



PV LEGAL



gefördert durch



www.dbu.de

PV LEGAL

*Reduction of legal-administrative barriers for PV system
installations in Europe*

Abschlussbericht

Gefördert von der DBU unter dem Aktzenzeichen 28322

Projektkoordinator und Autor:

Bundesverband Solarwirtschaft e.V.

Thomas Chrometzka

Quartier 207, Friedrichstraße 78

10117 Berlin - Germany

Tel: 0049 (0) 30 29 777 88 40

Email: chrometzka@bsw-solar.de

Project website: www.pvlegal.eu

Projektkennblatt
der
Deutschen Bundesstiftung Umwelt



Az	28322	Referat	Fördersumme	EUR 94.572
Antragstitel	PV LEGAL – Reduction of Bureaucratic Barriers for Successful PV Deployment in the EU			
Stichworte	Photovoltaik, Bürokratieabbau, Barrieren, Markthemmnisse			
Laufzeit	Projektbeginn	Projektende	Projektphase(n)	
32 Monate	07/2009	02/2012		
Zwischenberichte	31.12.2010	30.06.2011	31.12.11	
Bewilligungsempfänger	Bundesverband Solarwirtschaft e.V. Quartier 207 Friedrichstr. 78 10117 Berlin		Tel	030 2977788 40
			Fax	030 2977788 99
			Projektleitung Thomas Chrometzka	
			Bearbeiter	
Kooperationspartner	Für Kooperationspartner keine Förderung beantragt			
	ASIF (www.asif.org), eclareon GmbH (www.eclareon.com), EPIA (www.epia.org), PTPV (www.pv-poland.pl), ASSOSOLARE (www.assosolare.org), ENERPLAN (www.enerplan.asso.fr), HELAPCO (www.helapco.gr), Micropower Council (www.micropower.co.uk), SER-SOLER (www.enr.fr), ZSFI (www.zsfi.si), APESF (www.apesf.pt), BPvA (www.bpva.org), CZREA (www.czrea.org), Holland Solar (www.hollandsolar.nl)			
Zielsetzung und Anlass des Vorhabens				
<p>Das Ziel des Projektes PV LEGAL war es, Transparenz über administrative Hemmnisse bei der Planung und Installation von Photovoltaik-Anlagen zu schaffen. Das Projektkonsortium hat sich ferner dafür eingesetzt, unnötige Hemmnisse abzubauen und so die Rahmenbedingungen für die Photovoltaik (PV) in Europa zu verbessern um einen schnelleren und effizienteren Marktaufbau in den verschiedenen Ländern zu gewährleisten. Dies ist unumgänglich für die Erreichung der europäischen Klima- und Energieziele. Aus diesem Grund wurde das Projekt von der Europäischen Gemeinschaft gefördert und der Koordinator (Bundesverband Solarwirtschaft) von der DBU unterstützt.</p>				
Darstellung der Arbeitsschritte und der angewandten Methoden				
<p>In einem ersten Schritt wurde mittels detaillierter Recherche und umfassender Mitgliederbefragungen aller beteiligten Partner die Datengrundlage für das Projekt geschaffen. Hierbei wurde untersucht, welchen Hürden und Barrieren sich Investoren gegenüber sehen, die in PV-Anlagen in den teilnehmenden Ländern investieren wollen. Die Ergebnisse wurden der Industrie, Entscheidungsträgern sowie der interessierten Öffentlichkeit im Internet (unter www.pvlegal.eu) kostenfrei zur Verfügung gestellt. In einem zweiten Schritt erstellten die Projektpartner Beratungspapiere, in denen für die einzelnen Länder Verbesserungsvorschläge bzw. Politikempfehlungen gemacht wurden. Diese Beratungspapiere wurden mit der Industrie in acht Veranstaltungen in den teilnehmenden Ländern diskutiert und erweitert um Aktualität und Praxisbezug sicherzustellen. Im dritten und letzten Schritt wurde der Kontakt zu Behörden, Entscheidungsträgern und Netzbetreibern verstärkt um die erarbeiteten Ergebnisse und Verbesserungsvorschläge konkret umzusetzen bzw. Prozesse einzuleiten, die zu konkreten Änderungen der Rahmenbedingungen führten.</p>				
<small>Deutsche Bundesstiftung Umwelt • An der Bornau 2 • 49090 Osnabrück • Tel 0541/9633-0 • Fax 0541/9633-190 • http://www.dbu.de</small>				

Ergebnisse und Diskussion

Fast alle angestrebten Ergebnisse des Projektes konnten erreicht werden.

- Die PV LEGAL Datenbank ist online und kostenfrei zugänglich für Politik, Wirtschaft und PV-Branche. Die Datenbank wurde im Mai 2010 aufgesetzt und zweimal wie geplant aktualisiert: das erste Mal am Ende 2010/Anfang 2011 und das zweite Mal am Ende des Jahres 2011.
- 8 nationale und 6 regionale vorläufige Beratungspapiere wurden fertiggestellt, die konkret darlegen, wie sich rechtlich-administrative Barrieren in den teilnehmenden Ländern beseitigen lassen
- In 8 nationalen Foren konnte die Empfehlungen mit der Industrie abgestimmt und in allen Fällen erweitert werden, so dass
- Die abschließenden 8 nationalen und 7 regionalen Beratungspapiere anschließend mit Entscheidungsträgern in den verschiedenen Ländern diskutiert werden konnten.
- Zusätzlich wurde von vier Unterauftragnehmern im Konsortium 4 nationale Positionspapiere erstellt, die in gleichem Maße Verbesserungsvorschläge für vier weitere Länder darstellten
- In 12 nationalen und 7 regionalen Workshops wurden die Ergebnisse der Papiere anschließend Entscheidungsträgern (Behörden, Parlamentariern, etc.) vorgestellt und mit diesen ausführlich diskutiert
- In den letzten 6 Monaten der Projektlaufzeit wurden die Projektergebnisse auf verschiedenen Kommunikationswegen (Workshops, Besprechungen, auf inhaltlich passenden Konferenzen) immer wieder von den Projektpartnern aufgegriffen und um eine Umsetzung geworben.

Unter Berücksichtigung aller teilnehmenden Länder an dem Projekt konnten insgesamt über 60 Prozesse eingeleitet werden, die dazu führen Bürokratie bei der Installation von Photovoltaik-Anlagen zu reduzieren. Gemessen an dem Ziel von 24 Prozessen, die das Konsortium einleiten wollte, ist das Ergebnis übererfüllt.

Öffentlichkeitsarbeit und Präsentation

Öffentlichkeitsarbeit hat während des gesamten Projektes eine Schlüsselrolle gespielt. Eine Verbesserung der Rahmenbedingungen für die Photovoltaik lässt sich nur mit einer entsprechenden Beteiligung aller notwendigen Akteure erreichen. Nationale und regionale Entscheidungsträger, Behörden und Netzbetreiber wurden deshalb aktiv in das Projekt eingebunden, die Industrie war ebenfalls maßgeblich beteiligt. In einem ersten öffentlichen Statusbericht wurden Methodik der Forschung und die Zusammenfassung der ersten Projektergebnisse im August 2010 veröffentlicht. Die wichtigsten Empfehlungen wurden im September 2011 veröffentlicht, während ein öffentlicher Abschlussbericht die Gesamtergebnisse und die Empfehlungen des Projekts im Februar 2012 präsentierte. Über die gesamte Projektlaufzeit wurden europäische Workshops auf der Europäischen Photovoltaikkonferenz (2009: Hamburg, 2010: Valencia, 2011: Hamburg) organisiert. Eine Abschlussveranstaltung fand in Brüssel, Belgien, am 8. Februar 2012 statt. Über die Projektlaufzeit wurden etwa 20 Vorträge zum Projekt auf weiteren Veranstaltungen präsentiert, sowie 23 Artikeln in Europäischen Medien platziert.

Fazit

Die EU-Kommission hat das PV LEGAL Projekt als ein „Flaggschiff-Projekt“ im Förderprogramm Intelligent Energy Europe bezeichnet. Wie oben dargestellt konnten fast alle Projektergebnisse erfüllt, viele, v.a. kritische Ergebnisse, sogar übererfüllt werden.

Nichtdestotrotz gibt es weiter bürokratische Barrieren, die die Planungszeit von Photovoltaikanlagen verlängern und Kosten unnötig in die Höhe treiben. Das Projektkonsortium hat sich noch während der Laufzeit von PV LEGAL auf ein Nachfolgeprojekt verständigt, welches im Mai 2012 starten wird. Hier soll die erfolgreiche Arbeit aus PV LEGAL fortgeführt werden. Gleichzeitig soll ein größerer Fokus auf diejenigen Barrieren gerichtet werden, die einer großmaßstäblichen Integration der Photovoltaik in die Netze Europas im Weg stehen. Der Bundesverband Solarwirtschaft hofft auch hier auf eine Förderung durch die DBU.

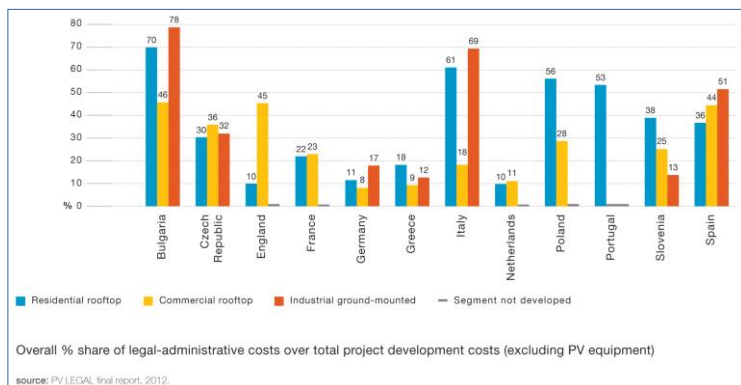
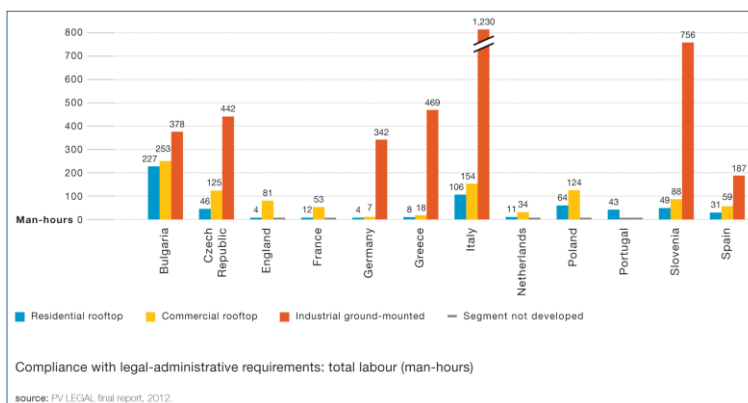
List of contents

Projektkennblatt	2
1 Final Report summary	5
2 Final Report introduction	6
2.1 Objectives of the action	6
2.2 Achieved results and lessons learnt of the action	6
2.3 Identified problems and corrective actions taken during the action.....	8
2.4 Activities and impact after end of the action.....	9
3 Consortium management during the action	10
3.1 Communication between partners	10
3.2 Project meetings	10
3.3 Quality control	11
3.4 Cooperation with other projects.....	11
3.5 PV LEGAL advisory board	12
3.6 PV LEGAL website beyond the end of the project	12
4 Achievements of the action	13
4.1 Achieved results per work package against initial objectives.....	13
4.2 Review of deliverables, including not achieved results	20
4.3 Review of impact of the action	24
4.4 Success stories.....	28
5 Lessons learned	29
5.1 Management.....	29
5.2 Communication and dissemination	29
5.3 Common Dissemination activities.....	29
5.4 Conclusions	29
6 Other issues	31
6.1 REA withdrawing from PV LEGAL	31
6.2 Subcontractors' participation in Project Meetings	31
7 Appendices to the Final Technical Implementation Report	32
7.1 Updated list of submitted deliverables since starting date	32
7.2 Final state of hours spent (in %) of the action per partner and per work package	33
7.3 List of contact persons after end of the action	34
7.4 PV LEGAL Key Recommendations	35
7.5 Legal-administrative progresses made since the beginning of the project.....	39

1 Final Report summary

The European project PV LEGAL aimed at identifying and reducing legal-administrative barriers that affect the planning and deployment of photovoltaic (PV) systems across Europe. The consortium, after analysing the barriers to the development of PV in each of the 12 participating European countries and confronting their results, has identified four main areas in which the barriers hampering PV installations in Europe, which are barriers a) in permitting procedures, b) related to grid connection rules and technical standards, c) in grid connection procedures, and d) related to grid capacity issues.

In order to quantify the effect of these barriers on actual PV project development duration and costs, the PV LEGAL consortium has periodically surveyed PV industry stakeholders in each of the participating countries. With a series of interviews, PV LEGAL project partners carefully assessed the costs, labour, duration and waiting times involved with each main phase of the development of a PV system. The most recent results of the PV industry survey are summarised in the charts on this page. These charts allow us to compare the sometimes strikingly different durations and efforts involved in realising a similar PV system in each for each of the participating countries.



The share of legal-administrative costs over total PV project development costs can give an idea of the economic burden that permitting and grid connection procedures represent for a PV developer, a burden that is generally reflected on PV system prices on the national market. The total labour required to complete the legal-administrative permitting and grid connection processes may instead give an idea of the complexity and lack of

transparency of the procedures involved.

The project consortium did not only research and quantify bureaucratic barriers but worked actively to remove those and improve the situation for PV developers in Europe. For this reason, tailor-made recommendations have been released and discussed with decision makers in all countries. In a common effort and taking into account all countries participating in the project, more than 60 processes have been initiated to reduce administrative burdens for photovoltaic installations.

Due to the success of PV LEGAL, a follow-up action has been designed. The overall goal of the PV GRID project is to contribute to overcoming the barriers hampering the large-scale integration of Photovoltaic (PV) power into the electricity Distribution Systems (DS). This goal will be pursued through an analysis of barriers and solutions and the formulation of regulatory and normative recommendations. Further, the project will take care of maintaining the PV LEGAL database, thus taking forward the successful endeavour of PV LEGAL.

The Bundesverband Solarwirtschaft has received confunding for the project from DBU (Az 28322) without which this success would not have been possible and hopes to do so for PV GRID.

2 Final Report introduction

2.1 Objectives of the action

The PV LEGAL project aimed at removing administrative barriers for PV system installations in Europe. The action had the following objectives:

- to **research in depth legal-administrative frameworks and barriers** in the 12 countries involved in the project and to **set up the PV LEGAL database** containing detailed information on legal-administrative procedures in the participating countries. The contents of the PV LEGAL database were to be updated twice over the duration of the project
- to make contact with relevant **national and regional stakeholders** such as policy makers, authorities and grid operators in order to work hand in hand with relevant stakeholders over the whole duration of the project.
- to **prepare 8 national and 8 regional preliminary advisory papers** addressing the legal-administrative barriers of each participating country
- to organise **8 national forums** presenting and discussing the contents of the preliminary advisory papers. The forums were important steps in ensuring that the advisory papers exhaustively address the legal-administrative barriers present in a country and reflect the views of PV industry stakeholders in a country.
- to deliver all **final versions of the 8 national and 8 regional advisory papers and in addition of 4 national position papers** (relative to subcontractor's countries: Bulgaria, Czech republic, Netherlands and Portugal)..
- one of the key **objectives of the project, was to approach national and regional decision makers** through the organisation of **12 national and 8 regional review workshops**. During the workshops national PV LEGAL partners and subcontractors discussed and promoted the recommendations of the PV LEGAL advisory and position papers.
- Finally, further objectives of the project were to prepare the **2 PV LEGAL status reports** (interim and final) and to organise **3 European PV LEGAL workshops** at the "European Photovoltaic Solar Energy Conference and Exhibition" (PV SEC) to periodically present the advancement of the project. These dissemination objectives were, reinforced in the last year of the action. A small publication, the **PV LEGAL key recommendations** was prepared in time for the 2011 European PV LEGAL workshop. The publication was aimed at initially disseminating key results of the project. An additional **final European-level event** was also added to the original schedule of PV LEGAL in order to boost the discussion and adoption of the project recommendations.

2.2 Achieved results and lessons learnt of the action

Nearly all results foreseen for the action were achieved:

- The **PV LEGAL database** is accessible online for policy makers, industry and the general public. The database was set up in May 2010 and updated two times as planned: the first time at the end of 2010/beginning of 2011 and the second time at the end of 2011. In coincidence with the two updates, the user interface was also technically upgraded. The database contains:
 - **12 national legal-administrative frameworks descriptions**, each targeting three market segments
 - **12 regional legal-administrative frameworks descriptions**, each targeting the three market segments

- **12 national PV industry surveys** containing detailed information on global and legal-administrative costs of project development, legal-administrative and non legal-administrative labour requirements, duration and waiting times
- **Involvement and information of relevant stakeholders and key actors.** National and regional decision makers, authorities and grid operators have been actively informed of the project. Each participant in the project compiled a list of all meetings organised
- **8 national and 6 regional preliminary advisory papers**, focusing on the mitigation of legal-administrative barriers in participating countries and selected regions
- **8 national forums**, discussing the recommendations of the preliminary advisory papers and presenting the experiences in other European PV markets
- **1 additional national forum** (not foreseen in the ECGA) was organised in Bulgaria in 2010
- **8 national and 7 regional final advisory papers**, focusing on the mitigation of legal-administrative barriers in participating countries and selected regions. No regional paper was prepared for Greece due to lack of barriers at regional level.
- **4 national position papers**, focusing on the mitigation of legal-administrative barriers in participating subcontractors' countries (Bulgaria, Czech Republic, Netherlands and Portugal)
- **12 national workshops** were held in 8 countries covered by project partners and 4 countries covered by project partners
- **7 regional workshops** were held in 7 countries covered by project partners. No regional workshop was held in Greece due to lack of barriers at regional level.
- The **1st (interim) PV LEGAL status report** presenting the methodology of the research and summarising the first project results was published in late August 2010
- The **PV LEGAL key recommendations** were published in September 2011
- The **2nd (final) PV LEGAL status report** presenting the overall results and the recommendations of the project was published in February 2012
- **3 PV LEGAL European workshops** were held, respectively in Hamburg, Germany on September 22nd 2009, in Valencia, Spain on September 9th 2010 and again Hamburg, Germany on September 7th 2011.
- The **final European PV LEGAL** event was held in Brussels, Belgium on 8th February 2012

Over the course of project execution the main lesson learned was that, due to **continuously evolving legal-administrative frameworks**, the description of national frameworks, barrier analysis and formulation of recommendations often have to deal with uncertain, evolving situations, leading to delays and extra work for project partners. In these cases, it is often necessary to draw a line and decide which aspects can be described with completeness and which, instead, have to be kept on hold and addressed in the future when they will be more defined. However, partners and subcontractors have demonstrated their engagement in the project, as in several cases extra work on the database and on the advisory papers was carried without hesitations.

Another lesson learned was that, in many cases, there is a general difficulty to define and research the "**regional level**" of legal-administrative frameworks due to the intrinsic complexity of the subject. In fact, countries can have very different legal-administrative structures: some countries are rather centralised, others are more decentralised. In both cases, the decision making process often involves not only these two levels (national and regional), but far more (provincial and municipal, for instance). In this context, regulations defined at a national or regional level may be implemented differently by the underlying levels, leading to local differences. In other cases, local difficulties may just arise out of lack of competence or information. As a consequence, the preparation of the regional advisory papers had to be tackled

differently in each country. While the local level was out of the scope of PV LEGAL, it was anyway deemed appropriate to address national or regional legislations in order to leave less freedom to local level interpretations.

A third lesson learned was connected to the task of **comparing barriers across countries**: due to different market situations, a barrier may occur only in a particular country. In other cases, the background of similar barriers may be different. As a consequence, the task of organising the exchange of experience and information within the consortium required extra hours and the set-up of dedicated working groups. However, during the final task of formulating recommendations that could be valid at European level, it was possible to overcome this issue. Most barriers found in the different countries were grouped under four different areas (permitting procedures, grid connection rules and technical standards, grid connection procedures, grid capacity issues) together with the corresponding recommendations made in the national advisory papers. By confronting the recommendations gathered in these four areas it was finally possible to extract those that could be valid in most European countries.

2.3 Identified problems and corrective actions taken during the action

A first challenge has been the **underestimation of the time needed to develop the research methodology and templates**. This has led to **additional workload for partners** (especially the WP2 leader) **and an initial delay in WP2**. Even though the research templates were tested thoroughly before their distribution to the project consortium, several updates were necessary during the research phase. The only possibility to avoid the additional work encountered would have been to better and longer test the templates by doing the initial research on a pilot country before starting the market research and data collection by all partners. This was not possible due to time constraints.

A second difficulty has been the **underestimation of the difficulty level of the templates set up for the market research and data collection**, especially for the industry survey template. The template of the industry survey interviews was designed in cooperation with the Better Regulation Unit of the German Federal Chancellery and according to the SCM model¹, with the purpose of using a sound methodology to assess the impact of bureaucratic barriers. This has led to the development of a very elaborated template requiring interviewees to provide detailed information on project development processes, legal-administrative activities within each process, costs, duration and waiting time of each process. Handling and using the complex document became difficult for the partners. Two videoconferences were offered by the WP2 leader to present and explain the structure and the logic of the document to the project consortium.

A third challenge has been experienced with the **underestimation of the time and costs needed for mentoring the subcontractors**. Although most subcontractors were already assigned before the project started, difficulties arose with the selection of the Bulgarian subcontractor, as it was not easy to evaluate which association would be the best partner for the PV LEGAL consortium. The grant agreement foresees that one subcontracting agreement shall be signed for each WP (subcontractors are involved in WP 2, WP 3 and WP 4). The coordinator has prepared together with a specialised law firm a standard subcontracting agreement that has then be used for all WPs. The external costs for the establishment of the subcontracting agreement had not been foreseen in the PV LEGAL grant agreement. In general, the budgeted hours and costs for mentoring the subcontractors were not sufficiently dimensioned in the contract negotiation phase.

A fourth major challenge was represented by **the decision of REA UK to leave the project**. As a consequence, it was necessary to find both a suitable replacement partner and a way to modify the

¹ The Standard Cost Model (SCM) Network is a collaborative, international group, working together to share experiences and knowledge to reduce administrative burdens (<http://www.administrative-burdens.com>).

timeline of the project guaranteeing that the results for the UK were anyway achieved. After several internal consultations and meetings with potential candidates, the UK-based organisation **The Micropower Council** (MPC) was chosen to carry out the work left behind by REA. The revised schedule that was devised allowed MPC to deliver all expected results by the end of the project.

A fifth challenge was to **deal effectively with the regional versions of the advisory papers**. As we learned during the initial phases of the research, regional aspects cannot be treated similarly in all countries. While in some countries like Italy, regional legislations have definitively an effect on PV development, in other countries such as Spain the regional framework is fully defined at national level, and eventual differences tend to appear at a local (municipal or provincial) level, out of the initial scope of the PVLEGAL project. The issue was tackled by allowing project partners to differently prepare the regional advisory papers according to their sensibility

A sixth challenge was related to the **timing of the update of the database**. During 2010 and in early 2011, several legal-administrative frameworks were suspended or heavily modified by national governments. As a result, the update of the database could not be performed as scheduled, as uncertainties were still strong on the outcome of the framework revisions. In general, this difficulty was tackled by adopting a flexible schedule, established in agreement with the national partners closely following the evolving national situations. In some cases, PV industry surveys had to be delayed until when the effect of the changes could be reflected in the practical experience of market actors.

A final difficulty was the **organisation of national and regional workshops**. The workshops, aiming at discussing the PV LEGAL recommendations with decision makers, had initially been planned as dedicated events gathering all different decision makers addressed in the papers. However, many project partners felt that the most effective way to convince decision makers about the PV LEGAL recommendations was to organise bilateral meetings with each of the original target groups of the workshops. As a result, some countries organised workshops and others organised bilateral meetings. In some cases, both types of events took place.

2.4 Activities and impact after end of the action

While PV LEGAL officially ended on February 29th 2012, its outcomes and its own project consortium are bound to last for at least a few more years. Its final report was printed in over 6000 copies and its distribution will continue throughout 2012.

Most prominently, during winter and spring 2011 the project consortium discussed and prepared a new project proposal. This turned out to be successful: the PV GRID project is currently under negotiation with the Executive Agency for Competitiveness & Innovation (EACI). Most of the original PV LEGAL project consortium will be joined by its 4 subcontractors (as project partners, this time), 4 new PV associations, 3 DSOs and 2 research institutes in a new endeavour, whose objectives will be to carry on the PV LEGAL database and more specifically tackle the issues arising from the integration of large shares of PV capacity into the electrical distribution grid. PV GRID is expected to kick-off in May 2011.

Additionally, BSW-Solar was invited by EACI to present the findings of PV LEGAL to an audience of representatives of EC Member States working on simplification of administrative procedures for RES plants during the next meeting of the Concerted Action on RES Directive, taking place in May 2012 in Tallinn.

Finally eclareon, thanks to the experience matured in PV LEGAL has been invited by the German Federal Ministry For the Environment, Nature conservation and Nuclear Safety and the Indian Ministry of New and Renewable Energy to take part to an international endeavour whose aim is to enable investment in the Solar Sector in India. Indian companies will be supported in the development phase of solar projects through an Internet based publicly available database showing the pathway through legal-administrative-regulatory frameworks. The project will focus on solar programmes on the federal level and on those of selected Indian states. The other objective of the project will be to streamline the solar project proposals and make them time and cost efficient, enabling a qualified and professional solar market in India.

3 Consortium management during the action

3.1 Communication between partners

The objective of the project consortium has been to ensure an ongoing communication and exchange of information between the participants. A **contact list and a mailing list** of all participants have been regularly updated and circulated.

A **weekly coordination call** was organised from the beginning of December 2009 to the end of January 2010 in order to improve the management of the research design and execution phases (WP 2). Successively, a **bi-weekly conference call between all WP leaders and the project coordinator** has been organised since February 2010 up to the end of the action, with interruptions during the summer 2010 and 2011.

Working guidelines have been established by WP leaders for most WPs (2, 3, 4 and 5). The working guidelines (5 to 10 pages documents) were elaborated in order to provide project partners and subcontractors with a detailed description of the activities, objectives and deliverables of each WP and a clear distribution of tasks and firm deadlines. Partners have been involved in the drafting process of the working guidelines and were invited to comment on the draft documents set up by the WP leaders before the adoption of the guidelines by the consortium. Thus, **all partners have been actively involved in the concrete planning of the single WPs**.

A series of **thematic working group calls** were organised in March and April 2010 in the framework of WP 3 building up on the project meeting held in Rome, where working groups were set up discussing and developing solutions on how to remove legal-administrative barriers (each working group focusing on a particular barrier).

A **project wide conference call** was organised in December 2011 in order to prepare for the final phases of the project

3.2 Project meetings

The **kick-off project meeting** took place in Berlin on **July 7-8th 2009**. The Work Package Leaders presented their WPs to the partners. The main aspects of the administrative barriers for PV were discussed in detail, in view of the upcoming tasks of developing the database, the industry surveys and conceiving the following steps in the project. Tasks were distributed within the consortium in order to start working on WP 2. Technical and financial project management issues were also discussed.

A **2nd project meeting** focused on Work Package 2 was held in Berlin on **January 28-29th 2010** and mostly dedicated to revise the research data. A WP 2 progress report was delivered to the partners. Each participant also had the opportunity to share their information and experience on legal-administrative barriers through country reports presented by each partner and subcontractor. On day two, partners discussed the further work packages and started planning the work in WP 3 and WP 4.

A **3rd project meeting** was organised in Rome on **March 16-17th 2010**. On the first day participants presented their updated industry survey results. On the second day the consortium focussed on the forthcoming WP 3 and 4. The advisory paper template was presented to the participants by the WP 3 leader and partners and subcontractors started exchanging good practice examples and developing solutions on how to remove legal-administrative barriers in working groups (each working group focusing on a particular barrier). As for WP 4, the consortium started to define a schedule for the national forums and decided on the common format of the events.

A **4th project meeting** was organised in Brussels on **July 8-9th 2010**. The main focus of the meeting was reviewing the analysis of legal-administrative barriers and of the proposals on how to address them, as a basis for the preparation of the preliminary advisory papers of each country. The secondary focus of the

meeting was to present the online database and discuss the results of the PV industry survey. Finally, some emphasis was put on the upcoming organisation of the national forums, by reviewing the calendar of the events and the provisional agendas.

A **5th project meeting** took place in Berlin on **January 20-21st 2011**. The meeting was focused on the discussion on the status of the national and regional advisory papers and the planning of their finalisation (WP3). Furthermore, a first draft of a consolidated review of all barriers and recommendations for their removal was discussed during the meeting. During the second day of the meeting, the focus was moved on WP4, with the review of the national forums and the preparation of the national and regional workshops.

A **6th project meeting** was organised in Warsaw on **July 7-8th 2011**. The meeting was mainly focused on the finalisation of the consolidated review of PV LEGAL barriers (basis to the final PV LEGAL report) and recommendations already started during the Berlin meeting in January. Further, the meeting went on to highlight the current status of the national and regional workshops. Finally, the plan for the final update of the database was presented to all national partners.

The **7th and final project meeting** was organised in Brussels on February 7th 2012. The meeting was focused on wrapping up the work of each WP by discussing the lessons learned and on preparing together the plan for the final report.

3.3 Quality control

Quality control was applied to all the deliverables of the project:

- Within **WP2**, all database updates were reviewed by eclareon, improved by partners when necessary and published only when mutual agreement was found. The researched information has been harmonised in order to ensure comparability of results.
- Within **WP3**, eclareon was also in charge of providing a central source for advice and guidance to partners preparing the advisory papers. eclareon reviewed the draft version of each advisory paper and position paper in their national language, making sure that the general template was adopted, that barriers were thoroughly presented and that proposals for alleviating barriers were sound and well documented. EPIA was in charge of ensuring that the same layout was respected for all countries.
- Within **WP4**, the organisation and the reporting of national forums, national and regional workshops was overseen and harmonised by ASIF.
- Within **WP5**, all deliverables and publications were reviewed by EPIA (with the aid of BSW) in order to ensure both content and layout quality.

BSW, the project coordinator, was actively involved in the quality control of all deliverables within all work packages.

3.4 Cooperation with other projects

Early during project execution, contact was made with the **Windbarriers** IEE project. This project started in December 2008 and ended in November 2010, researching information on administrative and grid access barriers obstructing the development of wind energy in the EU, with the aim of contributing to their removal. In fact, the Windbarriers consortium had conducted an industry survey a few weeks before the PV LEGAL industry survey started, and therefore it was possible to draw precious advice from their experience in interviewing stakeholders.

Drawing from the experience of preparing the PV industry survey, eclareon has regularly participated in the German **Standard Cost Model Working Group**, coordinated by the German Federal Chancellery.

3.5 PV LEGAL advisory board

Representatives from the Windbarriers project and other EU projects with similarities to PV LEGAL (RES-E Regions, PV Policy Group, PV UP-SCALE, PV Technology Platform) as well as other experts were invited to participate in the advisory board.

A first meeting of the **PV LEGAL advisory board** was organised at the Intersolar Fair in Munich on **June 10th 2010**. This meeting was focused on the presentation of the PV LEGAL database to advisory board members. The board recognised the value of the database and provided precious input for its improvement.

A second meeting of the **PV LEGAL advisory board** was organised at the EU PVSEC Congress in Valencia on **September 9th 2010**. This time, the meeting was focused on the review of the advisory papers content and proposals on how to best address policy-makers, administrations and grid operators in each country.

A third **PV LEGAL advisory board** meeting was organised at the Intersolar Fair in Munich on June 9th 2011. During the meeting, the draft of the consolidated overview of barriers and recommendations was presented and discussed with the participants (representatives from EWEA, WIP Munich and RENAC). Further, the best strategy on how to disseminate and promote the PV LEGAL final recommendations was also debated.

3.6 PV LEGAL website beyond the end of the project

EPIA will maintain the PV LEGAL website online after the end of the project, up to the time when it will be merged with the new PV GRID website in July 2012.

4 Achievements of the action

4.1 Achieved results per work package against initial objectives

4.1.1 Work Package 1 - Management

Over the 32 months of project duration, the project coordinator BSW-Solar endeavoured to achieve sound project management and coordination of the several project activities. Regular conference calls between WP leaders were held during the most crucial months of the project, on top of numerous bilateral calls.

BSW-Solar kept constant communication with EACI and DBU in order to clarify several aspects related to the administration of the project. Those clarifications were regularly communicated to project partners. In particular, the consequences of the decision by REA-UK to leave the project had to be dealt with. It was chosen to replace REA-UK with the Micropower Council, another UK-based renewable energy industry association.

In total, 7 project meetings (see section 3.2) and 3 advisory board meetings (see section 3.5) were held over the duration of the project. While the original schedule for the project meetings was substantially respected, the original idea of having the advisory board meetings side to side to project meetings was abandoned and replaced by advisory board meetings organised during international PV conferences and exhibitions. The reasoning behind this decision was to make sure that high-level European PV stakeholders were able to attend the meetings without having to modify their already tight schedule. On the other hand, this move allowed saving budget originally foreseen to cover the travel costs of the advisory board members and to dedicate it to other project needs such as allowing subcontractors to join all project meetings.

Although most subcontractors were already assigned before the project started, difficulties arose with the selection of the Bulgarian subcontractor. Further, BSW-Solar needed to prepare together with a specialised law firm a standard subcontracting agreement that has later been used for all WPs. The external costs for the establishment of the subcontracting agreement were not foreseen in the PV LEGAL grant agreement. In general, the budgeted hours and costs for mentoring the subcontractors were unfortunately underestimated during the budget negotiation phase. Nonetheless, the collaboration with all four subcontractors acting as national partner for Bulgaria, Czech Republic, Portugal and the Netherlands proved positive and fruitful, as demonstrated that the 4 organisations decided to join as partners the PV GRID consortium.

4.1.2 Work Package 2 – Database and Research

eclareon GmbH, WP2 leader, demonstrated dedication and flexibility in coordinating the activities that, starting from the definition of research methodology and of the database structure, led to the launch of the database in May 2010 and to the subsequent updates conducted at the end of 2010 and at the end of 2011.

The **definition of the research objectives and the design of the research templates** together with the definition of the **architecture of the database** proved to be two challenging initial tasks of this workpackage. Both tasks were carried out by eclareon in strict collaboration with BSW-Solar. All project partners were asked to review and comment on the outcome of this initial planning activity. A **presentation of the structure of the database** was also organised on EACI premises in Brussels in December 2009 with the participation of representatives from EACI, DG Energy and DG ENV. In general, the definition of the database architecture used up more resources than originally anticipated. Also the research templates had to be updated several times due to technical issues and were upgraded in February 2010 in order to incorporate all database features and to include the results of the industry survey into the main research template. This additional work caused a delay compared with the original schedule.

After careful evaluation of four different offers, the Berlin-based Sunbeam GmbH IT agency was chosen as the subcontractor to carry out the **programming and integration of the database on the PV LEGAL website**. The subcontractor's work was supervised by eclareon and coordinated with BSW-Solar and EPIA in a joint effort to make sure the website and the database were seamlessly integrated.

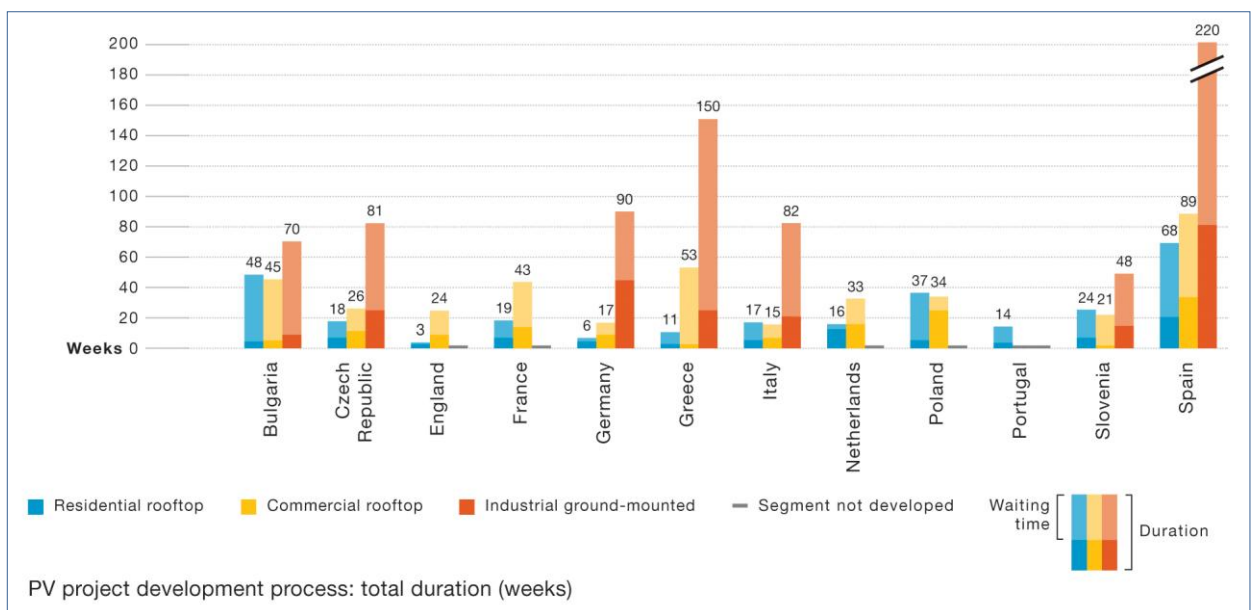
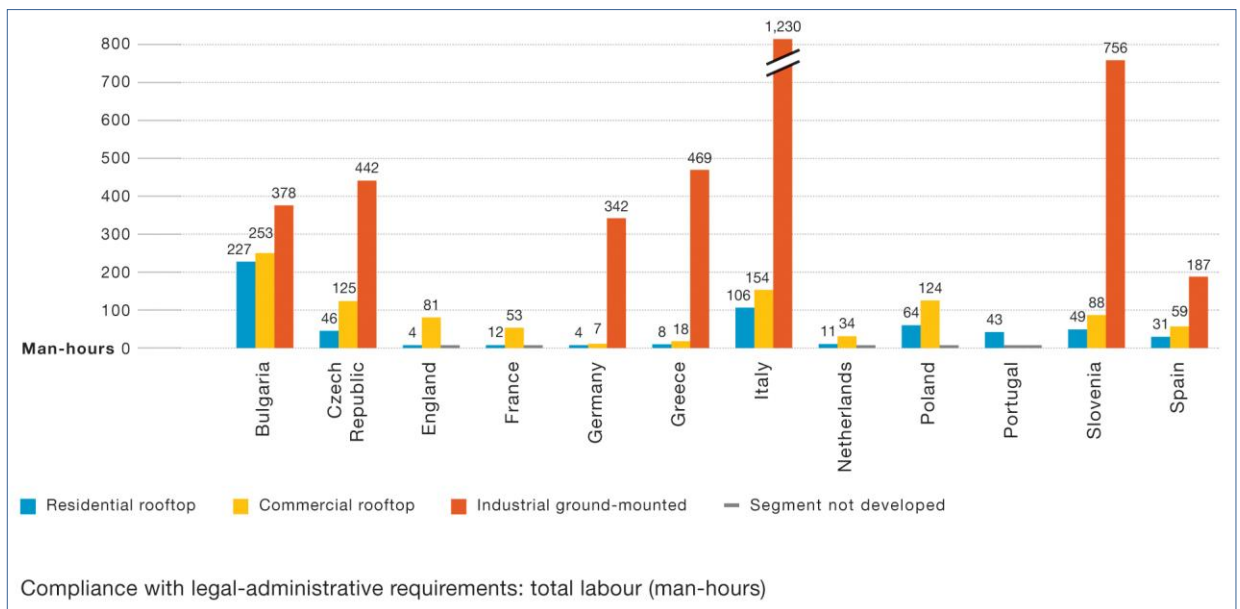
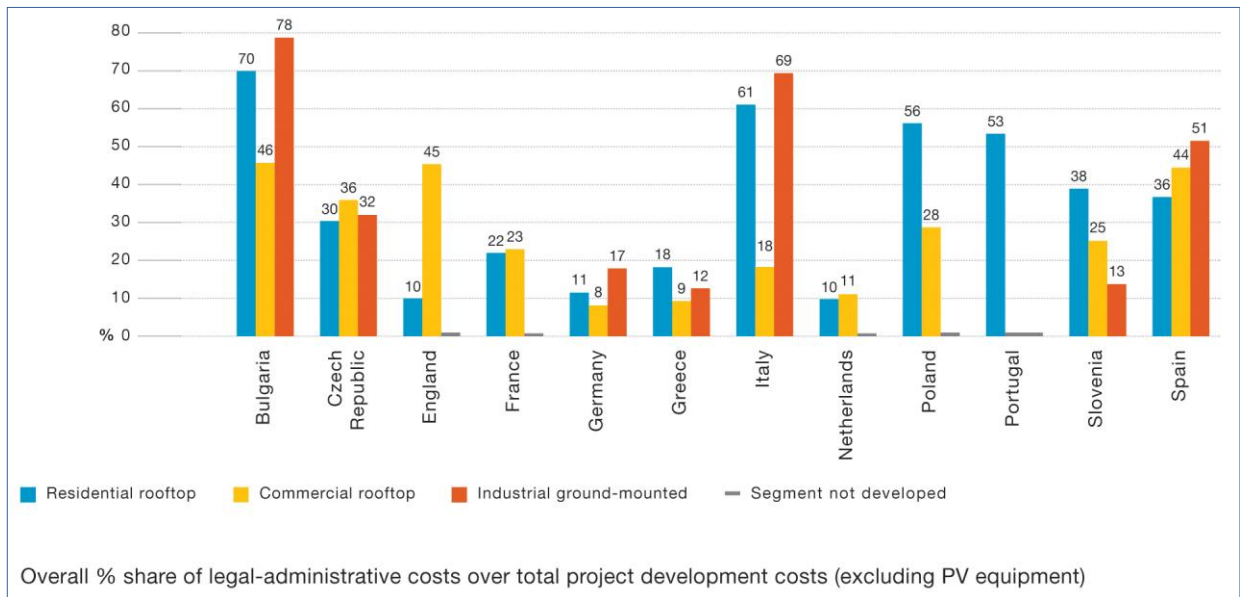
All national solar associations participating to PV LEGAL either as partners or subcontractors researched **qualitative information on legal-administrative frameworks and barriers** in their respective country. The researched information was compiled in the research templates prepared by eclareon. Furthermore, PV LEGAL partners and subcontractors conducted an **industry survey** in their country in order to gather **quantitative information** on duration of the processes, waiting times, global costs and legal-administrative costs involved. These results, after eventual corrections resulting from the **research evaluation and harmonisation process** led by eclareon in coordination with BSW-Solar, were integrated into the correspondent research templates and loaded on the **PV LEGAL** database. The database was revealed in the PV LEGAL website on May 17th 2010, with a few months of delay with respect to the original schedule caused by the initial difficulties discussed above.

In the months subsequent to the publication of the database, BSW-Solar and eclareon collected feedback from the PV LEGAL Advisory Board, the PV LEGAL project partners and other users regarding the **usability of the database**. After analysing all the feedback, BSW-Solar and eclareon defined the **improvements** that could be realised within the first update of the database. A major improvement was the creation of separate national and regional profiles for each country. This and other minor improvements were realised during December 2010. In order to further improve the appearance and the usability of the PVLEGAL database, BSW and eclareon a further technical update of the database was completed in spring 2011.

The **database contents** were **updated twice over the duration of the project**, the first time between the end of 2010 and the beginning of 2012, the second time towards the end of 2010. As a consequence of several changes occurring in most national frameworks interested by the project, it was not possible to follow the same update schedule for each country. In some cases, at the time the update was started, the national framework was still object of drafting and discussion between stakeholders, suggesting that the partner waited a few weeks before starting the update. In some other cases, the national framework had just been drastically changed, so while it was possible to update the **qualitative content** of the national database, a few months needed instead to be waited before running again the PV industry survey this ascertaining the **quantitative** impact of the new framework on the practical experiences of PV project developers. Nonetheless, the update phases were successful, and at the time of writing the PV LEGAL database holds a good picture of what it takes and how long it takes to install a PV system in the 12 countries participating to the project.

A national **stakeholder contact list** was developed by the eclareon in order to record all contacts made by project partners and subcontractors with national and regional policy makers, authorities, grid operators and the PV industry. The list contains the contact details of each contact person and a description of the actions undertaken (meetings, phone calls, participation in industry survey, etc.). The document was to be used over the whole duration of the project in order to keep track of all contacts made with stakeholders, starting from the research phase up to the national dissemination process.

The final results from the research in Work Package 2 can be taken from the following graphs:



4.1.3 Work Package 3 – Advisory Papers

As a first step in this task, an **advisory paper template** with a predefined document structure was prepared by eclareon together with the WP3 leader, PTPV and BSW-Solar. The document was discussed by the consortium at the project meetings in January and in March 2010. Successively, EPIA prepared a **design template** for the advisory papers, in order that each partner was able to print locally its Advisory Papers with the same graphical appearance.

Eclareon was also responsible to ensure the review and quality control of the advisory papers, making sure that:

- All preliminary national and regional papers respected the proposed structure or, alternatively, their different structure chosen by national partners was equally robust
- The legal-administrative barriers were described and analysed with sufficient detail and methodology
- The proposals for addressing the barrier were reasonable and well-documented

During the period from August to December 2010, most **preliminary national and regional advisory papers** were finalised by national PV LEGAL partners before the respective national forum and presented at the event. The **Italian preliminary national advisory paper** was further revised in October 2010 in order to take into account legal-administrative changes that occurred in the weeks immediately following the publication of the initial paper and the Italian national forum.

In general, the task of preparing a regional advisory paper was more difficult than foreseen. In some countries of the consortium, the existence and the impact of regional barriers was overestimated by partners during the preparation of the project. The research phase, consequently, in some cases revealed no regional barriers at all or, instead, barriers obstructing the regional level but stemming from national legislations or provisions. As a consequence the preparation of the regional advisory paper had to be tackled differently in each country.

A **preliminary regional advisory paper was not produced for Greece**, due to the impossibility of identifying any barriers stemming from regional level. Barriers appearing at regional level but originating from the national level were incorporated by Helapco to the preliminary national advisory paper.

Both preliminary advisory papers for the United Kingdom were delayed due to the withdrawal of REA-UK from the project. The publication of the preliminary versions was accomplished by the Micropower Council in June 2011.

Overall and leaving the United Kingdom aside, the schedule of this phase sustained a certain delay, in the sense that the preliminary advisory papers were not all published simultaneously in May 2010 as originally planned. However, this objective was not anymore realistically achievable given the delay generated in the research phase that resulted in the PV LEGAL database being only published in May 2010 instead of January 2010 as originally planned. Consequently, after discussing the issue at the March 2010 project meeting in Rome, the project consortium agreed to differentiate the publication schedule for each country, following the national forums calendar and ensuring that at least each preliminary national advisory paper was ready in time for presentation and discussion for the national forum. This objective was fully achieved.

Another difficulty, as already mentioned, was the necessity to differently address regional issues in each country. As a result, the **German, Italian and Spanish preliminary regional advisory papers** were not ready in time for the national forums. In order to present the preliminary papers to the industry and discuss them with relevant stakeholders before their finalisation, extra meetings were organised by the project partners:

- The **German preliminary regional advisory paper** was finalised in December 2010. It was however decided by BSW-Solar that the document would not be disseminated to the general public could be discussed in depth with the industry before being made public. BSW organized a dedicated meeting

to discuss the paper with the industry on February 25th 2011. 23 PV industry representatives attended the meeting. After the meeting, the regional paper was significantly amended by BSW according to the feedback of the participants.

- The **Spanish preliminary regional advisory paper** was finalised and published in December 2010 and presented at the General Assembly of ASIF on March 25th 2011. More than 200 PV industry representatives attended the meeting. The document was sent in advance to the participants, and was amended by ASIF according to the feedback of the participants.
- The **Italian preliminary regional advisory paper** was discussed with an Assosolare member working in the region Apulia and the candidate to lead the Regional Working Table for Puglia (Mr. Umberto Resta) on February 14th 2011. The paper was also made available to Assosolare's members for comments. However, no Italian preliminary regional paper was published by Assosolare, and only the final paper is available. Therefore, the Italian preliminary regional advisory paper is not part of the PV LEGAL deliverables.

Final national and regional advisory papers by project partners were published between March and September 2011. All were originally scheduled for March 2011. The finalisation of the papers was slightly delayed by the difficult set up of the preliminary papers. The **national position papers** of the subcontractors were finalised in parallel with the national and regional advisory papers. All national position papers were published between March and May 2011. All papers were finalised and distributed before the organisation of the national and regional review workshops (WP4).

As indicated in the Interim Report, the development of the **UK** papers was substantially delayed due to the withdrawal of REA-UK and its replacement by the Micropower Council:

- The **UK preliminary national advisory paper** was finalised at the end of June 2011 (finalisation announced for May 2011 in the Interim Report) and presented to the industry during the UK National Forum on 22 June 2011.
- Due to the difficulties encountered by the Micropower Council to identify regional barrier in UK, the set up of the **UK preliminary regional paper** was delayed (paper initially expected for May 2011). The paper could not be prepared in time for the national forum, and in order not to delay the organisation of the review workshops it was decided not to publish a preliminary regional paper but to directly set up the final paper with the support of the UK PV industry. Therefore, the British preliminary regional paper is not part of the PV LEGAL deliverables, instead there is an outline on the British approach for the final paper.
- The **UK final national and regional papers** were both finalised and published at the end of August 2011.

In addition to the tailored national and regional suggestions, a set of “Key Recommendations” were published, which was originally not foreseen in the project plan. To make the findings of the project more accessible to parties not involved or outside of Europe, these recommendations have been formulated and published in work package 5. The full text of the key recommendations can be found in Annex 7.3.

4.1.4 Work Package 4 – National Forums and Workshops

ASIF, the WP 4 leader, initially set up a **WP 4 working guideline** that was discussed with the consortium at the project meetings in January 2010 and in March 2010. This guideline contains a detailed **description of the structure and the format of the national forums**. This format required each forum to present and discuss:

- Legal-administrative procedures and grid connection regulations in the host country, bringing forward the findings and the conclusions of the preliminary national advisory papers
- PV market conditions in other countries where administrative frameworks, together with effective support measures, provide for good investment opportunities

During the following months the schedule of the national forums was coordinated centrally by ASIF, in order to ensure maximum participation of project partners to the events of each country.

Country	National Forum Venue and date	Attendance
England	London, June 22 nd 2011	50
France	Paris, November 25 th 2010	84
Germany	Berlin, September 22 nd 2010	134
Greece	Athens, October 22 nd 2010	102
Italy	Rome, September 8 th 2010	Over 300
Poland	Warsaw, December 16 th 2010	76
Slovenia	Celje, November 11 th 2010	60
Spain	Madrid, October 6 th 2010	84
Bulgaria	Sofia, June 1 st 2010	190

Table 1 – National forum timeline

In general, all national forums achieved good participation and positive reactions from the national PV stakeholders, becoming fundamental events in the process of finalising the advisory papers. In absolute numbers, participation varied according to the size of the national market, with Germany and Italy showing the highest number of participants. Additionally, the Bulgarian subcontractor BPVA organised its own PV LEGAL national forum even if the Grant Agreement did not require this. Leaving UK aside, the schedule of national forums incurred in a negligible delay, as the last forum took place in December and not in November 2010 as originally planned.

Following the national forums and the finalisation of advisory papers and position papers, the **organisation of the review workshops** was the main activity WP4 (national and regional review workshops for partners, only national workshops for subcontractors) until the completion of the project.

The **format of the workshops** was discussed with the project partners and the subcontractors at the project meeting in Berlin in January 2011. It was decided that partners had the possibility to organise either workshops which combine all target groups (one dedicated event) or several meetings with individual target groups (2-3 meetings with diverse people). The WP4 guidelines were accordingly updated by ASIF.

The organisation of the review workshops was originally scheduled between April and July 2011. In most countries, the national and regional workshops were organised within this time frame. In **Poland, Portugal, the Netherlands and UK**, the organisation of the workshops has been slightly delayed and the events are now scheduled for September 2011. In Poland and UK, the delay was due to the late finalisation of the papers. In Portugal and the Netherlands, first national workshop had been scheduled and had to be cancelled due to recent changes of government in those two countries.

Country	National workshop	Regional workshop	Comments
England	January 24 th 2012 (6)	January 17 th 2012 (7)	The timeline of these events was delayed by the retirement of REA-UK from the project
France	May 20 th (3), May 26 st (12) and September 23 rd 2011 (1)	June 27 th 2011 (4)	National bilateral meetings and one regional workshop
Germany	May 9 th (5) and May 12 th 2011 (8)	May 18 th 2011 (19)	National bilateral meetings and one regional workshop
Greece	April 12 th 2011 (6)	N/A	National workshop (no regional workshop organised due to the lack of barriers at regional level)
Italy	July 13 th (3), July 14 th (2) and September 14 th 2011 (4)	July 21 st (5) and August 1 st 2011 (5)	Bilateral meetings
Poland	September 15 th 2011 (16)	October 26 th 2011 (8)	Bilateral meetings also took place
Slovenia	June 2 nd (1), June 15 th (1) and June 22 nd 2011 (1)	June 15 th (1) and June 27 th 2011 (1)	Bilateral meetings
Spain	June 14 th 2011 (13)	May 3 rd 2011 (5)	Workshops
Subcontractors	National workshop		Comments
Bulgaria	February 21 st (4), June 16 th (5), June 24 th (2) and October 10 th 2011 (4)	N/A	Bilateral meetings
Czech republic	June 12 th 2011 (6)	N/A	Workshop
Netherlands	October 12 th 2011 (7)	N/A	Workshop
Portugal	December 20 th 2011 (4) and January 5 th 2012 (1)	N/A	Bilateral meetings

Table 2 – National and regional workshop schedule
(in brackets, the number of decision-makers attending each session)

In parallel with the organisation of the national forums, national project partners contacted the PV stakeholders already identified in WP2 as part of the “**continuous dissemination**” task, promoting the consultation of the PV LEGAL database and their participation to the upcoming national forums and the review workshops. Some policy makers, administrations and grid operators have later participated to the national forums or the review workshops. This has been an ongoing task involving a continuous exchange with the project’s target groups.

4.1.5 Work Package 5 – Communication and Dissemination

WP5 was coordinated by EPIA in strong collaboration with BSW-Solar. This workpackage contained several tasks and deliverables whose aim was to boost dissemination and communication of project results and developments. In general, all originally agreed results were achieved or surpassed, while additional items were added to the original plan in order to maximise the impact of the action. The consortium considered the **communication and dissemination absolutely crucial** and put a major effort into these activities.

The **PV LEGAL website**, whose preparation was coordinated by EPIA, went online in February 2010. Earlier, EPIA prepared and distributed the **project logo and the presentation design**. The **PV LEGAL project leaflet** was finalised on June 1st 2010. Over 6000 copies were printed in English and in all other 11 languages covered by the project. Over the duration of the project, all 6 foreseen **press releases** were published and distributed in order to mark the key milestones of project execution. Further, 6 **PV LEGAL**

newsletters were periodically sent by email to a distribution list constituted by several thousand European PV stakeholders and maintained by EPIA.

Several actions were put in place in order to foster collaboration with other initiatives and to boost PV LEGAL visibility beyond the participating countries. The PV LEGAL project was presented to the **Mirror Group of the PV Technology Platform (PVTP)** in Brussels in October 2009. Contact was also made with the **Policy Working Group of the PVTP**, which was considering analysing legal-administrative barriers in the EU 27. A presentation was held at a meeting of the Policy Working Group in Zurich in December 2009 and it was decided that the PVTP would rely on the PV LEGAL research. PV LEGAL project outcomes were regularly presented to **other national PV associations not participating in the project** through the **National Associations Working Group** of EPIA. PTPV, WP3 leader has also regularly informed the **PV-NMS-NET** partners of the project results. The project and its results were presented during the “PV in NMS” Workshop held at Intersolar Europe 2011. For a full list of presentations, please check the deliverables section.

In term of events, EPIA organised 3 international workshops during the 2009, 2010 and 2011 editions of PV SEC, attracting in total over 250 international stakeholders. In addition, during the last months of the project EPIA and BSW-Solar organised a further international event in Brussels, in order to provide enhanced visibility to the project’s final recommendations in the EU policymaking community. The event took place in Brussels on February 8th 2012, attracted over 100 people and together with the final press release achieved a very good resonance.

The interim project status report was published in September 2010 in coincidence with the PV SEC event mentioned above. One year later in September 2011, the additional “key recommendations” short publication anticipated the conclusions of the final status report, to be published in February 2012 in coincidence with the final event in Brussels. The final status report was initially printed by EPIA in 4000 copies and will be distributed over the next months by project partners on all convenient occasions. Successively, additional 1500 copies of the final status report were printed by Assolare and HELAPCO.

4.1.6 Work Package 6 – EACI standard dissemination activities

On two occasions, BSW-Solar was invited by EACI to present PV LEGAL: at the European PV projects meeting workshop organised by INES in Aix-les-Bains, France on October 1st 2010 and at the IEE Info day in Brussels organised by EACI on January 18th 2011.

4.2 Review of deliverables, including not achieved results

4.2.1 Work package 1

All foreseen deliverables were delivered according to the agreed schedule:

- **The final publishable report (D1.1)** corresponds to **D5.3**, published in February 2012

4.2.2 Work package 2

All foreseen deliverables were delivered within this workpackage. Slight variations in the agreed schedule occurred due to an initial delay in the work package activities.

- **The WP 2 working guidelines (D2.1.1)** provided PV LEGAL partners and subcontractors with a clear overview of the WP 2 objectives, activities and time limits.
- The **PV LEGAL database research template (D2.1.2)**, a very detailed template for recording qualitative research on legal-administrative frameworks and barriers.

- The **PV LEGAL industry survey template (D2.1.3)** was aimed at recording the experience of the PV industry on legal-administrative costs, global project costs, waiting times for authorities and grid operators and general duration of projects.
- **12 MS Excel lists of national key policy makers, regulators and major stakeholders (D2.2)**
- The **concept of database structure (D2.3)** was shaped in a database integration guide that defines the structure of the database, its user interaction functionalities and the graphical presentation of the database information.
- The **PV LEGAL database (D2.4)** was launched on May 17th 2010 and updated in December 2010 and December 2011, with some additional data behind refreshed in early 2011. The PV LEGAL database is accessible from the PV LEGAL website at: www.pvlegal.eu/database.html

4.2.3 Work package 3

Not all foreseen deliverables were delivered within this workpackage. 3 preliminary regional papers were abandoned due to the compression of the agreed schedule caused by the initial delay generated by WP2 and due to the difficulties arisen in the analysis of regional barriers. The UK papers were delivered with a sensible delay generated by the decision of REA-UK to abandon the project consortium.

- **8 preliminary national advisory papers (D3.1)** in national language and English were finalised
- **5 out of 8 preliminary regional advisory papers (D3.2)** in national language and English were finalised.
 - No preliminary regional advisory paper was delivered for Greece due to the impossibility of addressing any barrier at regional level.
 - No preliminary regional advisory paper was delivered for the United Kingdom, as the final paper was directly set up with the support of the UK PV industry in order not to delay the WP4 schedule; instead an outline of the approach chosen is attached.
 - The Italian preliminary regional advisory paper was not published, but only discussed with stakeholders before being finalised
- **4 national position papers (D3.3)** in national language and English were finalised. National position papers were prepared by the subcontractors in parallel with the finalisation of national and regional advisory papers by national partners, i.e. by March 2011 (month 21 instead of 11).
- **8 final national advisory papers (D3.4)** in national language and English were finalised
- **7 out of 8 final regional advisory papers (D3.5)** in national language and English were finalised.
 - No preliminary regional advisory paper was delivered for Greece due to the impossibility of addressing any barrier at regional level.

All final advisory and position papers are available on the PV LEGAL website. <http://www.pvlegal.eu/results/advisory-papers.html>

4.2.4 Work package 4

All foreseen deliverables were produced within this workpackage, except the regional review workshop for Greece. The overall schedule was mostly respected. The format of the review workshops was made more flexible, allowing for bilateral meetings in those countries where this was deemed more opportune. The UK events were delivered with a sensible delay generated by the decision of REA-UK to abandon the project consortium.

- **8 national PV forums (D4.1)** were organised in participating partner's countries. The corresponding proceedings are available on the PV LEGAL website: <http://www.pvlegal.eu/events/national-forums.html>
 - An additional non-contractual national forum was organised in Bulgaria by the Bulgarian subcontractor in June 2010
- **12 national review workshops (D4.2)** were organised in participating partners' and subcontractor's countries. The corresponding proceedings are available on the PV LEGAL website: <http://www.pvlegal.eu/en/events/national-workshops.html>
- **7 out of 8 regional review workshops (D4.3)** were organised in participating partners' countries. The corresponding proceedings are available on the PV LEGAL website: <http://www.pvlegal.eu/en/events/regional-workshops.html>
 - No regional review workshop was organised for Greece due to the impossibility of addressing any barrier at regional level.

4.2.5 Work package 5

All foreseen deliverables were produced within this workpackage, and in addition a further short publication and a final EU-level event were delivered in order to boost the impact and resonance of the project. The overall schedule was respected.

- The **PV LEGAL website (D5.1)** was launched in February 2010 and is available at <http://www.pvlegal.eu> or <http://www.pv-legal.eu>
- **6 press releases in all EU national languages (D5.2)** were produced:
 - The **first press release** announcing the start of the project and the first PVSEC workshop was sent to the press on September 14th 2009.
 - The **second press release** announcing the launch of the PV LEGAL database was sent on May 17th 2010.
 - The **third press release** announcing the outcomes of the national forums was published on March 2nd 2011 in Bulgaria, Czech Republic, Portugal and the Netherlands (in other countries between September and December 2010).
 - The **fourth press release** announcing the publication of the final PV LEGAL advisory papers and the update of the PV LEGAL database was published in all countries on 19 May 2011.
 - The **fifth press release** announcing the publication of the PV LEGAL key recommendations was published in all countries on 7 September 2011
 - The **sixth and final press release** announcing the final PV LEGAL event in Brussels was published in all countries on 8 February 2012, with the exception of Spain where, due to delicate situation created by the government suspending all incentives for renewables a few days before, the press release was delayed to the end of February and released with a slightly modified message.
 - All press releases are available on the PV LEGAL website at <http://www.pvlegal.eu/press/press-releases.html>.
- **3 (instead of 2) European PV LEGAL status report publications (D5.3)** were delivered:
 - The **interim PV LEGAL status report** was published and presented in September 2010
 - The additional **PV LEGAL key recommendations** were published in September 2012
 - The **final PV LEGAL status report** was delivered in February 2012

- **Over 10 project presentations on EU events (D5.4)** were delivered:
 1. EU PVSEC in Hamburg, September 2009
 2. Mirror Group of the PV Technology Platform (PVTP), Brussels, October 2009
 3. Forum Solarpraxis, Berlin, November 2009,
 4. PV Technology Platform Working Group, Zurich, December 2009
 5. National PV Associations Network meeting, February 2010
 6. International Congress and Exhibition on Energy Efficiency and Renewable Energy Sources for South East Europe, Sofia, 15th April 2010
 7. Bulgarian national forum, Sofia 1st June 2010
 8. Inter pares project meeting, Brussels, 7th June 2010
 9. Workshop organised by the German Ministry of Economy, Berlin, 3rd August 2010
 10. Congress Green Power 2010, Warsaw, 07th October 2010
 11. IV Poland – Spain Forum on RES, Warsaw, 19th October 2010
 12. International Fairs POLEKO, Poznan, 24th November 2010
 13. Meeting of the European PV projects organised by INES, Aix-Les-Bains, 1st December 2010
 14. Renewable Energy Conference, Bratislava, 2nd December 2010
 15. IEE Info day 2011, Brussels, 18th January 2011
 16. CIS, Rome, Italy 25th February 2011
 17. 1st Solar Balkans Forum, Sofia, 14th-15th April 2011
 18. PV NMS Workshop, Intersolar Fair, Munich, 8th June 2011
 19. Intersolar North America, San Francisco, 13th July 2011
 20. EU PV SEC Hamburg, 8th September 2011
 21. SunDay Conference, Utrecht, 12th October 2011

- **Over 10 articles in EU media (D5.5)** were delivered:
 1. „Datenbank dokumentiert Hindernisse auf dem PV-Markt“, Photon, July 2009
 2. „Smaller systems, less paperwork“, Sun, Wind and Energy, September 2009
 3. „Weniger Bürokratie bei PV-Planung“, Sonne, Wind und Wärme, September 2009
 4. "Beschleunigen für Brief und Siegel", Sonne, Wind & Wärme, March 2010
 5. "The great bureaucratic marathon", Photon International, April 2010
 6. "Der Große Behördenlauf", Photon Deutschland, April 2010
 7. "Carrera de Obstáculos burocráticos", Photon España, May 2010
 8. "Sechs Wochen in Deutschland, 39 in Frankreich", Sonne, Wind & Wärme, August 2010
 9. "Six weeks in Germany, 39 in France", Sun & Wind Energy, September 2010
 10. "Bürokratie behinder EU-weit Sonnenstromausbau", VDI-Nachrichten, November 2011
 11. Photovoltaic Supplement published in Polish daily Rzeczpospolita, 16 December 2010
 12. "Europas grösste Solarbremser", Photon Deutschland, April 2011
 13. "PV Legal: Positive PV progress made in legal and administrative barriers", PV magazine (online), May 20th 2011
 14. "EPIA: Red tape hindering Europe's solar PV take off", EurActiv, May 30th 2011
 15. "EU consortium cuts PV red tape in Europe", PES, August 2011
 16. "Weniger Bremsklötze", Photovoltaik, August 2011
 17. "Reducing Hindrances", PV Magazine, August 2011
 18. "Installations photovoltaïques – un parcours administratif semé d'embuchés" Actu environnement, September 2011
 19. "EU governments urged to lift red tape to aid solar pv development", Platts, September 2011
 20. "PV LEGAL: Reducing bureaucratic barriers is key to successful deployment of PV in the EU", Photovoltaics International, November 2011
 21. Perspektywy i bariery rozwoju fotowoltaiki w Polsce, Czysta Energia, Jan 2012
 22. "Fotovoltaico: le procedure sono ancora lunghe e poco trasparenti " Edil One, 14 February 2012
 23. Perspektywy i bariery rozwoju fotowoltaiki w Polsce, Czysta Energia, Feb 2012

For a copy of the articles, see the press section of the PV LEGAL website (<http://www.pvlegal.eu/press/selected-articles.html>).

- **3 International PVSEC workshops (D5.6) and an additional final European-level event** were organised:
 - First international PV LEGAL workshop in Hamburg on September 22nd 2009.
 - Second international PV LEGAL workshop in Valencia on September 9th 2010
 - Third international PV LEGAL workshop in Hamburg on September 8th 2011
 - Final PV LEGAL European-level event in Brussels on February 8th 2012
- The **proceedings of the international PV LEGAL workshops (D5.7)** are available <http://www.pvlegal.eu/events/european-workshops.html>
- The **project logo and common presentation design (D5.8)** were distributed to the consortium in September 2009.
- The **PV LEGAL project leaflet (D5.9)** was finalised on June 1st 2010. Over 6000 copies were printed in English and in all other 11 languages covered by the project.

4.2.6 Work Package 6

- **Regular update of the project information (D6.1)** submitted to EACI with every project report
- On two occasions, BSW-Solar was invited by EACI to present PV LEGAL (**D6.3**): at the European PV projects meeting workshop organised by INES in Aix-les-Bains, France on October 1st 2010 and at the IEE Info day in Brussels organised by EACI on January 18th 2011.

4.3 Review of impact of the action

4.3.1 Enhanced PV LAPs in 12 EU countries

Minimum 2 significant improvements on national PV legal-administrative frameworks – 24 improvements in total

- Over the duration of the project, all twelve participating countries reported one or more improvements of their legal-administrative framework and also indicated that proposals in this direction are currently being discussed in their country. Over 60 improvements have already taken place. Detailed information is available in the appendix to the report (see section 7.5).

Number of national legal-administrative framework descriptions, each targeting three market applications

- 12 framework descriptions are available in the PV LEGAL database for each of the 3 market segments: **in total 36 framework descriptions.**
- The final PV LEGAL status report summarised the qualitative and quantitative aspects of the database in 12 countries

Number of regional framework descriptions in 8 countries, each targeting 3 market applications

- 12 framework descriptions are available in the PV LEGAL database for each of the 3 market segments: **in total 36 framework descriptions.**
- The final PV LEGAL status report summarised the qualitative and quantitative aspects of the database in 12 countries

Number of national advisory papers and recommendations

- 8 preliminary national advisory papers, both in English and in the national language of the correspondent country published and later replaced by their final versions
- 8 final national advisory papers, both in English and in the national language of the correspondent country, are available in the PV LEGAL website.

Total: 16 advisory papers

Number of national position papers and recommendations

- 4 final national position papers, both in English and in the national language of the correspondent country, are available in the PV LEGAL website.

Number of regional advisory papers and recommendations

- 5 preliminary regional advisory papers, both in English and in the national language of the correspondent country published and later replaced by their final versions
- 7 final regional advisory papers, both in English and in the national language of the correspondent country, are available in the PV LEGAL website.

Total: 12 advisory papers

Number of national forums, with presence of all key stakeholders which are involved in LAPs

- 9 national forums were organised during the project, with the following attendance of PV stakeholders:
 - Italian forum: over 300 national stakeholders
 - Spanish forum: 84 national and international PV stakeholders
 - German forum: 134 national and international PV stakeholders
 - Greek forum: 102 national and international PV stakeholders
 - Slovenian forum: 60 national and international PV stakeholders
 - French forum: 84 national and international PV stakeholders
 - Polish forum: 76 national and international PV stakeholders
 - UK Forum: 50 national and international PV stakeholders
 - Bulgarian Forum: 190 national and international PV stakeholders

Total: over 1000 stakeholders attending 9 national forums

Number of national review workshops targeted at key decision makers

- 12 national review were organised during the project, with the following attendance of key decision makers:
 - England: 6 decision makers
 - France: 14 decision makers
 - Germany: 13 decision makers
 - Greece: 6 decision makers
 - Italy: 9 decision makers
 - Poland: 16 decision makers

- Slovenia: 3 decision makers
- Spain: 13 decision makers
- Bulgaria: 15 decision makers
- Czech Republic: 6 decision makers
- Netherlands: 7 decision makers
- Portugal: 5 decision makers

Total: 113 decision makers attending 12 national review workshops

Number of regional review workshops targeted at key decision makers

- 7 review were organised during the project, with the following attendance of key decision makers:
 - England: 7 decision makers
 - France: 4 decision makers
 - Germany: 19 decision makers
 - Italy: 10 decision makers
 - Poland: 8 decision makers
 - Slovenia: 2 decision makers
 - Spain: 5 decision makers

Total: 55 decision makers attending 7 national review workshops

4.3.2 Knowledge transfer to other European countries

Number of content available at project website www.pvlegal.eu

- 12 **national legal-administrative frameworks** descriptions, each in English and the national language of the respective country are available in the online PV LEGAL database
- 12 **regional legal-administrative frameworks** descriptions, each in English and the national language of the respective country are available in the online PV LEGAL database
- A **comparison of results of the PV LEGAL research** is available for download in the results section of the PV LEGAL website
- The **first PV LEGAL status report** was published in September 2010 and is available in the results section of the PV LEGAL database
- The **final PV LEGAL status report, including summary of barriers and recommendations from all participating countries** was published in February 2012 and is available in the results section of the PV LEGAL database
- The agenda, the presentations and the reports of **9 national forums** (including the non-contractual Bulgarian one) are available in the events section of the PV LEGAL database
- The reports of **12 national review workshops** are available in the events section of the PV LEGAL database
- The reports of **8 regional review workshops** are available in the events section of the PV LEGAL database

- **6 PV LEGAL newsletters** were sent by electronic mail to a contact list constituted by several thousand European PV stakeholders maintained by EPIA

Number of visits at PV LEGAL website

- From its creation up to 27 March 2012 the PV LEGAL website registered over **76.000 visits**, corresponding to an average of over **2.900 visits per month**
- In the first ten months of activity, the PV LEGAL website registered **50.000 unique visits**, corresponding to an average of over **1.900 unique visits per month**
- In the first month after the publication of the database, the PV LEGAL website recorded almost **14.000 visits of which nearly 11.000 were unique!**

Number of participants at 3 European workshops within PVSEC 2009, 2010 & 2011

- The **first international PV SEC workshop** at PVSEC 2009 was attended by 80 people
- The **second international PV SEC workshop** at PVSEC 2010 was attended by around 100 people
- The **third international PV SEC workshop** at PVSEC 2011 was attended by 80 people
- The **final event In Brussels** was attended by 106 people

Total: over 360 people attending 4 events

Number of press releases in all EU languages

- The **first press release** announcing the start of the project and the first PVSEC workshop was sent to the press on September 14th 2009.
- The **second press release** announcing the launch of the PV LEGAL database was sent on May 17th 2010.
- The **third press release** announcing the outcomes of the national forums was published on March 2nd 2011 in Bulgaria, Czech Republic, Portugal and the Netherlands (in other countries between September and December 2010).
- The **fourth press release** announcing the publication of the final PV LEGAL advisory papers and the update of the PV LEGAL database was published in all countries on 19 May 2011.
- The **fifth press release** announcing the publication of the PV LEGAL key recommendations was published in all countries on 7 September 2011
- The **sixth and final press release** announcing the final PV LEGAL event in Brussels was published in all countries on 8 February 2012, with the exception of Spain where, due to delicate situation created by the government suspending all incentives for renewables a few days before, the press release was delayed to the end of February and released with a slightly modified message.

4.3.3 Improved preparation of public and commercial actors

Number of participants at 8 National Forums

- Over 1000 key stakeholders 8 PV LEGAL National Forums

Number of participants from other EU countries attending to national forums

- Not available, participants nationality was not recorded

Number of participants from other EU countries attending to PV SEC Workshops

- Not available, participants nationality was not recorded

4.4 Success stories

4.4.1 Breakthrough of PV LEGAL in the Netherlands

In early October 2011 Holland Solar, the Dutch PV LEGAL partner, announced the “Green Deal”, an agreement with the Dutch Government for the simplification of authorisation processes and permits necessary to install a PV system in the Netherlands. Thanks to these adjustments it will be easier to invest in solar energy both for private citizens and commercial organisations.

The procedures for the implementation of solar energy by citizens and businesses will be simplified. Especially private customers currently find the procedures for delivering solar power to the grid unclear. Holland Solar will work with the grid operators in making information more accessible, and on the process of offsetting generated energy against own energy consumption. Also part of the “Green Deal” between the Minister and Holland Solar is removing of bottlenecks in the authorisation procedure applicable to the realisation of solar energy systems on listed buildings and for city areas with a protected view. Today’s procedure often causes uncertainty for the applicants on a municipal level. The state government will work on a uniform directive for municipalities.

4.4.2 Poland - the recognition of the value of PV

One of the successes of the project was the recognition of the value of PV in the draft of the new RES Law in Poland. The package of three energy laws (Law on Energy, Law on Biogas and Law on RES) was presented by the Ministry of Economy on 22nd December 2011. The draft introduces a number of important matters related to photovoltaics. Special attention will be devoted to the microsystems (installed capacity of up to 40 kW). Significant simplifications (further described in Chapter 6.4.8) have been introduced for these PV systems. The Advisory Papers on the legal barriers for PV in Poland and their recommendations on how to overcome them were taken into account in the new Law. The Polish advisory papers, distributed in 700 copies in Polish and 150 in English are treated as a basic source of information and guidance for potential investors and decision makers.

4.4.3 Solar Guidelines in India

ecclareon, thanks to the experience matured in PV LEGAL has been invited by the German Federal Ministry For the Environment, Nature conservation and Nuclear Safety and the Indian Ministry of New and Renewable Energy to take part to an international endeavour whose aim is to enable investment in the Solar Sector in India. Indian companies will be supported in the development phase of solar projects through an Internet based publicly available database showing the pathway through legal-administrative-regulatory frameworks. The project, called SOLAR GUIDELINES will focus on solar programmes on the federal level and on those of selected Indian states. The other objective of the project will be to streamline the solar project proposals and make them time and cost efficient, enabling a qualified and professional solar market in India.

5 Lessons learned

5.1 Management

One of the main lessons learned from coordinating a large project consortium deals with partners' resources. Our project consortium was formed by 13 national associations, either as co-beneficiaries or subcontractors. Some of these associations were very small at the beginning of the project, with little or no permanent staff yet employed. In those cases, board members may need to provide the work required on the project. While this can be acceptable as the involvement in IEE projects may allow small newborn industry associations to grow and then hire staff, from management perspective it may become an issue. In the partners may not be able to respond timely enough when their board members are distracted by urgencies in their other daily work. As a takeaway, in our follow-up project PV GRID (that will have even more partners) we strongly suggested to all national partners to have at least one dedicated staff working on the project, in order to ease communication and be able to timely respond to requests.

Another takeaway of PV LEGAL deals with workpackage management. In our WP3, we had the WP coordinator responsible for overall delivery of WP deliverables, another partner responsible for reviewing Deliverable content and a third partner responsible for deliverable format and printing. While this worked in the end, it also required extra coordination efforts both from the three partners mentioned and the coordinator. In practice, as no one was fully responsible for the whole workpackage, it turned very difficult to periodically assess the status of the preparation of deliverables (coming from other 12 partners). In the future we will have WP leaders fully responsible for all the content of their work package.

Finally, sound financial reporting requires a consistent time effort and training of project partners. BSW-Solar was particularly proactive during PV LEGAL in this sense, inviting partners to periodically report their staff, travel and other costs. Interim financial statements were therefore periodically reviewed by BSW, allowing to identify errors in reporting long before official reports were due, to monitor staff utilisation in the different work packages and to avoid overspending of budgeted costs.

5.2 Communication and dissemination

EPIA and BSW-Solar decided to take particular care of the project's final report and final event. While this required more effort in content preparation, layout design and stakeholder involvement, the result was that the impact and resonance of the project's final conclusions were greatly enhanced.

5.3 Common Dissemination activities

PV LEGAL was requested 2 times by EACI to participate to dissemination events. On two occasions, BSW-Solar was invited by EACI to present PV LEGAL: at the European PV projects meeting workshop organised by INES in Aix-les-Bains, France on October 1st 2010 and at the IEE Info day in Brussels organised by EACI on January 18th 2011.

The participation at IEE Info day 2011 was particularly interesting. The presentation of PV LEGAL interim results attracted several questions and generated some contacts and discussions that were also useful in preparing the PV GRID Proposal.

5.4 Conclusions

Drawing the conclusions from almost 3 years of PV LEGAL, the first thoughts go again to project management. As said above, often monitor spending and staff utilisation, clearly assign WP responsibilities

to a single, competent partner and in general for consortium-building favour committed partners with consistent and permanent staff resources. It turned out to be very useful to ask all WP leaders to prepare guidelines / task outlines of their work packages in the beginning in addition to the Annex I so that all partners know what workload is coming up.

Then, when advocating for changes in legal-administrative frameworks, it is fundamental to have a firm grasp on the background and to involve the maximum number of stakeholders from the very beginning. It is necessary to study the laws regulating the sector and to listen to the opinions of all stakeholders, in order to identify the common ground on which proposals may gather the largest possible consensus and therefore be successful. As a result of our good approach, the advisory papers and the workshops delivered by PV LEGAL played, in the case of some countries, a crucial role in changing the regulations regarding RES and PV.

As a closing remark and from a coordinator's view, albeit project management is always more time-consuming than planned, the effort spent has paid off. We consider the project a great success and will try to carry this spirit on into the new PV GRID project.

6 Other issues

6.1 REA withdrawing from PV LEGAL

One of the project partners, the Renewable Energy Association, surprisingly served notice of its withdrawal from the PV LEGAL project in early 2010. A part of the work foreseen for the time period before this announcement, i.e. the qualitative content of the legal administrative framework, had already been delivered and was available in the PV LEGAL database.

In the following months, it was necessary to find both a suitable replacement partner and a way to modify the timeline of the project guaranteeing that the results for the United Kingdom were anyway achieved. After several consultations amongst project partners and meetings with potential candidates, the UK-based organisation Micropower Council was chosen to carry out the work left behind by REA. The tasks of the Micropower Council will be to update the UK database with reference to the recent change of regulatory framework for PV installations in the UK, to prepare a national and regional advisory paper, to host the national forum and finally to involve relevant policy makers in the national and regional workshops. The Micropower Council effectively started working on the project in October 2010, even though the Grant Agreement amendment was only ratified by EACI on December 6th 2010.

6.2 Subcontractors' participation in Project Meetings

The PV LEGAL grant agreement arranges for the participation of the subcontractors in only two of the project meetings. As project meetings are considered key for the conduction of the project it has been agreed with the selected subcontractors that they would have to possibility to participate in all project meetings. The necessary budget could be taken from the travel budget foreseen for the advisory board members – which was only limitedly used as the locations for the advisory board meetings were carefully chosen and their timing aligned with international PV events.

7 Appendices to the Final Technical Implementation Report

7.1 Updated list of submitted deliverables since starting date

WP N°	Deliverable N°	Deliverable name	Month of completion
1	D1.1	Final Publishable report	34
2	D2.1	PV LEGAL database research design template and research plan	2
2	D2.2	12 MS Excel Lists of national key policy makers, regulators and major stakeholders	8
2	D2.3	Concept of database structure	4
2	D2.4	PV LEGAL database	7,18,30
3	D3.1	8 Preliminary national advisory papers	11
3	D3.2	8 Preliminary regional advisory papers	11
3	D3.3	4 National position papers	21 (originally 11)
3	D3.4	8 Final national advisory papers	21
3	D3.5	8 Final regional advisory papers	21
4	D4.1	8 national PV forums and corresponding proceedings	13-17
4	D4.2	12 national workshops and their proceedings	22-26
4	D4.3	8 regional workshops and their proceedings	22-26
5	D5.1	Project website (in English) including the PV LEGAL database	5, 8
5	D5.2	Production of 6 press releases in all EU languages	-
5	D5.3	European PV LEGAL Status Report publication	9 and 32
5	D5.4	Ten project presentations on EU Events	30
5	D5.5	Ten project articles in EU media	30
5	D5.6	International PVSEC workshops	4, 16, 28
5	D5.7	Proceedings of international PVSEC workshops	5, 17, 29
5	D5.8	Creation of project logo and Common presentation design	5
5	D5.9	Creation of project leaflets	-
6	D6.1	Creation and regular update of the project information	-
6	D6.2	Inputs to additional common information material related to IEE actions (...)	-
6	D6.3	Project presentations and background material presented at information and dissemination events (...)	.

Table 3 - Updated list of submitted deliverables since starting date

7.2 Final state of hours spent (in %) of the action per partner and per work package

Actual & planned achievement		Total partners	BSW	eclareon	Assosolare	SER	Enerplan	EPIA	ASIF	PTPV	Helapco	ZSFI	MCP	REA
WP1	actual	107%	118%	109%	96%	46%	182%	84%	84%	102%	91%	102%	95%	100%
	planned	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WP2	actual	117%	135%	131%	132%	72%	106%	19%	121%	87%	136%	103%	109%	100%
	planned	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WP3	actual	88%	73%	87%	80%	46%	65%	540%	60%	100%	106%	101%	100%	0%
	planned	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%
WP4	actual	78%	90%	68%	58%	56%	207%	290%	70%	99%	49%	100%	101%	0%
	planned	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%
WP5	actual	100%	104%	62%	138%	36%	110%	108%	72%	100%	83%	100%	98%	100%
	planned	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WP6	actual	16%	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	planned	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL	actual	95%	101%	107%	88%	56%	97%	111%	80%	97%	91%	101%	102%	100%
	planned	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 4 - Final state of hours spent (in %) of the action per partner and per work package

7.3 List of contact persons after end of the action

Contact person(s) after end of the action:

Participant N°	Participant Short name	Address of Participant	Family name, first name	Telephone N°	Fax N°	email
1	BSW	Quartier 207, Friedrichstraße 78 10117 Berlin - Germany	Chrometzka , Thomas	+49 30 2977788 40	+49 30 29 777 88 99	chrometzka@bsw-solar.de
2	eclareon	Luisenstr. 41 D-10117 Berlin - Germany	Brückmann , Robert	+49 30 246 286 93	+49 30 246 286 94	rb@eclareon.com
3	ASIF	DOCTOR ARCE 14 28002 MADRID – SPAIN	Collado , Eduardo	+34915900300	+34 915 612 987	ecollado@asif.org
4	ASSOSOLARE	piazza Luigi di Savoia, 2 20124 Milano - Italy	Zanolla , Andrea	+39 02 66.98.91.56	+39 02 67.07.41.93	andrea.zanolla@assosolare.org
5	ENERPLAN	Le Forum B - 515 Avenue de la Tramontane - Zone Athélia IV 13600 La Ciotat - FRANCE	Roland , Sylvain	+33 4 42 32 43 23	+33 4 42 08 44 94	sylvain.roland@enerplan.asso.fr
6	EPIA	Renewable Energy House Rue d'Arlon 63-67 1040 Brussels - Belgium	Latour , Marie	+32 2 4001013	+32-2-400.10.10	m.latour@epia.org
7	HELAPCO	Vouliagmenis Ave. 224 GR-173 43, Athens, Greece	Spsomas , Stelios	+30 210-9577470	+30 210-9707440	spsomas@otenet.gr
8	SER	13-15, rue de la Baume 75008 Paris - France	Poubeau , Romain	+33 1 48 78 05 60	+33 1 48 78 09 07	romain.poubeau@enr.fr
9	PTPV	Ul. Pralatowska 5/50 03-510 Warsaw - Poland	Pietruszko , Stanislaw	+48 22 679 8870	+48 22 679 8870	pietruszko@pv-poland.pl
10	ZSFI	LATKOVA VAS 59Aa 3312 PREBOLD- SLOVENIA	Gustin , Matej	+386 3 703 22 73	+386 3 703 22 76	info@zsfi.si
11	MPC	Stowe House, 1688 High Street B93 0LY Knowle, Solihull - UK	Bennett , Grace	+44(0) 1564 732791	+44 (0) 1564 771506	grace.bennett@micropower.co.uk

Table 5 - List of contact persons after end of the action

7.4 PV LEGAL Key Recommendations

7.4.1 PERMITTING PROCEDURES

Administrative permitting procedures are often the most severe obstacle to be tackled by a PV developer. These procedures may involve obtaining building permits, grid connection licences, environmental impact assessments, electricity production licences etc. The recommendations below aim at streamlining and harmonising the PV permitting procedures in the spirit of article 13 of the European RES Directive.

1) Lean and appropriate permitting procedures

Permitting procedures should reflect the decentralised nature of PV. As such, streamlined and lean procedures should be sought in order to reduce the burden on planners and administrations. Permitting procedures applicable to large conventional power plants are not suitable for PV. They do not reflect the simple decentralised nature of PV technology and should therefore be altered. In addition, permitting authorities should not be allowed too much discretionary authority in the administrative process since otherwise procedures become less clear and the outcome less predictable.

2) One-stop-shop for all permission procedures

It is advisable to reduce to a minimum the number of public departments/staff involved in PV permitting. With a one-stop-shop approach as it is implemented in Greece for residential PV, administrative burdens can be removed from the project planner as well as from the administration. In Portugal, all permitting procedures are handled online and taken care of by one authority.

3) Definition of deadlines

Deadlines should be defined for authorities to deal with permitting requests. Whenever deadlines are not met, a legal entitlement for PV system operators should be enforced that allows for the reimbursement of potential damage suffered due to the delay. The penalties should be more than symbolic; they should be strong enough to compensate e.g. for a missed Feed-in Tariff (FIT) degression step.

4) Guidance for planning authorities

Clear and consistent guidance for planning officers should be made available to enforce a uniform approach to permitting. Planning authorities should clearly and uniformly define the permits needed. Trainings/workshops should be organised for local authorities and support should be granted for municipal agents in charge of permitting.

5) Waive building permits for rooftop PV systems

Rooftop PV systems, at the least, should be exempted from building permissions, to allow for a burden-free development of this market segment. The exemption should be defined by the law and should cover all types of rooftop PV systems. A simple notification of the system to the planning authority (as required by the RES Directive) should be sufficient. For example, in Germany even this requirement is waived, only a notification to the Federal Network Agency for statistical purposes is asked.

6) Spatial planning should not prevent PV

In some countries spatial planning provisions can prevent PV systems from being built. Spatial planning provisions should therefore not discriminate explicitly against PV. Instead, spatial planning should foresee the priority of RES over conventional energy sources.

7) Permitting fees

Fees should not be charged by authorities for permitting procedures since permitting procedures can be tailored to the needs of PV and administrative efforts can be significantly reduced. However, if fees need to be collected (e.g. for larger projects), they must be transparent and proportionate. Regional differences should be avoided to allow for more planning certainty, and the fee structure should be published and accessible on the internet.

7.4.2 GRID CONNECTION RULES AND TECHNICAL STANDARDS

PV systems, in order to be allowed to connect to the electricity distribution or transmission grid, need to meet certain criteria defined by grid operators and electricity market regulators. Often these criteria do not take into account the characteristics of PV systems and may then represent a barrier to their penetration. The recommendations below aim at involving the PV sector in the discussion on technical standards and at harmonising rules at national level.

1) Involve PV industry in bodies in charge of defining technical standards

As PV technology becomes a significant factor in the energy supply system, it will be crucial to involve the PV industry in defining technical standards. Industry know-how is needed when revising grid codes or setting up grid connection rules to accommodate for the needs of distributed energy generation technologies. This input will ensure the safe operation of the grid and should be required by national energy law.

2) Define clear technical standards and grid connection rules at national level

Technical standards and grid connection rules should reflect the features and requirements of PV technology. Standards and rules should be clear, specific and uniform, and ideally be developed on a national level to avoid regional peculiarities that hinder broad PV penetration. DSOs should be involved as well as all energy generation stakeholders. Further, all steps needed for the connection of a PV system to the grid should clearly be described. Ideally, there should be a legal entitlement of PV system planners to a connection study and to all relevant information needed to plan for connecting the PV system to the grid.

3) Technical standards and grid connection rules defined at the national level should be binding and exclusive

To ensure transparency, good access to the grid and a reduced cost of PV system installation, grid connection rules defined at the national level should be binding and not subject to stricter definition by individual DSOs. Guidelines for DSOs on how to harmonise procedures – such as the ones used in Slovenia – should be set up. A uniform template grid connection application form should be used by all DSOs, as is done in the UK.

4) Set up an independent mediation office to efficiently resolve conflicts between parties

An independent mediation office (based on the example of the Clearingstelle EEG in Germany) could be helpful to resolve conflicts between parties without bureaucratic delays. The independence of such a body must be ensured.

7.4.3 GRID CONNECTION PROCEDURES

Connection to the grid is often the last but decisive step in the development of a PV system. While some Member States do not yet even recognise priority access to the grid of RES systems, in most countries these processes are often afflicted by severe delays that have a significant impact on the economic returns of PV systems. The recommendations below aim at enhancing the transparency and the efficiency of grid connection procedures in the spirit of article 16 of the European RES Directive.

1) Member States should provide for priority access of renewable energy systems to the grid

In the spirit of the EU Directive for the promotion of RES it is crucial to ensuring that PV systems are connected to the grid as a priority. This is e.g. foreseen in Italy while in some other countries lacking provisions hamper PV grid connection procedures.

2) Streamline grid connection procedures

Lengthy and complicated grid connection procedures can significantly slow down or even prevent the installation of PV systems. The following recommendations should be adopted:

- Limit paperwork so that the requirements by the DSO on the PV system operator are proportionate. In some of the researched countries up to seven communication steps with the DSO are needed in order to connect a PV system.
- Implement simpler procedures for small systems to allow for swift and non-bureaucratic installations in the residential rooftop segment (e.g. by defining the connection point of the house by default as the appropriate connection point for the PV system).
- Introduce one-stop-shop procedures that reduce number of people involved in the grid connection process (up to one interlocutor on DSO side).
- Introduce on-line procedures that have proven to be effective in some countries and allow for swift processes when dealing with the DSO.

3) Define deadlines for the attribution of the grid connection point

The allocation of a grid connection point (alternatively: the connection of the PV system) should be undertaken by the DSO as soon as possible, but not later than six weeks after a connection request has been made.

4) Define legal penalties for not respecting deadlines

In cases where time limits for the allocation of a connection point are not kept, a legal entitlement for PV system operators should be enforced, allowing for the reimbursement of the potential damage suffered due to the delay. The penalties should be appropriate to compensate for missed FIT revenues and not be only of symbolic nature.

5) Grid connection costs should be proportionate, transparent, standardised and regulated

Grid connection costs charged to the PV system operator must be proportionate, transparent, standardised and regulated. Information about the cost should be made publicly available and be monitored by an independent body (e.g. the electricity market regulator).

6) PV grid connection training and connection by installers

The RES Directive foresees the implementation of training schemes for renewable energy installers by Member States. Such training schemes should include PV grid connection modules. Installers trained in these national schemes could then be allowed to connect PV systems. In some countries, only the

DSOs are allowed to connect PV systems to the grid. At least for residential rooftop systems the PV installer should be empowered to make the connection.

7.4.4 GRID CAPACITY ISSUES

The exceptional growth of PV installations in several European countries in recent years represents a challenge to Europe's distribution and transmission grid infrastructure. Unfortunately, in some cases this challenge has become a reason to curtail or totally block the installation of further PV and RES capacity. The recommendations below aim at reasonably addressing the issues deriving from increased penetration of PV and RES generators on the grid infrastructure, always in the spirit of article 16 of the European RES Directive.

1) Grid analysis and regional grid concepts

An independent body (e.g. the electricity market regulator) should evaluate the grid infrastructure status especially in case grid operators refuse to connect further PV and RES capacity because of grid saturation. This is the only way to allow for an unbiased and objective assessment of the state of the grid. Such a study should evaluate costs, benefits and the potential for grid extension and improvements. At the same time, building on ambitious RES targets for regions, strategic grid concepts taking into account the future load curves and other regional specificities should be developed by the DSOs in cooperation with the RES sector.

2) No generic limits for PV

In all cases, fixed limits imposed on the connection of PV in certain areas or to a connection point should be avoided. For instance, in Spain it is not possible to install PV capacity in excess of 50% of the evacuating line's thermal capacity. Instead, capacity issues eventually should be resolved on a case-by-case basis.

3) Public availability of grid data

Information should be publicly available (e.g. on the websites of the grid operators) on the grid status, grid capacity availability, generation capacity, PV installations connected to the grid and grid permits granted. This will give PV developers adequate planning information.

4) Legal provision on grid extension and cost

In order to avoid PV system grid connection denials, the energy law should clearly define under which conditions grid operators must extend the grid to accommodate more RES generation capacity. At the same time, the law should specify who must bear the grid extension and improvement costs. One way would be to require that the grid be extended if reasonable from a macroeconomic perspective. The cost for the development of the grid could be collected by the DSO via grid charges and be passed on to the electricity consumers.

5) Clear deadlines for grid extension

Deadlines for grid extension should be set so that grids can accommodate large amounts of PV and renewable generation capacity in general.

6) Prevent grid connection speculation

To avoid speculation in PV connections licences, sufficient grid capacity to connect PV systems should be ensured so that licenses are not a scarce commodity traded for profit on a secondary market.

In countries with regulatory frameworks that provide for the reservation of grid capacities when developing PV systems, those reservations should be issued only for specific projects. This would limit the selling of licences on the secondary market to be used for other projects. Milestones should be established according to which a continuous development process can be tracked. Reservations should be issued for a limited time – with a validity period sufficient to realise the PV system but not overly long. France, for ex

7.5 Legal-administrative progresses made since the beginning of the project

7.5.1 Bulgaria

February 2012 update

A draft amendment to the RES Act was introduced in December 2011, just 6 months after the last amendment of the RES act (in May 2011). According to the ruling party GERB the proposals are motivated by the large number of RES projects that have been submitted and approved up to 2011 and the possible challenges for the electricity grid due to increased installation of PV projects.

Most important proposals for changes in the RES Act:

- Remains the annual determination of 'maximum yearly grid connection capacity' for RES projects that are based on assumptions by EDC/TSO. The State Commission for Energy and Water Regulation (Regulator) has to approve (or disapprove) the proposed 'maximum yearly free capacity' by DSO/TSO. After the approved 'maximum yearly capacity' limit for RES is reached, the remaining PV/RES projects requesting grid interconnection are not eligible to interconnect to the electricity grid, at least until the following year. Such procedure contradicts to Directives 2009/28/EO and 2009/72/EO because of no priority of grid access for PV/RES projects (there is no such discriminative legal procedure for conventional power plants).
- TSO/DSO will prepare schedules for grid connection of all RES projects (excluding biomass) with preliminary grid connection contracts (PGCC), according to the 10-years Plan for Development of the Grid (2010-2020) and the order of precedence of PGCCs.
- In cases of agreement with the schedule the future producers will have to sign an annex to the PGCC with new terms for grid connection included. Otherwise they will have the opportunity to release the reserved capacity and to receive the paid advance guarantees for grid connection back.
- The legal-administrative procedure for securing the FiT will be amended and thus valid as of the date of commissioning of a RES/PV system; FiT for PV systems remains fixed for 20 years.
- When the plant is to be put into operation in different phases over a longer period of time, the electricity produced by each part will be measured separately and will be purchased according to the pertinent price as of the date of commissioning of the different phases/parts;

In addition to the temporally restriction for the development of new RES projects until July 2012, the proposed amendment could affect more negatively on the sector by implementing a delayed time for grid connection of RES plants, although already regulated contractual terms between producers and TGO/DGOs.

The draft amendment to the RES Act was adopted on first reading by the National Assembly and now is under discussions by MPs before second reading and official adoption, which is expected by end of March 2012.

BPVA submitted its official position on the draft with proposals to the National Assembly to consider and approve more clear and predictable terms and conditions for the future producers, including implementation of special new procedure for reduction of the administrative barriers for small-scale PV installations (up to 30 kWp on residential buildings and up to 200 kWp in industrial areas). The members of relevant Parliamentary Commission expressed a positive will for such move and they are discussing several ways to implement it, including different categorization of the installations and grid connection facilities by the Spatial Planning Act, reduction of the administrative steps and of the waiting time for building permits, grid connection contracts, etc. The concept for PV installations of such scale is shortening of the legalization and building to around 3 months.

October 2011 update

RESA provides for an annual determination of 'maximum yearly grid connection capacity' for RES projects that are based on assumptions by EDC/TSO. The State Commission for Energy and Water Regulation (Regulator) has to approve (or disapprove) the proposed 'maximum yearly free capacity' by DSO/TSO. After the approved 'maximum yearly capacity' limit for RES is reached, the remaining PV/RES projects requesting grid interconnection are not eligible to interconnect to the electricity grid, at least until the following year. The maximum-yearly-connection-capacity procedure is not valid for rooftop systems up to 30 kWp in urbanized areas; and for rooftop systems up to 200 kWp in industrial areas.

Applications for grid connection shall be submitted by the future producer to the relevant grid operator together with advance payment in the amount of 5.000 BGN per MWp (appr. 2.600 Euro) for the future plant. Applications for grid connection will be processed by the relevant grid operator in order of entrance and the applicants will receive an answer for admissibility.

Upon signing of preliminary Grid Connection Contract (PGCC) an advance payment shall be paid to DSO/TSO in amount of 50,000 BGN per MWp (appr. 26.000 Euro) for systems over 5 MWp or 25,000 BGN per MWp (appr. 13.000 Euro) for systems up to 5 MWp. The advance payment is part of the fee for interconnection, incl. rehabilitation and extension of grid connection facilities.

PGCC are valid for 1 year, before end of which the applicants have to submit an application for a final grid connection contract (FGCC). FGCC have validity period not longer than the period for commissioning of the installation and construction of grid connection facilities. These facilities are constructed solely by the operators.

Preliminary statements on technical availability for grid connection admissibility of new RES plants will be issued by the operators as of June 30th on a yearly basis, starting in 2012. At that date the Regulator (State commission for energy and water regulation – SCEWR) shall determine the maximum capacities by regions for the first time.

RESA practically creates a temporary restriction for the development of new RES projects. According to the temporary and final provisions of RESA, the pertinent procedure regarding grid connection of RES power systems is suspended until 01.07.2012. This provision is not valid for RES projects that decide not to receive financial support and they are able to connect to the grid even though that would not be possible for all other new projects.

May 2011 update

An amendment to the Act for Protection of Agricultural Lands (APAL) enforced on 04.05.2011 has introduced a discriminatory regime for RES, prohibiting the use of converted agricultural land for construction of photovoltaic (PV) power plants only. All other businesses and enterprises in Bulgaria are not affected by this ban.

April 2010 update

A draft law containing proposals for reducing legal-administrative waiting times and for clarifying and simplifying the connection of PV installations to the grid is currently being discussed by the Bulgarian government. The Bulgarian PV Association is actively involved in the process and first PV LEGAL findings were presented to the government in several high level meetings. The new law is scheduled to come into force between September and December 2010.

7.5.2 Czech Republic

June 2011 update

On May 2011 the government's cabinet approved a draft bill about "supported sources of energy" to replace the existing law on the promotion of energy from renewable sources.

The House on 20th June 2011 endorsed the government's draft bill in a first reading.

The new law sets long-term stable and sustainable conditions for promoting energy production from renewable sources with the least impact on energy prices for end consumers. It is associated with the National Action Plan for Renewable Resources, which sets annual limits for the development of renewable energy sources. Domestic renewable sources under this plan will be developed only to the extent that allows the state in 2020 to produce 13 per cent of energy from such sources as the Czech Republic has undertaken within the EU.

Under the new law e.g.:

- starting next year it will be possible to purchase electricity from renewable sources to two or three dealers selected by the Ministry of Industry and Trade.
- only the PV rooftop systems with a capacity of up to 30 kWp will be supported.

April 2010 update

An amendment to the connectivity regulation has been adopted as of April 1st 2010. The amendment should limit speculative reservations (introduction of deposit payments and introduction of land planning permissions for larger installations). The results of the PV LEGAL research were fed into the discussion on the amendment by the Czech Renewable Energy Agency.

Moreover a methodical instruction tool on building permissions was published by the Ministry for Regional Development and the Landscape Development Office in November 2009. This document should provide clarity with regards to building law applications for PV systems.

The Ministry of Environment is also running a series of civil servant workshops in order to make the process of PV permission more transparent and to give civil servants proper tools for speeding up the decision making process. CZREA is participating in the workshops as a speaker.

7.5.3 France

January 2012 update

In July 2010, the law "*Grenelle 2*" has defined in its article 88 a deadline for the grid connection of small installation (< 3 kWp). Following this, it was transposed in May 2011 into the Energy code (art. L342-3).

On the 10th January 2012, the decree n° 2012-38 has finally fixed penalties for exceeding deadline of either grid connection proposal or grid connection, in the case of PV installations < 3 kWp. Penalties for exceeding the one month period which allows the grid operator to send his grid connection proposal

to the PV project developer is set to 30€. Penalties for exceeding the quarter period following acceptance of the proposal which allows the grid operator to perform the grid connection is set to 50€. At least, penalties will be raised to 50€ for each additional month after the above mentioned period.

In November 2009, decree n°2009-1414 has already deleted the declaration of operation to DIDEME for PV installations under 250 kW installations.

By the 1st January 2012, decree n°2011-1893 of 14th December 2011 (published in the Official Journal on the 18th December) will modify decree n°2000-877 (8th September 2000) relating to operation authorization of electricity production installation. Thereby, the authorization (or declaration) procedure will be tacitly recognized for some electricity production installations. This decision will directly concern all PV installation under 12 MW, which will be considered as de facto « authorized ». This is a new step into administrative simplification, which aims to encourage RES installations development.

July 2011 update

After the government decided, through Decree No. 2010-1510 of 9 December, to suspend, for a period of 3 months, mandatory purchase for any project with a power above 3 kWp, whose technical and financial proposal (TFP) or whose connection proposal (CP) by the grid administrator (ERDF or RTE) has not been accepted by the producer before the 2nd of December. Projects with a power above 3 kWp whose TFP or CP were not accepted by the 1st of December have been returned to the new tariff structure, which was subsequently defined with the Decree dated 4 March, 2011. This decree therefore ""cleared"" part of the TFP request waiting list. It also defined the commissioning time limits for projects with a TFP/CR accepted as at 1 December.

To benefit from the purchase tariff in force on the connection request date, facilities with a capacity above 3 kWp, which are allowed to continue their development by the Decree, are subject to a commissioning deadline for the installation:

- Within 18 months of the TFP acceptance date.
- Within nine months from the publication of the decree if the TFP acceptance date was nine months ago or longer.

If this period is exceeded (except in the case of work on the grid), the purchase tariff will become ineligible. This completion time constraint is a new obstacle for numerous projects. This means that funding has become problematic for these projects, with more financial guarantees being required by banks to cover the potential risk of ""loss"" of the purchase tariff. In addition, urban planning obligations which apply to large-scale projects because their own deadlines do not generally make it possible to meet the commissioning deadlines introduced by the decree.

Following this decree, the government organized a consultation with PV industry representatives, with six meetings being held between late December 2010 and late February 2011.

The consultation resulted in a report, which was submitted to the Ministers of Ecology, Sustainable Development, Transportation and Housing; Economy, Finance and Industry; and Industry, Energy and the Digital Economy. This document was in the form of feedback on the debate, allowing politicians to choose which decisions to make.

The report tackled the following topics:

- The need to move away from the suspension period in order to put the PV industry back on track for sustainable growth,
- The ambition to develop a French PV industry which takes into account economic realities and environmental objectives,

- The new framework for regulation to be implemented and for managing the move away from the suspension period.

Following this consultation, a new framework for mandatory purchase was defined. It came into force on 10 March 2011 (Decree of 4 March, 2011 establishing the conditions for purchasing electricity produced by facilities using radiant energy from the sun as specified in Paragraph 3, Article 2 of Decree No. 2000-1196 of 6 December 2000; NOR: DEVR1106450A). The main provisions are as follows:

20-year purchase contract starting from the commissioning date, which must take place 18 months after the full connection request, otherwise the contract will be reduced by three times the extra time;

- "Attractive" purchase tariff only for facilities with a power of up to 100 kW (added to the powers of current or completed projects on the same building or cadastral parcel). For facilities in excess of 100 kWp, the purchase tariff was set at €0.12/kWh, but with an additional procedure for calls for projects due to be introduced during 2011, to benefit from a rate in excess of €0.12/kWh;
-
- The purchase tariffs are set according to the building type, integration type, and facility power (added to the power of other current or completed projects in the same building or cadastral parcel);
- Depending on the volume of projects with connection requests during a given quarter, and for each segment (residential building integration, non-residential building integration, simplified building integration for any building type), the purchase tariff in the following quarter may be reduced by up to 9.5%, linked to the quarterly DSO obligation to communicate to the government the detailed list of new projects entering in waiting list during each quarter (global amount of project and total power for each segment);
- A certificate of financial capacity is mandatory for any project above 9 kWp;

The integration criteria have not really changed from the previous decree (31/08/2010), but they make provision for building facilities where the height of the photovoltaic system plan exceeds the surrounding roofing components plan by no more than 60mm. This limit will change to 20mm from 01/01/12.

This means that the purchase tariff is revised downwards and the eligibility conditions are made more stringent. However, this in no way changes the administrative obstacles that already exist.

March 2011 update

With the new decree of 4 March 2011 the DSO have the obligation to communicate to the government the detailed list of new projects entering in waiting list during each quarter.

December 2010 update

A Decree on December 9th 2010 has suspended all new FIT applications in France for projects larger than 3 kWp. This suspension is for 3 months, period during which the government intends to discuss with the sector's stakeholders about the future of PV in France for the following years.

July 2010 update

In France the law "Grenelle 2" foresees, in its article 68, a regional development of RES. Each region has to define their own RES plan, in accordance with the EU directive and objectives. These regional

schemes for climate, air and energy (SRCAE) have to be co-elaborating between Regions and Prefectures. Targets retain will have to be consistent with national, and de facto European, objectives by 2020 and 2050.

- Reduction and adaptation to climate change and energy management
- Air quality
- Qualitative and quantitative RES production targets consistent with European objectives.

These schemes can include a territorial plan for climate & energy that applies to Regions, Department, town and community of cities (above 50 000 inhabitants). It has to be adopting before 31st December 2012, and update every 5 years. They can also include a RES grid connection scheme realized by the Transport System Operator. SRCAE have to be adopting at least before 12th July 2011, but many Regions have not finishing it. An update every 5 years is foreseen.

The same law has also defined a deadline for the grid connection of small installation (< 3 kWp), in its article 88. This deadline is defined as follow: except specific cases which need grid extension or strengthening, the grid connection delay for a RES electricity production, less than 3 kVA, cannot exceed 2 months from the grid connection proposal acceptance. This grid connection proposal has to be send by the DSO to the producer within one month from the grid connection request reception. If those deadlines are not honored, penalties can apply. Penalties list will be defined by a Decree. But since the law publication on the 12th July 2010, no Decree about this has been published. The publication of this decree has last till January 2012 (see above January 2012 update)

April 2010 update

Since November 2009 an environmental impact assessment and a building permit are required for every PV system above 250 kW. These new administrative procedures are considered an improvement by the French PV sector since they should allow for a better-regulated development of ground mounted PV in the country.

Since March 2010 a CONSUEL certification is required for PV installations below 250 kW. The introduction of this new measure has been supported by SER and ENERPLAN, thereby using the knowledge obtained through the PV LEGAL project in order to improve the quality and the security of PV installations in France.

7.5.4 Germany

December 2011 update

In July 2011 Thuringia has decided to amend the state building regulation (ThürBO). For the installation of PV systems "in adjacent to and on top of" the roof and exterior wall surfaces of buildings, no building permission is required in the future. The permit freedom for solar energy systems shall continue even if the solar power generated is fed into the grid completely. This change is an important clarification of the legal framework in the State.

In June 2011 amendments to the Building Code were approved. By this revision, the installation of photovoltaic systems is legally facilitated. Upon entry into force photovoltaics belong to the "privileged" projects in so called 'Outside Areas' (eg farm buildings). Specifically, it is envisaged that the "use of solar energy systems in, adjacent to and on top of roof and exterior wall surfaces of buildings" is explicitly permitted in 'Outside Areas'. BSW-Solar had previously repeatedly asked for this clarification.

May 2011 update: BSW-Solar achieves initial progress in solar-friendly reform of building law

BSW-Solar continues to fight for a “solar-friendly” revision of building law regulations at Federal (*Bund*) and State (*Länder*) levels. As a result of the ongoing exchange with the responsible Federal and State Ministries, the first concrete improvements in the Federal Building Code are now on the political agenda. Among the concrete changes are plans to ease building law requirements for the utilization of solar energy in outlying areas (*Außenbereich*).

Such plans are at the heart of the draft bill introduced by the Federal Ministry of Transport, Building and Urban Development on 16 May. The revised version of the Federal Building Code, which the German Government plans to adopt in its Cabinet meeting on 6 June, is a component of the so-called “Energy Package,” with which the government intends to accelerate energy system transformation.

On 18 May, immediately following the publication of the draft bill, BSW-Solar conducted high-calibre expert talks, attended by a high-ranking representative of the responsible Federal Building Ministry and numerous representatives of the responsible State (Land) Ministries, to discuss with experts from the field the proposals on the table. BSW-Solar also took the opportunity of these talks to present to the experts in attendance its position on the current amendment to Federal and State regulations.

Following the expert talks, which took place within the framework of the EU project PV LEGAL, BSW-Solar also made a contribution to the consultation procedure with an extensive statement of its position on the revision of the building code. BSW-Solar supports the Federal Building Ministry’s fundamental objective of using the future law to strengthen the principle of climate protection in regional planning law. However, in the course of the conference, BSW-Solar also pointed out the need for further changes in the Federal Building Code, in the Building Use Ordinance as well as in State building regulations.

The EU project PV LEGAL, coordinated by BSW-Solar, has since put forward numerous concrete proposals to remove barriers relating to building law, both at regional and at Federal levels. During the coming weeks, BSW-Solar will resume talks with responsible politicians at Federal and State levels.

BSW-Solar’s statement on the amendment of the Federal Building Code (BauGB) is available at the following link: www.solarwirtschaft.de/fileadmin/content_files/110527_BSW-Stellungn_baugb.pdf

April 2011 update

First step towards a greater influence of the solar industry on the definition of technical standards, FNN publishes technical solution for over frequency protection

The FNN (Forum Grid Operation/Grid Technology) has put forward a solution for overfrequency protection in the form of a technical notice, which is valid until the VDE/FNN application regulation “Power plants connected to the low voltage grid” becomes binding and with this followed a central PV LEGAL recommendation of BSW-Solar (50.2 Hz Issue). For decades, power grid operators have stipulated that solar power systems must all shut down automatically when a frequency of 50.2 hertz (Hz) is reached. A solution proposed by the industry now provides for a mitigation of this problem until a new norm comes into effect. Jörg Mayer, Managing Director of BSW-Solar commented: “For years we have called for this regulation to be lifted, since it is not in tune with the role of solar power in the energy supply. This rigid shut-down threshold imposed by grid operators is rooted in a time when the operators expected that photovoltaics would supply only a negligible share of electricity production.”

The adoption of a solution which has been recommended by the solar industry to the FNN is a first step towards a greater influence of the solar industry on the definition of technical standards within FNN. The increased involvement of the solar industry in the activities of the FNN is one of the recommendations formulated by BSW-Solar and the PV LEGAL consortium in order to reduce legal-administrative barriers to the grid integration of PV in Germany and other European countries. For

historical reasons, it is mostly the grid operators who are represented in the FNN, whilst the RES industry, on the other hand is under-represented. The sheer number of PV systems installed in Germany however means that the solar industry now has a considerable influence on the networks. It follows, then, that it must be given an active role in network management.

March 2011 update: Improvement of grid connection rules for PV systems

The first recommendations of the solar industry have been implemented by the European Law Alignment Act for Renewable Energies (EAG EE) passed on 18 March 2011 for the implementation of Directive 2009/28/EC on the promotion of the use of energy from renewable sources. With the EAG EE, the regulations for connecting PV systems to the grid have been expanded and specified. In particular, the responsibilities and deadlines of grid operators toward those willing to feed-in have been expanded and set out in clearer terms. In the future, grid operators are required to “immediately” provide those willing to feed-in, once they have requested grid connection, with a precise timeframe for processing their request. As of now, the grid operator must also, “immediately or within eight weeks at the very latest”, provide potential system operators with a detailed timeframe for establishing a connection to the grid, all required network data to check and identify the grid connection point as well as a clear and detailed cost estimate for grid connection.

December 2010 update

Some significant legal-administrative improvements have taken place in Germany over the last months:

- **Problems connected with the Definition, Verifiability and Utilisation of areas of land eligible for EEG remuneration**

The *Clearingstelle* EEG (clearing point for legal questions on the implementation of the German Renewable Energy Act) has published a clarification on the definition of conversion areas on 1 July 2010. This clarification is in line with what BSW-Solar suggests in its national preliminary advisory paper. The decision provides for clarity. However, a clarification of the Renewable Energy Act itself remains a necessity. The clarification is schedule to take place in the framework of the next regular amendment of the act in 2012.

- **Difficulties with the determining of the commissioning of PV systems**

The *Clearingstelle* EEG has published a clarification on the conditions for the commissioning of a PV system on 25 June 2010. This clarification is in line with what BSW-Solar suggests in its national preliminary advisory paper. According to the decision, the commissioning of a PV system depends neither upon the connection of an inverter nor “the prior application for grid connection, implementation of a connection study or the laying of the grid connection or of connecting lines”. Even though decisions of the *Clearingstelle* EEG are not legally binding, most of the German distribution grid operators have informed BSW that they are implementing the decision in favour of PV systems. A clarification of the Renewable Energy Act itself remains a necessity. The clarification is schedule to take place in the framework of the next regular amendment of the act in 2012.

- **Registration of PV systems as a trade and permissibility of PV systems in residential areas**

The German Federation-States Committee (*Bund-Länder-Ausschuss*) "Trade Law" has stipulated in spring 2010 that privately operated rooftop PV systems cannot be classified as commercial systems and therefore must not be notified as a trade to the responsible authorities. As a result, owners of privately operated rooftop PV systems must not become compulsory members of the responsible Chamber of Industry and Commerce and must not apply to be exempted from membership fee. Furthermore, the permissibility of privately operated PV systems in residential areas is not problematic as they are not considered as a trade.

It is however not clear how the Fiscal Offices will implement the decision of the Federation-States Committee "Trade Law". In order to guarantee legal certainty, it is therefore still recommended that the Federal Ministry of Finance (*Bundesministerium der Finanzen*) should issue a decree for the clarification of the situation that instructs the Fiscal Offices as to how the registration of PV systems as a trade is to be handled

7.5.5 Greece

July 2011 update

A new ministerial decision officially in place after April 2011 has further simplified authorization procedures for PV systems, clarifying issues related to permits needed by Urban Planning authorities. This new decision however has re-introduced further barriers for systems installed on historic buildings and heritage areas thus blocking installation of small rooftop systems in those cases.

December 2010 update

After the introduction of a new RES Act in mid-2010, a series of Ministerial Decisions followed in autumn, which further simplify the authorisation procedures for PV. More specifically:

- New applications for large PV systems can now be filed to the Regulatory Authority for Energy (such applications were frozen in 2008).
- Production (electricity generation) license is not needed for systems smaller than 1 MWp.
- Rooftop systems of any size do not require environmental permitting any more, while procedures have become easier for ground-mounted systems.
- Residential systems can now be installed in all regions (previous regulations excluded the autonomous island grids).
- Applications previously excluded (such as facades, louvers, warehouses, carports, etc.) are now feasible in the residential sector.
- PV systems on historical buildings can now be deployed under a special authorisation procedure.
- Installation of PV systems on prime agricultural land is now allowed with certain limitations.
- A 150 €/kWp bank guarantee is needed for ground-mounted systems up to 1 MWp before the signing of a grid connection contract.

Following these positive changes, there was a new wave of applications and a grid-connection bottleneck has been created. Getting an offer for grid-connection is now the major barrier for investors.

April 2010 update

The change of the government in Greece in autumn 2009 has triggered changes in the legislative framework for renewable energy. A new renewable energy source law is expected in May 2010. HELAPCO has used the early experience of the PV LEGAL project to draft proposals for this new upcoming legislation. Most of these proposals are related to legal-administrative barriers with the aim to reduce the authorisation burdens. There are no concrete results as yet, but results are expected soon. From the drafts of the law, it seems that there will still be a lot of room for improvement. The further outcomes of the PV LEGAL project will be very useful in the near future as more changes are needed.

7.5.6 Italy

February 2012 update

Art. 65 of Decree n. 1 of 24th of January 2012 "*Disposizioni urgenti per la concorrenza, lo sviluppo delle infrastrutture e la competitività*" (Urgent measures for competition, development of infrastructures and competitiveness) modified (once more) the rules concerning the access to the incentives for ground mounted systems in agricultural lands that were recently (re)defined by Decree n. 28 of 3 March 2011. Decree 28/2011 – previous framework Under Art. 10.4 of Decree 28/2001 the following limitations were imposed to ground mounted systems in agricultural land:

- PV systems of more than 1 MWp NOT allowed
- A PV system cannot cover a surface of more than 10% of the slave area
- respect of the minimum distance of 2km between systems built on lands belonging to the same owner. Art. 10.6 provide exceptions on the application of the limitations for:
 - PV systems having obtained all permissions within the 29th of March 2011 or
 - PV systems for which the application for the permits have been submitted within the 1st of January 2011

According to Art. 10.5 the limitations do not apply on abandoned lands (at least 5 years) Decree 1/2012 – new framework Decree 1/2012 blocks the access to the incentives for all ground mounted systems in agricultural lands except for:

- PV systems having obtained all permissions within the 23rd of March 2012 systems for which the application for the permits have been submitted within the 23rd of March 2012.

On condition that the same systems respect the provisions set under Art. 10.4 (less than 1 MWp and maximum 10% of the slave land) and the system starts operations within 1 year from the entering into force of the Decree and Art. 10.5.

Amendments to Art. 65 have been submitted by Assosolare, in particular in order to preserve the rights and the investments of those operators falling in the exemption cases as defined by Art. 10.6 of Decree 28/2011 for which the retroactive effects of the new regulation are causing problems.

July 2011 update

- Legislative Decree of 3 March 2011 n. 28 has defined a new framework for the RES sector in Italy, including PV.
- The III Conto Energia, approved the 6th of August 2010 has been stopped in advance, on the 31st of May 2011.
- Decree 5 May 2011 defined the IV Conto Energia, in force from the 1st of June 2011.
- IV Conto Energia: the following types of PV systems are eligible to obtain the Tariffs:
 - PV systems built over buildings and "other" PV systems, further divided in:
 - "small" PV systems: roofs/building systems up to 1000 kW, and other systems up to 200 kW using Net Metering.
 - "large" PV systems: systems not falling within the definition of "small" PV systems
 - "Integrated PV systems" with innovative features, being the modules specifically designed to substitute architectural elements;

- “Concentration PV systems”.
- Goal of 23 GW in 2016. Mechanism to keep the costs under control and within a maximum cumulative expenditure of 6-7 Billions €/year in 2016.
- Tariffs for PV Systems: from 1st June 2011 until 31st December 2016 tariffs will be decreased regularly and differentiated as follows:
- 1st June 2011 - 31st December 2012 (transitional period): tariffs will depend on the type (roof/other) and power of the [PV system](#) and start operation date - month (2011) or semester (2012);
- 1st January 2013 - 31st December 2016: all-inclusive Tariffs (*tariffa onnicomprensiva*) for the electricity fed into the grid and a premium Tariff for the own-consumed electricity. Tariffs will be different on the basis the type (roof/other) and power of the [PV system](#) and the start operation date (semester).
- NOTE: the all inclusive tariff imply the exclusion of other forms of “valorization of the produced electricity” as (i) the *scambio sul posto* (net metering system); (ii) the *ritiro dedicato*; (iii) the sale of electricity to the market.

Notes on the Transition period - 2011 – 2012

- Budgetary CAP and Registry for “large” PV systems
- To access the tariffs all “large” PV Systems will have to: be listed in the Registry with a ranking that falls within the budgetary CAP available for the period. The reaching of the CAP blocks the admission of new systems for the given period
 - provide a Certified completion of works within 7 months from the date the ranking is published (9 months for systems above 1 MW)
 - systems connected in 2011 or 2012 but failing to get the ranking will get the 2013 “*Tariffa omnicomprensiva*”.
 - Also, systems installed between June and August 2011 will be counted to decrease the budget limit for the II Semester 2012. Potential devouring of the budget II Semester 2012 in 2011.
- Feed in premium (FiT + sale of electricity or net metering)

Notes on period 2013–2016

- “Soft” CAPs and dynamic tariff reductions.
- No register
- No hard budgetary limits are applied
- All-inclusive Tariffs (*tariffa onnicomprensiva*) for the electricity fed into the grid and a “premium” Tariff for self-consumption
- Tariffs are differentiated on the basis of:
 - the type of [PV system](#) (roof/other)
 - the power of the [PV system](#) and
 - the start operation date (semester).

- If budgetary limits are exceeded a further reduction, additional to those planned, is applied for the next period.

December 2010 update

In Italy, the need for a better and more harmonised legal framework in the PV the sector as well as simpler and swifter administrative procedures has long been recognised. The second half of 2010 brought a number of new provisions and some radical modifications going towards the goals of simpler and more transparent procedures for the authorisation and commissioning of PV systems. The most important updates are described below:

- The National Guidelines for the *Autorizzazione Unica* (the centralised procedure for the authorisation of PV Systems), foreseen by *DLgs. 387/2003* and left aside for many years, have been adopted and published in the O.J. of the 18 September 2010 ("*DM 18 Settembre 2010*"). This represents a great step forward in the necessary harmonisation of Italian legal frameworks for the authorisation of PV systems. The regions will have 90 days time from the entering into force of the decree, to adapt their legislation to the new guidelines. If this is not done, the National Guidelines will prevail over the regional norms. The issue of the necessity to adopt the Guidelines was largely debated in the National Advisory Paper and was at the core of the PV LEGAL National Forum held in Rome on September 8th 2010.
- A simplified procedure for the landscape authorisation (DPR 09/07/2010 n. 139), has been adopted and published in the O.J. of August 26th, 2010. The regulation entered into force the 10th of September 2010. The simplified procedure will apply, among other types of "minor entity works" also to PV systems of up to 25 square meters (about 3 kW). The need for a simplification in the landscape procedure was dealt with in the PV LEGAL Advisory Paper, due to the vast areas of the Italian territory covered by landscape restrictions and the incidence of the procedure in the balance of "waiting times" for the administrative procedures highlighted by the Industry survey for Italy. The simplified procedure, as it is, will benefit only PV systems up to 3 kWp. Therefore the chance of having a simplified procedure covering the whole residential segment was not seized in its full potential.
- The Environmental Impact Assessment (VIA) procedures have been modified by decree n. 128/2010, which aims at a reorganisation and simplification of the norms on Environmental Impact to better regulate the public interest in the protection of the environment with that of economic development. The decree was published in the O.J. n. 186 of August 11th, 2010 and entered into force the 26th of August. The VIA procedure was discussed in the Advisory Paper, particularly the need for a more uniform regulation at national level.
- For what concerns the low and medium voltage, a convention between Enel and the Ministry of Economic Development have been signed to adapt the distribution grid to the use of electricity produced by PV systems (up to 1 MWp) and develop smart grid solutions in Campania, Puglia, Calabria and Sicily (structural funds). The Advisory Paper included the infrastructural issues highlighting the need for a prioritisation of the interventions according to the distributed generation paradigm.
- With Deliberation ARG/elt 125/10 the Authority have published a revised Unified Text for Active Connections (TICA) (All. A to the Deliberation). The modifications aim to introduce swifter connection procedures, more transparency in the communications between the grid operators and project developers and introducing provisions concerning the requests of connection in areas (or lines) where the capacity of the grid is critical. The latter point was supposedly aimed at fighting speculative connection requests, but raised some concerns that were highlighted by Assosolare as well as by other industrial associations, particularly for what concerns the

payment of guarantees for systems falling into these “critical areas” or “critical lines”. The need to overcome the speculative aspect in connection requests was largely debated in the Advisory Paper. The solution adopted with the new TICA does not answer at best the issue while creating further problems that will need to be addressed in the immediate future.

- AEEG has also started support activities to grant financing to pilot projects aimed at developing smart grid solutions (Deliberation ARG/elt 39/10 of 25 march 2010). Following the indications of another deliberation of the AEEG (ARG-elt 93/09), the GSE has defined a procedure to improve the predictability of the production from variable and intermittent renewable sources.
- As from December 1st, 2010 the procedure for the request of the incentives is done exclusively through the GSE web portal. The new procedure aims at speeding-up the procedures for the admission to the Conto Energia incentives and improves the efficiency of the service. GSE has also published the technical rules for the admission to the incentivising tariffs of the III Conto Energia (*DM 6 agosto 2010*). The GSE has also published the Guide to innovative applications for BIPV, foreseen by the III Conto Energia and allowing the access to special tariffs for complying PV systems.

April 2010 update

The National Guidelines for the *Autorizzazione Unica* (the one stop shop procedure for the authorisation of PV Systems), foreseen by law and left aside for many years, have been readmitted to the political agenda after the issue was raised by Assosolare in the framework of the PV LEGAL project. A draft is now waiting to be discussed by the State – Regions Unified Conference and should be approved in 2010. The *Autorizzazione Unica* is one of the main bottlenecks for the PV sector in Italy.

A new regulation (now being examined by the Parliament) will simplify the bureaucratic procedure currently necessary to obtain the landscape authorisation for PV systems having a “minor impact” on the buildings. The regulation might reduce waiting times from more than 100 days to 60 days in those cases where landscape restrictions are present and *Sovrintendenze* (Ministerial offices at local level in charge of controlling that the heritage, landscape and architectural qualities of the territory are preserved correctly and responsible for the issuing of permissions) are involved. Also the administrative burden for the offices involved will be significantly reduced.

Some improvements are also being introduced in the direction of a better and easier access to the feed in tariffs. The energy regulatory authority AEEG has given the *Gestore dei Servizi Energetici* (GSE, institution in charge of managing the energetic services and the feed-in tariffs) responsibility to introduce on-line procedures in order to simplify the information and document exchange between producers and GSE for the access to the incentives. A new procedure has been introduced as of January 2010.

7.5.7 Netherlands

October 2011 update

The government and Holland Solar signed an agreement for jointly investing in the introduction of installation certificates for solar energy systems, simplification of the connection to the electricity grid for citizens, and the simplification of authorisation processes and permits. Thanks to these adjustments it will be easier to invest in solar energy as a citizen or as a company. The quality certification and assurance program provides a response to a European duty from the Renewable Energy Directive. Europe states that there must be a certification system for sustainable energy, geared towards the quality of the installation. Europe is not alone in calling for this: both members of Holland Solar as well as her clients ask for clear quality guarantees in the market. Holland Solar will head the programme, in cooperation with AgentschapNL and Uneto-VNI. Buyers of a solar energy system provided with this

certificate will know that the installation is of good quality. This will secure the confidence in solar energy.

The procedures for the implementation of solar energy by citizens and businesses will be simplified. Especially private customers find the procedures for delivering solar power to the grid unclear. Holland Solar will work with the grid operators on making information more accessible, and the process of offsetting generated energy against own energy consumption. Also part of the Green Deal between the Minister and Holland Solar is removing of bottlenecks in the authorisation procedure applicable to the realisation of solar energy systems on listed buildings and for city areas with a protected view. Today's procedure often causes unclarities for the applicants on a municipal level. The state government will work on a uniform directive for municipalities. Solving these bottlenecks will result in a better development of the market.

April 2010 update

In the past, the support schemes for both small residential systems and for larger commercial systems opened every year at the same date. This resulted in huge numbers of applications being sent in within a period of a week to the administration, which caused unnecessary delays for processing the applications (as all approvals are issued at the same time, after all applications are processed). In the past, this delay has been as long as 25 weeks. In 2010, the support scheme will have two different openings, one for the small residential systems and one for the larger commercial systems. In between there is a period of 2 months. This should lead to a reduced workload for the administration, and therefore a shorter processing time.

So far the technical requirements for grid connection have slightly differed between the grid operators. PV investors assumed that there was no difference and often noticed during the grid acceptance test that their system didn't meet the specifications of the regional grid operator. This caused extra cost for modifications of the technical installation, and delays in getting the PV system connected to the grid. This issue was identified and discussed by the national association with the grid operators. At the moment, this problem is being resolved, and technical specification for grid connection will be the same for all regions (i.e. all grid operators).

A major concern amongst developers of PV systems is the lack of a certification program in the Netherlands. This concern has been raised directly by Holland Solar and through the work done on PV LEGAL, and has recently resulted in the start of a national quality assurance program for PV systems and installers. The government has instituted a project team consisting of its division for renewable energy, the building standardisation association, the association of installers, and the national association for the solar energy industry. The project team is to develop a recommendation for defining a certification program for PV installers and installations over the next years, also in line with the requirements of the RES directive. Several project meetings and seminars, also involving representatives from the industry and from professional users, have already taken place, which has led to a first report with recommendations.

7.5.8 Poland

February 2012 update

The package of three energy laws (Law on Energy, Law on Biogas and Law on RES) was presented by the Ministry of Economy on 22 December 2011. The proposed Law on RES regulates the business activity in the field of power generation from renewable sources, terms and conditions for grid connection of RES systems, and the mechanisms and instruments to support RES energy generation. Moreover, the draft includes regulations on the national action plan for RES, certification of installers, and international

cooperation in the field of RES. The draft introduces a number of significant changes related to photovoltaics. Special attention should be devoted to the introduction of the term **microsystem** – *a system for generation of renewable energy of installed capacity of up to 40 kW*.

Significant simplifications have been introduced for small PV systems, such as

- Elimination of the need for a license, and thus no need for business registration and payment of social security premiums,
- grid connection of microsystems will be obligatory and free of charge,
- Energy producers or energy trading companies will be obliged to buy electricity generated in microsystems.
- Certificates of origin will specify, among others, the so called correction factor, the value of which will be laid out in implementing regulations. These factors will actually decide the level of support for specific renewable energy sources because for the purpose of determining whether the obligation of redemption of certificates of origin has been fulfilled it is not the amount of energy generated in the given RES that will be taken into account, but the amount adjusted in an appropriate ratio (for PV systems $k = 2$). Microsystems will receive preferential treatment in the form of additional 0,5.
- The second most important change in the support system is the stability period for support levels for different RES in the period of 15 years.
- The draft regulates the conditions and procedure for acquiring the qualifications of installer of microsystems. To work as a qualified installer, one will have to possess an appropriate certificate obtained after submitting to examination procedure run by the President of the Technical Inspection Office. Details will be provided in the draft itself and future implementing regulations.

July 2011 update

There are no changes in the legislation regarding RES. The new Law on RES won't be in force this year. It is expected that the support system will be based on green certificates as it is now. The number of certificates will depend on kind of RES, its age and installation site. But the spread will be only 0,8 – 2,0.

Photovoltaics gains more attention and understanding. There is also understanding that small systems can't be treated as a big ones. The published document "Legal-administrative barriers for PV system installations in Poland" realized decision makers the situation of photovoltaics in Poland. This document will be very useful for the potential investors.

The Voivodship's Funds for Protection of Environment and Water Management announced calls for proposal for RES-E under which MW PV systems can be installed. There are already two tenders for 1,8 MW in Wierchoslawice near Krakow and 311 kW in Ruda Slaska near Katowice.

URE (Energy Regulation Office) informed that 4 systems with the total power 110 kW have concession to produce and sell electricity and 2 MW (number of installation not known) have promise of concession.

December 2010 update

A new Polish Energy Law entered into force in March 2010. The main objective of the amendment of the previous law was to stop speculative reservation of connection capacities.

Following measures are foreseen in the law:

- Introduction of deposit payments for the connection of RES systems to the grid (deposit payment to be made within 7 days after requesting the issuance of Grid Connection Conditions). A deposit of up to 30 000 PLN per megawatt of planned connection power (as defined by the energy law) can be requested by the grid operator. The deposit payment cannot exceed the connection fee and in case of excess the utility, that is to perform the grid connection, shall return the difference with legally defined interest, accounted since the day of the payment. Such regulation should secure the investor from excessive level of the advance and accelerate the process of issuance of the Grid Connection Conditions. On the other hand, the necessity to obtain financial resources for the advance may constitute a great difficulty for the investor to accomplish the project.
- A copy of the local Land Development Plan must be submitted to the grid operator together with the grid connection request. In case no such plan exists, the grid operator must be provided with a “decision for area development conditions” by the local authority for the site where the PV system is to be installed (if such a decision is required on the basis of the law on spatial planning)
- Grid operators must publish the information on connected projects and available grid connection capacity on their website

April 2010 update

In Poland the Energy Regulation Office (URE) has recently published on its website a very clear description of the application process for obtaining a licence for the production of electricity (http://www.ure.gov.pl/portal/pdb/471/784/Odnawialne_zrodla_energii.html). This information is providing for more transparency in the legal-administrative process. Lead times are expected to be reduced accordingly. Moreover the URE is currently taking into consideration PTPV’s claim that the same regulation cannot be applied to large and small systems. First results of the PV LEGAL project were presented to the URE by PTPV. An amendment to the regulation might be proposed soon.

7.5.9 Portugal

December 2011 update

Since more than 6 month the legislation for [Segment B](#) has been in place and as a result of on-going exchanges before the licensing process the procedure is now working without major problems and with the necessary transparency. Like in segment A no paper documents are needed to run through the complete process.

April 2011 update

In December of 2010 the long expected revision of the legislation for segment A (residential rooftop systems) was published. The changes are a significant improvement and lead to a transparent and fast licensing process. The system for registration is always open and the request gets a number immediately. Anyone can know in which place of the waiting list his request is and have his waiting time transparent. Licenses are given for 25 MW per year and each month there can be expected 1/12 of this capacity for distribution.

Segment A in Portugal is now on a good way and the licensing procedure is one of the most modern at all: there is not one piece of paper necessary until the system is licensed. This is the result of a long work of APESF who talked to decision makers in all parts of involved administration. Also PV-Legal helped as it was always used as a key to open the discussion and as a database to improve the process.

Recently there is also published the legislation for segment B (commercial rooftop systems). Up to 20 kW there will be a feed-in-tariff of 25 €ct/kWh, up to 250 kWp it will be implemented an auction system where the request for the lowest feed-in-tariff will get the license. But still there are missing some decrees and details in the administrative process. It is expected that over 20 kW will appear the same kind of problems that Portugal has seen before: missing transparency, IT- pirates and dealing with licenses. Some details of the law perhaps will lead even to a total blocking of the whole process.

7.5.10 Slovenia

June 2011 update

On 30 May 2011 the instructions for connecting and operation of power plants of installed electrical capacity up to 10 MW as a part of the System Operating Instructions for the Electricity Grid (SOIEG) were published in the Official Journal of the Republic of Slovenia. The SOIEG should have been issued in June 2010 as originally planned. The instructions for connecting and operation of power plants of installed electrical capacity up to 10 MW do not reduce the number of steps to connect PV system with the electric grid but provide technical conditions about grid connection and clearly define steps leading to the connection of a PV system to the grid.

December 2010 update

In the past, only legal entities or private entrepreneurs could participate in the feed-in tariff support scheme. It was a problem for individuals that did not want to formally start an own business only to install a PV system on their rooftop. To change this situation, an amendment to the Energy Act was adopted and published in the Official Journal of Slovenia on the 8th of March 2010. Now the only disadvantage for individuals with no legal entities is the exclusion from the system of value added tax.

Until the end of September 2010, the various interpretations of the laws regarding building permits created a lot of uncertainty in the Slovenian PV market. Investors who were already in the process of installing the PV systems did not know whether or not they would need to obtain a building permit. To obtain building permits takes a lot of time and the procedure represents an additional financial burden. The matter was resolved only after the amended Ordinance regarding the energy infrastructure was published in the Official Journal of Slovenia on the 24th of September 2010. The updated Ordinance establishes the conditions for the installation of PV systems and their connection to the electricity grid. PV systems up to 1 MW have been classified as simple devices for producing electricity, whose installation is considered as an investment and maintenance work for which there is no need of a building permit. As a condition for the installation without a building permit, there are specific requirements regarding how the investor must look after the PV system. The final provisions of the Ordinance also arrange that PV power plants installed without a building permit before the enactment of the amended Ordinance are also to be classified as simple devices for generating electricity and shall not be removed as long as they comply with the current regulatory requirements.

In year 2010 many banks launched tailor made credit offers for the investors. Based on the feed-in tariff support scheme, financial institutions consider the investments in solar power plants as very safe.

7.5.11 Spain

June 2011 update

The draft of Royal Decree to improve legal-administrative framework was favourable informed by *Comisión Nacional de la Energía* (CNE) but final approval is delayed and is now estimated for second part of this year.

This Royal decree will include, in addition to items indicated in the December 2010 update, the possibility of connecting to the Low Voltage internal grid of the owner of the PV installation, when the owner, as a consumer, connects to the Utility grid in Medium Voltage

A Regional and National Workshop took place. The Result Assessment already issued significant agreement with utilities in the National and Regional Workshops to streamline administrative procedures and improve time response for connection to the grid.

Only fees for capacity studies made of one main utility is left, and there are good prospects that this utility also would remove this administrative cost.

Net metering identified in the "National Workshop" as a potential by-pass of the register and market annual cap that the government is not yet ready to abolish. The government is studying net metering and requested to PV LEGAL/ASIF during the National Workshop to contribute with ideas for an optimal design.

The regional government of *Castilla La Mancha* changed in June 2011 from a centre-left to a centre-right party, which implies a total change of political structure, causing certain impact in the PV LEGAL efforts made so far with the former officials.

December 2010 update

The draft of Royal Decree to improve legal-administrative framework was finalised, agreed with Government and passed the Comisión Nacional de la Energía (CNE). Now it is pending of final approval (expected for the first quarter of 2011). This decree, when approved, will:

- remove the need to obtain an administrative permit for all PV installations of up to 100 kWp connected to the low voltage grid
- introduce a major simplification of the procedure for connecting PV installations of up to 20 kWp to the grid, provided the PV installation is associated to an electrical consumption of equivalent or higher power at the same connection point, and
- provide for a reduction of bureaucracy for connecting PV installations of up to 10 kWp as these will be permitted to connect to the internal low voltage electricity network, instead of connecting to the medium voltage grid.

Additional and significant legal-administrative improvements for PV installations of up to 10 kWp will also be introduced as the owner of PV installations will have the possibility to consume on site the electricity generated. This net-metering framework foreseen by the decree will however need additional detailed regulation which will be addressed within PV LEGAL.

Legal-administrative procedures are also considered a barrier for the development of PV by the Spanish government in its Plan de Energías Renovables 2011-2010 (PER) now under preparation, and suggested actions for simplification of legal-administrative procedures are being discussed in the meetings with the entity in charge of preparing the report (Institute for Diversification and Saving of Energy, IDAE).

The current focus of the Spanish Government lies on economic issues related to PV and not on improving legal-administrative procedures. Therefore, it is currently very difficult to convince the government to implement the PV LEGAL proposals, like removing the existing market cap, as the government may consider this suggested action as incompatible with the desired tight economic control.

April 2010 update

Improvements of the legal-administrative framework are currently being discussed in Spain. First results of the PV LEGAL project have been presented to the Spanish government. The following proposals have already been fed into the Royal Decree draft which is currently being discussed by the Spanish parliament: removal of the need to obtain an administrative permit for all PV installations of up to 100 kW and connected to the low voltage grid; simplification of the procedure for connecting PV installations of up to 20 kW to the grid provided the PV installation is associated to an electrical consumption of equivalent or higher power at the same connection point; additional and significant legal-administrative improvements for connecting PV installations of up to 10 kW to the grid; reduction of bureaucracy for connecting PV installations of up to 10 kW and located inside an internal electricity network as it would be permitted to connect to the internal low voltage network, instead of connecting to the medium voltage grid

7.5.12 United Kingdom

February 2012 update: progress on management of the cost of grid upgrades

Ofgem, the gas and electricity market regulator, has issued an “open letter consultation” on the way forward for the next electricity distribution price control review. The next electricity distribution price control (ED1) is due to start on 1st April 2015 but Ofgem is now seeking input from stakeholders on the key issues that should be covered by the review.

Ofgem recognises in the initial letter setting out their perspective on the scope of the review that uptake of low carbon technologies, such as solar PV, is likely to increase significantly during this next price control review period. A key component of this review will therefore be to ensure that DNOs accommodate these low carbon technologies in a timely and cost effective manner.

The document published indicates that distribution networks are not designed to accommodate large volumes of low carbon, decentralised generation and Ofgem expects their take up to be an important driver of investment needs during the review. However there is uncertainty over how fast and where uptake will be. One challenge will be to strike a balance between ensuring that network capacity is in place to accommodate low carbon technologies and ensuring that customers do not pay for redundant assets.

As part of the review, and in order to ensure the timely and cost effective connection of low carbon technologies, it is likely to be necessary to consider the following issues:

- the approach the DNOs use in developing their business plans – particularly the timeframe, scenario analysis and methodology to evaluate different investment strategies.
- the outputs Ofgem will require the DNOs to deliver, particularly relating to connections, network reliability and environmental objectives and whether it is appropriate to establish output targets for dates beyond the end of the review
- barriers to the DNOs adopting commercial arrangements to manage demand and generation output (demand side response) and incentives and uncertainty mechanisms.

The connection of low carbon technologies is an overarching consideration. Ofgem plans to have an overarching “flexibility and capacity” working group to focus on this issue, which will start in advance. This working group will inform the development of the associated outputs and ensure coordination between them.

The review of G83/1

Ofgem, the gas and electricity market regulator, has included the issue of managing cost of grid upgrades to accommodate increased volumes of decentralised generation, including solar PV, as a central pillar of the document setting out the initial scope for the next electricity distribution price control review. Ofgem also plans to have an overarching “flexibility and capacity” working group to focus on accommodating increased decentralised generation.

The review of G83/1 began in May 2011 and a final version is expected to be published in March 2012. The key things this review was looking into were:

- Clarification of 16A per phase (ie 3.68kW single phase & 11.04kW three phase)
- Additional references (BSEN & IEC Standards) and Definitions (align with D Code & G59/2)
- Clarification and renaming of 2-stage connection process to make it clearer and easier
- Clarification on definition of “close geographical region”
- Significantly simplified application, installation & commissioning and decommissioning forms

Local Authority Building Control

Local Authority Building Control (the membership body representing local authority Building Control in England and Wales) has published a guidance note for its members on best practise for dealing with questions regarding the installation of solar PV panels on domestic properties. This note was written by Doug Basen and outlines that if the installer is a member of a competent persons scheme which requires Part A, C and P competency then the Local Authority should leave the installer to carry out the installation with no interference. If the installer is a member of a competent persons scheme which requires Part P competency only, the self-certification aspect of any work is restricted to electrical installation only and the remainder of the work is subject to formal consent under the building regulations, which must be applied for through the Local Authority building control department.