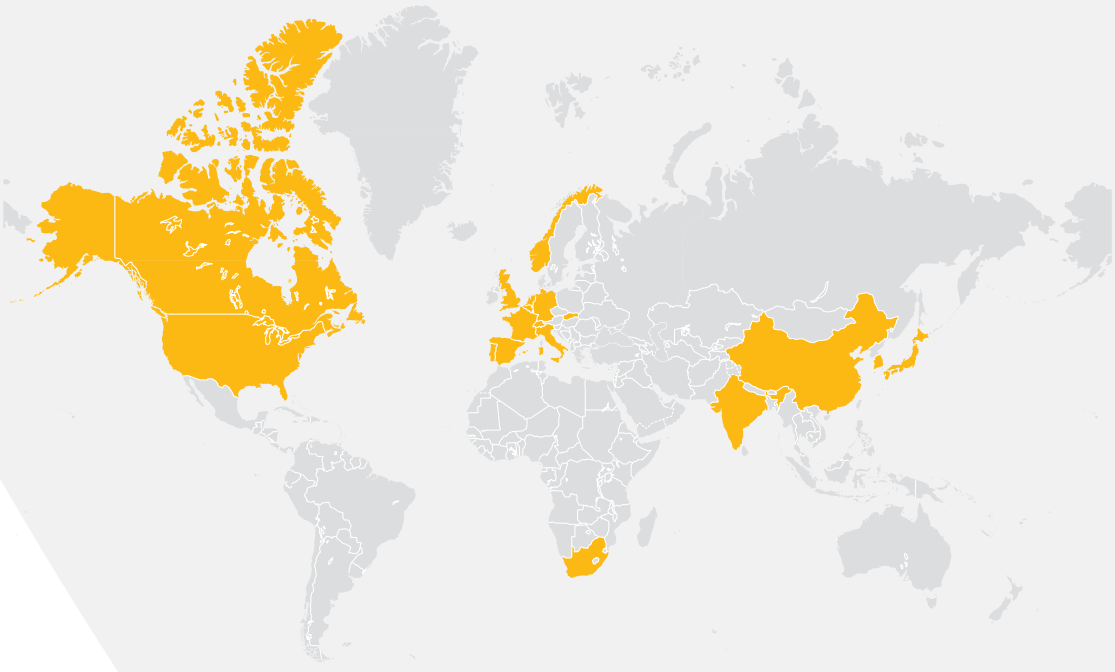
At the end of 2010, PV CYCLE represented more than 90% of the market for PV modules sold in Europe. The system's ultimate objective is to involve all manufacturers and importers of PV modules operating in the EU27 and EFTA countries. The graph on the right represents the growth in the number of members since the scheme was launched.

Number of members

2007	18
2008	25
2009	42
2010	110

All companies with a responsibility in manufacturing and/or importing PV modules are invited to become full members of PV CYCLE.

Besides associations and research institutes, since 2010, wholesalers, distributors, project developers, system integrators, electrical installation contractors as well as cell manufacturers are welcomed as associated members. The map below shows the country of origin for our members at the end of 2010.



03 1 - PV CYCLE MEMBERS

FULL MEMBERS AS OF 31.12.2010

Company	
Abound Solar	USA
Aleo	Germany
Alfa Solar	Germany
AmpleSun Solar	China
Arendi	Italy
Auversun	France
AVANCIS	Germany
Axitec	Germany
Bosch Solar	Germany
Bosch Solar CISTech	Germany
BP Solar	Spain
Brandoni Solare	Italy
Canadian Solar	Canada
Cappello Alluminio	Italy
China Sunergy	China
Chi Mei Energy	Taiwan
CNPV Solar	China
Conergy	Germany
Cossis	Germany
DelSolar	Taiwan
EGING PV	China
EPTECH Solar	France
ET Solar	China
Evergreen Solar	Germany
First Solar	USA
Fluitecnik	Portugal
Fonroche Energie	France
Frankfurt Solar	Germany
GE Wind Energy	Germany
General Solar Power	China
Gloria Solar	Taiwan
Helios Technology	Italy
Heliosphera	Greece
Henot	France
Hyundai Heavy Industries	Korea
IBC Solar	Germany
Invent	Italy
Isofoton	Spain
Jiangsu Runda PV	China
JS Solar	China
JT Solar	Germany
Jurawatt	Germany
Kaneka Belgium	Belgium
Korax Solar	Hungary
Kyocera Fineceramics	Germany
LDK Solar	Luxembourg
Lightway Green New Energy	China
Linuo PV	China
Luxor Solar	Germany
Martifer Solar	Portugal
Mitsubishi Electric Europe	Germany
MoserBaer	India
Nexpower	Taiwan
Open Renewables	Portugal
ORI Solar	China
PerfectEnergy	China
Phono Solar Technology	China
PHOTOWATT International	France
Q-Cells	Germany
REC	Norway
Renergies Italia	Italy
Risen Energy	China
SANYO Component Europe	Germany
Scheuten Solar	The Netherlands
SCHOTT Solar	Germany
SCHÜCO International	Germany
Shanghai Chaori Solar Energy Science & Technology Development	China
SHARP Electronics (Europe)	Germany
Shenzhen Topray Solar	China
Siliken	Spain
SOLAIRE DIRECT	France
Solar Century	UK
Solar Frontier	Germany
Solarday	Italy
Solarezo	France
Solar-Fabrik	Germany
Hanwha Solar One	China
Solarnova Produktions Vertriebs	Germany
SolarWorld	Germany
Soleos Solar	Germany
Solon	Germany
Solpower	Germany
Solsonica	Italy
Solyndra	USA
Sovello	Germany
Stream Energy	China
Sulfurcell	Germany
Jiangsu SunLink PV Technology	China
Sunny Optronics	China
SUNPOWER CORP	USA
Suntech Power	China
Sunways	Germany
Systovi	France
Tenesol Technologies	France
Tenesol Manufacturing	South Africa
Trina Solar	China
T-Solar	Spain

Unisolar	France
Upsolar Europe	France
Vipiemme Solar	Italy
Voltec Solar	France
Winaico	Taiwan
Wiosun	Germany
Worldwide Energy and Manufacturing USA	USA
Würth Solar	Germany
Xgroup	Italy
Yingli Green Energy	China
Yohkon	Spain
Zhangjiagang city SEG PV	China

ASSOCIATED MEMBERS AS OF 31.12.2010

Organisation/Company	
ASIF	Spain
BSW	Germany
Climan Energie	France
DGS	Germany
EDF Energies Nouvelles	France
EDF ENR Solaire	France
Energy Research Centre	The Netherlands
EPIA	Belgium
Evasol	France
Roth & Rau	Germany
SER	France
SolarIG	Spain
Subsun	France
Sunnco	France
TOTAL	France
URBASolar	France

Courtesy of BP Solar

03 2 - PV CYCLE BOARD OF DIRECTORS

The Board of Directors, elected by the members at the Annual General Assembly (AGM), governs the association in three-year terms.

At the AGM celebrated in June 2010, the members elected the following Board of Directors:

- **President:** Dr. Karsten Wambach, SolarWorld
- **Vice-President:** Dr. Martin Sommer, SCHOTT Solar
- **Treasurer:** Wilfried Taetow, Sanyo
- **Member of the Board:** Luis López Torremocha, Isofoton
- **Member of the Board:** Mette Vågnes Eriksen, REC
- **Member of the Board:** Eleni Despotou, EPIA

Courtesy of Isofoton

3 - PV CYCLE SECRETARIAT

PV CYCLE's staff reflects the international, young and dynamic attitude of its members.

The secretariat comprises three people, each of them with a different nationality, which certainly facilitates the roll-out of operations following the association's statutes.

From left to right:
- **Management Assistant & First Point of Contact for Germany and Italy:** Olmina Della Monica
- **Managing Director:** Jan Clyncke
- **Technology and Operations Manager:** Virginia Gómez

During 2010, the secretariat was supported by an external senior financial advisor:
- **Senior Financial Advisor:** Anne Vleminckx

PV CYCLE's collection system consists of two different potential paths for end-of-life PV modules depending on the quantities that are being disposed of.

04

PV CYCLE's System. How does it work?

TAKE-BACK AND RECYCLING SYSTEM

SMALL QUANTITIES < 30-40 modules

1. Check the location of your closest collection point at **www.pvcycle.org**
2. After dismantling or renovation, your de-installer will take the end-of-life PV modules to the closest collection point.
3. Modules are disposed of in the containers located at the collection points.
4. Once the containers are full, they will be taken to the recycling plant. Empty ones will be delivered to the collection points.
5. New raw materials are ready to be used in various products.

LARGE QUANTITIES > 30-40 modules

In large PV installation and renovation sites, modules will be directly picked up on location and then taken to the recycling plant. Special conditions may apply.

1. Call or email PV CYCLE to schedule a pick-up.
2. A truck will be sent to take your end-of-life PV modules to one of our partner recycling facilities.
3. New raw materials are ready to be used in various products.

For fewer than 30-40 units, the owner can transport them directly to a fixed collection point, also called 'certified collection point'. For larger quantities, PV CYCLE travels onsite to collect the pieces through an ad-hoc or temporal collection point.

All certified collection points are listed on PV CYCLE's website and an online locator has also been implemented in order to find the closest collection point. The certified collection points as of end of December 2010 are listed on the section 'Collection' .

When the (fixed or temporal) collection point is full, PV CYCLE orders the transportation of the modules to the recycling facility for correct processing and recovery. Moreover, there exists the possibility that a full member of PV CYCLE operates a collection and recycling system for its own modules, always under PV CYCLE's umbrella. This means that PV CYCLE has a complete overview of end-of-life PV modules as a whole.

For additional information requests, end-users can contact PV CYCLE by phone or through the special email address created exclusively to take care of collecting operations **operations@pvcycle.org**.

04 1 - COLLECTION

In 2010, PV CYCLE managed to set up certified collection points in nine European countries. This expansion is set to continue due to an increase in demand and the volume of modules being disposed of.

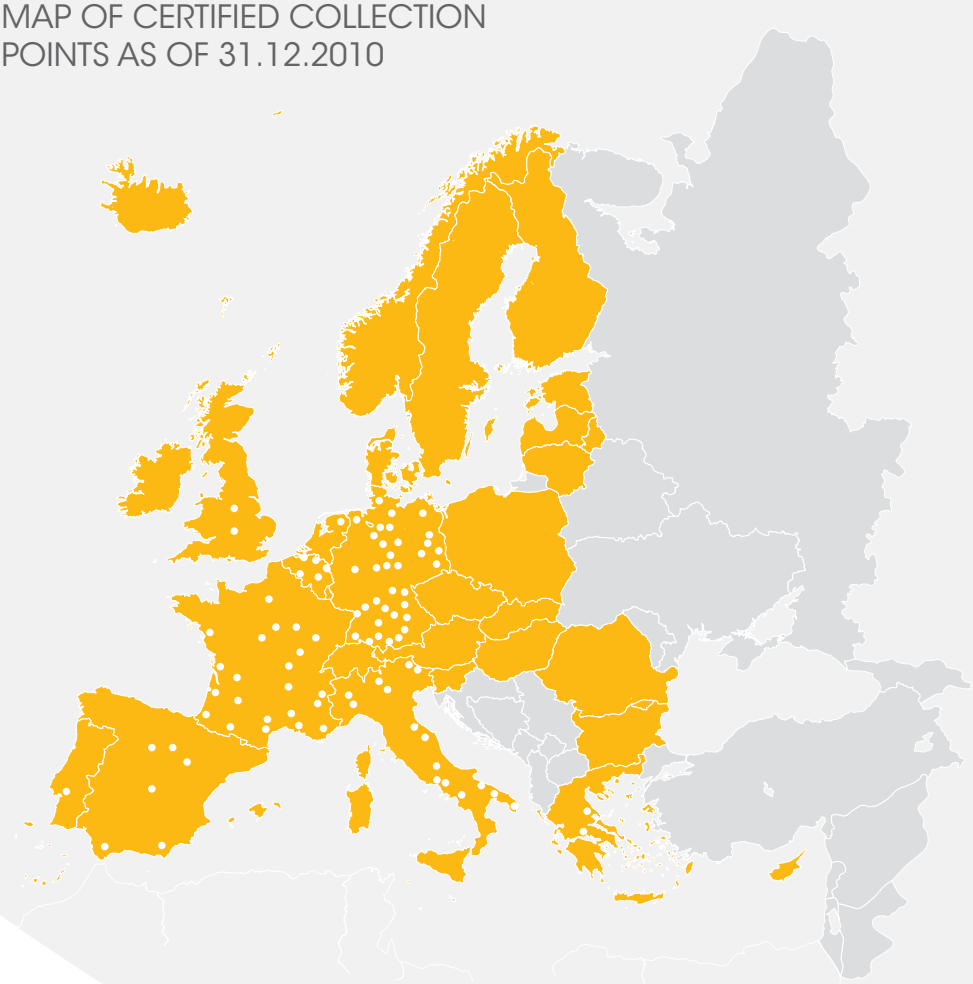
Courtesy of Gerlicher Solar

The distribution of collection points has been drafted according to the market's needs dependent on the market model itself. A clear example of this is Spain, where 99% of the market is represented by solar farms, and therefore a dense network of collection points is not needed.

PV CYCLE provides **two foldable containers** to dispose end-of-life modules at fixed collection points. The containers are closed with a lid, which assures secure transportation. Pick up of other storage units such as pallets, which are suitably wrapped for transportation, is also provided. The system is open to all commercially available PV technologies.

All certified collection points are listed on PV CYCLE's website. An online locator has been implemented in order to find the closest collection point. As of 31st December 2010, PV CYCLE had established 88 fixed collection points in nine different countries across Europe.

MAP OF CERTIFIED COLLECTION POINTS AS OF 31.12.2010



CERTIFIED COLLECTION POINTS PER COUNTRY (AS OF 31.12.2010)

AS Solar Benelux	Meulebeke	BE
De Lannoy	Aalter	BE
Enfinity	Assenede	BE
Soleco	Opglabbeek	BE
WT Solar	Kessel-Lo	BE
Abfallwirtschaft und Stadtreinigung Freiburg	Freiburg	DE
Aleo Solar	Prenzlau	DE
Alternative Energie Concepte	Bad Berneck	DE
AS Solar	Hannover	DE
AXITEC	Böblingen	DE
B&W Energy	Heiden	DE
Calyxo	Bitterfeld-Wolfen	DE
DeLimes Energy	Pfullendorf	DE
Donauer Solartechnik Vertriebs	Gilching	DE
E. U. Solar	Überlingen	DE
Enerix Alternative Energietechnik	Nittendorf	DE
Erneuerbare Energien Großhandel	Dresden	DE
EWS	Handewitt	DE
Hellmann Process Management	Osnabrück	DE
HM-PV	Pemfling - Grafenkirchen	DE
Hörmann Solartechnik	Zusmarshausen	DE
Hubert Schmid Recycling und Umweltschutz	Marktoberdorf	DE
IBC Solar	Simpelveld	DE
Klapka Solartechnik	Steinheim	DE
Kretzmann	Dachsbach	DE
Maxx-solar & Energie	Waltershausen	DE
Photovoltaik Institut	Berlin	DE
PV5 Solarconcept	Kleinostheim	DE
Sarauer Energie Technik	Pöttmes	DE
SEN	Grasberg	DE
SES 21	Oderding	DE
Solar-Pur	Saldenburg	DE
Solartechnik Stiens	Kaufungen	DE
Solpower	Weingarten	DE
Sunovation	Elsenfeld	DE
Wagner & Co. Solartechnik	Cölbe	DE
W-Quadrat	Gernsbach	DE
Abasol	Burgos	ES
Aresol Energías Renovables	Logroño	ES
AS Solar Ibérica	Madrid	ES
IBC Solar Spain	Ribarroja del Turia	ES
Proinso	Fustiñana	ES
Prosolar	Almanzora	ES

AMRFC Solaire	Saint-Ave	FR
AS Solar France	Decinescharpieu	FR
Cladil	Saint Fons	FR
Domosun	Libourne	FR
Energissimo	Sallanches	FR
Hallou Solaire	Saint Gilles Les Bains	FR
Herbert Energies	Aizenay	FR
Ipanema Energies	Morainvilliers	FR
Soleil en tête	Biarritz	FR
Soleil en tête - Laval	Laval	FR
Soleil en tête - Aixeco	Aix en Provence	FR
Soleil en tête - Eliantesarl	Lavaur	FR
Soleil en tête - Enersud	Grasse	FR
Soleil en tête - Episol	Fillinges	FR
Soleil en tête - JLB64	Bordes	FR
Soleil en tête - Orleans	Olivet	FR
Soleil en tête - Saint Medard	Saint Medard en Jalles	FR
Soleil en tête - Saveur Green	Velizy Villacoublay	FR
Soleil en tête - Soleo	Montceau les Mines	FR
Soleil en tête - RouchEnergie	Pamiers	FR
Subsun	Saint Etienne	FR
SUNNCO chez Leroy Logistique	Ambares et Lagrave	FR
Trialp	Chambery	FR
Proinso Hellas	Thessaloniki	GR
RS Energy Hellas Solartechnik	Volos	GR
Abaimpianti	Trezzano sul Naviglio	IT
Climacenter	Gioia del Colle	IT
Elettro Sannio	Pietrelcina	IT
Enelsi / SIS Servizi integrati di supporto	Pomezia (Rome)	IT
Energy System	Oleggio	IT
GE Energia	Luino (Varese)	IT
Globalitaly	Fiumicino/Roma	IT
Greenergy	Pesaro	IT
Habitat	Lusciano	IT
IET Impianti	Calcinelli di Saltara	IT
Kaleos	Neviano	IT
Puglimpianti	Fasano	IT
Quad Automazioni	Fornace (TN)	IT
Sincron MG	Monterotondo	IT
Tripower	Carmignano di Brenta	IT
IBC Solar	Simpelveld	NL
Oskomera Solar Power Solutions	Deurne	NL
Sunergetic	Alhos Vedros	PT
Maidston.com	Harrogate	UK
Solar Partner	Milton Keynes	UK

04

2 - TRANSPORTATION

Courtesy of Kioto photovoltaics

At the beginning of August 2010, the system performed the first shipment to a recycling plant. Although the number of shipments in 2010 was limited, almost 80 tonnes entered the PV CYCLE's System.

First Solar, member of PV CYCLE, operates its own collection and recycling scheme. During 2010, 1.900t of end-of-life PV modules were transported to the Frankfurt-Oder facility. Therefore, under the umbrella of PV CYCLE, 1.980t entered either the collective or the individual recycling system.

3 - RECYCLING

PV CYCLE has been exploring the recycling market over the past two years. Initially, recyclers were not interested in processing PV modules due to the limited volumes available. Even under this constrain, high value recycling, which incorporates the reuse of valuable materials such as silicon, was already technically possible.

However, it was not commercially available as a result of premature investment due to limited quantities. The type of plants described above will need a further two years to invest in technology as well as to increase their processing capacity before becoming commercially available. In the meantime, PV CYCLE is recycling the collected modules using the best available technique (BAT).

This technique shares direct synergies with flat glass recycling as the morphology, structure and composition of PV modules are similar to flat glass windows or windscreens. Further connections with flat screen recycling are not excluded.

Courtesy of Maltha

Adequate recycling is only possible if the modules are not mixed with any other waste.

For silicon based modules, aluminium frames and junction boxes are dismantled manually at the beginning of the process and following on from this, modules are crushed in a mill. About 84% of the initial weight is recovered at the output of this process. Subsequently, the extracted mixed glass is accepted without difficulty by the glass foam/glass insulation industry (see pictures on previous page).

Since the recyclers work in batches, the transported end-of-life PV modules during 2010 were not recycled before the end of the year. It is only in the first months of 2011 that the modules are being processed.

For CdTe technology, the recycling process starts crushing the module and subsequently a separation of the different fractions occur. This recycling process is designed to recover up to 90 % of the glass and 95 % of the semiconductor material contained (see pictures on this page). In this case, all the collected tonnes during 2010 have been recycled in the same year.

PV CYCLE only works with proven professional recyclers with the necessary qualifications and certifications. The final recyclers participating in the PV CYCLE's System are to be audited by an independent third party.

PV CYCLE keeps monitoring the recycling market for possible solutions.

Courtesy of First Solar

05

Overview of 2010 Activities

1 - ENVIRONMENTAL AGREEMENT

One of the pillars of the voluntary approach of PV CYCLE is the Environmental Agreement (EA) which was submitted to the European Commission in December 2010.
It formalises the commitment of its members and outlines how the collection and recycling system will work.

However, in early 2011 the Commission decided not to recommend the current version of the text to the Parliament and Council. PV CYCLE is working on a new text to be approved by the European institutions.

2 - FIRST INTERNATIONAL RECYCLING CONFERENCE 26 JANUARY 2010, BERLIN

More than 200 experts in photovoltaic (PV) energy, waste management and recycling participated in the 1st International Conference on PV module recycling organised by PV CYCLE and EPIA in collaboration with the European Commission's Joint Research Centre and the IEA PVPS Task 12. Attendees had the opportunity to learn first-hand from different industry associations and companies about how recycling mechanisms were being implemented and how the environmental impact of end-of-life solar panels was being minimised.

Representatives from related industry sectors also shared their experiences regarding the processes their companies had successfully implemented for TV monitors, electronic appliances as well as glass recycling. The last part of the conference was dedicated to learning about recycling and collection activities in the USA in addition to discussing issues regarding the Life Cycle Assessment (LCA) of photovoltaics and the mathematical model of PV recycling infrastructures.

05 3 - CONFERENCES, EXHIBITIONS AND OTHER EVENTS

2010 was a very active year for PV CYCLE, travelling around Europe to participate in major conferences and trade shows for the photovoltaic sector. Its presence has paid off with an increase in membership numbers and a quick expansion of the list of collection points across several member states.

SolarExpo

Intersolar

PV SEC

PV SEC

1st International recycling conference
> 26 January 2010
Berlin (DE)

SolarExpo
> 5-7 May 2010
Verona (IT)
For the first time, PV CYCLE exhibit with its own booth.

Intersolar
> 9-11 June 2010
Munich (DE)

PV SEC
> 6-10 September 2010
Valencia (ES)
Exhibition, conference and workshops.

ICM Battery Recycling Congress
> 15-17 September 2010
Brussels (BE)

Solartech Forum
> 14 October 2010
Milan (IT)

Recycling in der Photovoltaik
> 1 December 2010
Munich (DE)

4 - COMMUNICATION AND PROMOTIONAL MATERIALS

In order to raise awareness about PV CYCLE's System, a number of promotional and information materials were produced in 2010. They have been successfully used at industry meetings, conferences, workshops, trade shows, etc., to present the work the association has been doing but also to bring in new members and establish additional collection points. Large colourful stickers have also been produced to clearly identify PV CYCLE's containers.


Outreach toolkit for collection points:
This toolkit includes a series of items and printed publications to be shipped to all collection points so they are able to inform their customers about the work PV CYCLE is doing and what it means to be Collection Point.
All materials have been produced in 5 different languages: English, French, German, Italian, and Spanish. They are regularly mailed to all new collection points. The toolkit includes:




- Welcome letter
- Framed partnership certificate
- Informative leaflets
- Poster
- PV CYCLE Stickers

5 - MEDIA ACTIVITIES

PV CYCLE contributes regularly to major specialised publications with opinion pieces that highlight the latest developments of the association and the plans for the future. Some of the titles carrying these guest columns include Inter PV, PV Technology, and ERA Solar. Interviews with PV CYCLE have also been featured in major general interest dailies, both on and off-line, across several European countries.

In addition, there has been substantial media coverage of events such as the 1st Recycling Conference organised in early January 2010.

PV Technology - Italy

Inter PV

Eco Periodicals

Solar Today - Korea

La Razon - Spain

EU Energy Portal

Journal of Alternative Energy

Solar PV TV

Earth 911

06

Financial Report 2010

Every year, the accounts of PV CYCLE are externally audited by Ms D. Chabert. The final balance for 2010 shows that the association ended the year in good financial health.

SUMMARY 2010 BALANCE SHEET

Assets	2010
Fixed assets	**42.653**
- Intangible assets	11.547
- Tangible assets	31.106
- PPE	26.280
- Furniture & vehicles	4.826
Current assets	**710.011**
- Amounts receivable < 1 year	23.886
- Cash at bank & in hand	679.469
- Deferred charges and accrued income	6.656
TOTAL ASSETS	**752.664**

Liabilities	2010
Equity 668.013	
Provisions	**3.588**
Amounts payable	**81.063**
- Amounts payable < 1 year	77.121
- Acrued charges and deferred income	3.942
TOTAL LIABILITIES	**752.664**

SUMMARY 2010 P&L

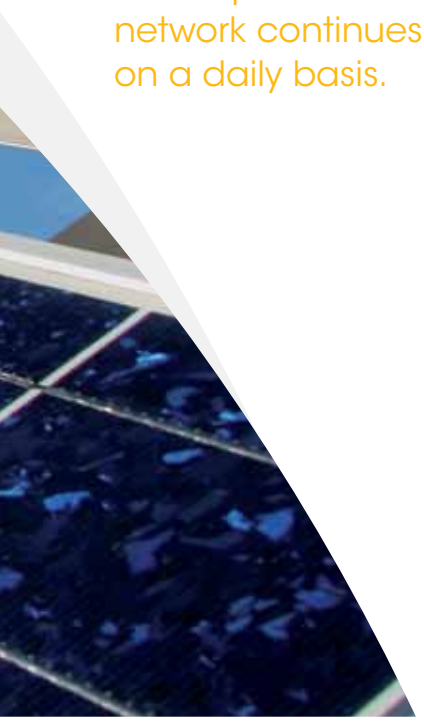
Income statement	
Turnover	**1.179.331,30**
- Services and miscellaneous goods (-)	(546.795,82)
Gross operating margin (+)	**632.535,48**
- Remuneration; social security and pensions (-)	(242.146,37)
- Depreciation intangible and tangible fixed assets (-)	(13.781,60)
- Amounts written off stocks; contracts in progress and trade debtors (-)	(21.000,00)
- Provisions for liabilities and charges (-)	(3.588,00)
- Other operating charges (-)	(92,00)
Operating result (+)	**351.927,51**
- Financial income (+)	3.329,64
- Financial charges (-)	(3.315,52)
Result for the period before taxes (+)	**351.941,63**
- Income taxes (-) (+)	(499,45)
RESULT FOR THE PERIOD (+)	**351.442,18**

PV CYCLE

07

Outlook 2011

2010 was just the beginning of a great journey. The first step was completed by implementing the collection network in the main photovoltaic markets. However, PV CYCLE cannot lower its guard. The consolidation and expansion of this network continues on a daily basis.



After receiving feedback from the European Commission regarding the Environmental Agreement, PV CYCLE is already in the process of redrafting a new text. It is expected to be submitted during 2011 for the Commission to evaluate.

As stated in the Environmental Agreement, the internal target for collection in 2011 is 700t. During the first quarter of 2011 approximately 140t entered the collective system for recycling. Collection is increasing compared to last year, although still needs to improve.

As stated before, recycling has started during 2011. Approximately 40t have been processed and other 50t have started the pre-treatment process. The rest of the collected tonnes, 130t approximately, are waiting at the recycler site to be scheduled for treatment.

Communication campaigns aimed at the final installation owners along with the entire value chain are to be rolled out shortly. The main goal is to explain how the system works and how end-users should properly dispose of modules to be recycled.

PV CYCLE's secretariat keeps growing and in 2011 it is planned to hire a finance and administration manager who will be in charge of managing the finances of the PV CYCLE's System and the association.

We are also working on new promotional and informative materials that can appeal to potential new members and collection points. As usual, many of them will be prepared in several languages to maximise our reach. 2011 will see the launch of a more interactive and cutting edge website which will also contribute to automate some of the financial operations of the association.

However, the emphasis will continue to be on strengthening our take-back and recycling system. The foundations are strong but as larger volumes of end-of-life modules begin to be discarded, the system must be thoroughly tested and any potential concerns addressed to be able to meet the needs of all European markets in due time. Collection is increasing at a steady rate and so will our network. Together, our industry will remain determined to overcome any challenges and contiue to be DoubleGreen in the years to come.

PV CYCLE a.i.s.b.l.

T + 32 (0)2 400 10 49
F + 32 (0)2 400 10 30
E info@pvcycle.org
W www.pvcycle.org

design by bidule.be