



# PV LEGAL

*make it simple!*

**REDUCTION OF BUREAUCRATIC BARRIERS  
FOR SUCCESSFUL PV DEPLOYMENT IN THE EU**

## **KEY RECOMMENDATIONS**

September 2011

## THE PV LEGAL PROJECT

Many countries have already recognised the potential of solar energy and are implementing strategies to develop the market. But bureaucratic hurdles have made it impossible to fully exploit the sun's potential as a source of energy. Administrative processes and permitting procedures still require a good deal of improvement in many EU countries. As a result, planning and connecting a solar photovoltaic (PV) system to the grid can still take several years in Europe.

### Aim

The European project PV LEGAL has set itself the target of identifying and reducing administrative hurdles to the planning and installation of PV systems.

PV LEGAL is supported by the European Commission in the "Intelligent Energy Europe" programme. 13 national PV industry associations, the European Photovoltaic Industry Association (EPIA) and the consultancy eclareon GmbH are involved in this project. The project is being coordinated by the German Solar Industry Association, BSW-Solar.

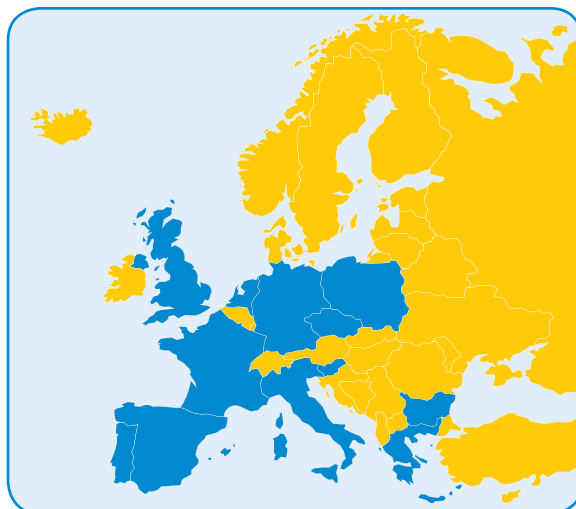


Figure 1 - The 12 PV LEGAL countries

### PV LEGAL Database

In the first phase of the project, an extensive database was created in order to identify bureaucratic barriers for project developers in the selected countries.

The PV LEGAL database provides a plethora of information for the three main market segments: small PV systems on residential buildings, medium-sized PV systems on commercial buildings and ground-mounted PV systems. For each of these segments the steps leading to the commissioning of PV systems have been identified and described in detail with information pertaining to duration, waiting periods and legal-administrative costs of the processes (more at [www.pvlegal.eu/database](http://www.pvlegal.eu/database)).

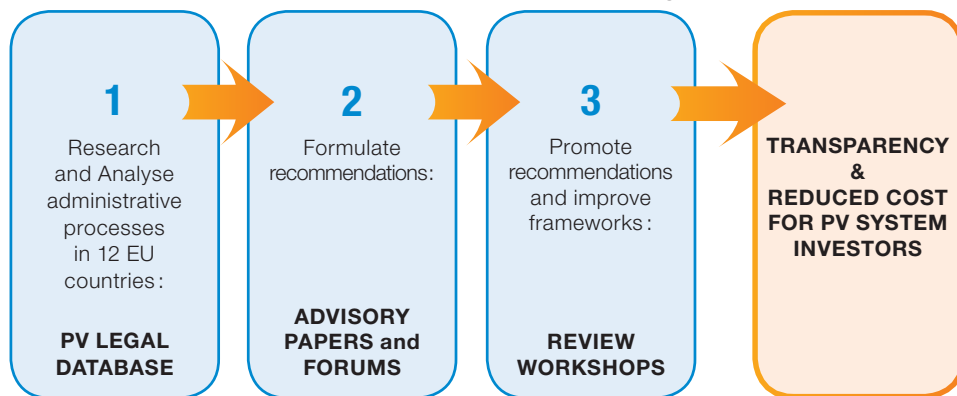


Figure 2 - Project steps and expected results

### Recommendations

At a further stage the project partners developed tailor-made advisory papers containing concrete recommendations for cutting red tape in each participating country. For those countries not participating in the project [this publication clusters the main barriers identified and presents solutions to overcome them.](#)

## WHY IMPLEMENT PV LEGAL RECOMMENDATIONS

On 23 April 2009, a new Directive for the promotion of Renewable Energies (Directive 2009/28/EC) was adopted. It sets binding renewable energy targets by 2020 for each Member State and includes stronger provisions for the reduction and **simplification of administrative barriers and access to the grid for renewable energy systems**.

The Directive clearly states that Member States:

- “Shall ensure that any national rules concerning the authorisation, certification and licensing procedures that are applied to plants and associated transmission and distribution network infrastructures for the production of electricity (...) from renewable energy sources (RES) (...) are **proportionate and necessary**”.
- Shall “**take appropriate steps to accelerate authorisation procedures**”.
- Shall provide for “**priority access or guaranteed access to the grid-system** of electricity produced from RES”.
- Shall ensure that transmission system operators (TSOs) “shall give **priority to generating installations using renewable energy sources** in so far as the secure operation of the national electricity system permits and based on **transparent and non-discriminatory criteria**”.
- Shall “**minimise the curtailment** of electricity produced from renewable energy sources”.
- “May require TSOs and distribution system operators (DSOs) to **bear, in full or in part**”, the “**costs of technical adaptations**, such as grid connections and grid reinforcements, improved operation of the grid and rules on the non-discriminatory implementation of the grid codes”.
- Ensure that cost sharing is “enforced by a mechanism based on **objective, transparent and non-discriminatory criteria**”.

This publication largely identifies barriers related to permitting procedures and grid connection of PV systems. Many of these could be resolved by full implementation of the Directive for the promotion of Renewable Energies. Concrete recommendations to remove or simplify the barriers hindering the development of PV systems have been formulated by the PV LEGAL consortium.

We therefore urge Member States and the European Commission to consider the numerous recommendations summarised in this publication. They have been developed by national associations to improve the legal and administrative framework related to PV systems in their respective countries.

Specific recommendations for individual Member States can be found at [www.pvlegal.eu/results/advisory-papers](http://www.pvlegal.eu/results/advisory-papers).

### Disclaimer

The sole responsibility for the contents of this publication lies with the authors. It does not necessarily reflect the opinion of the European Communities. The European Commission shall not assume any responsibility for any usage made of the contents thereof. Furthermore, no legal entitlements may be derived from the contents of this document.

## 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.

## 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

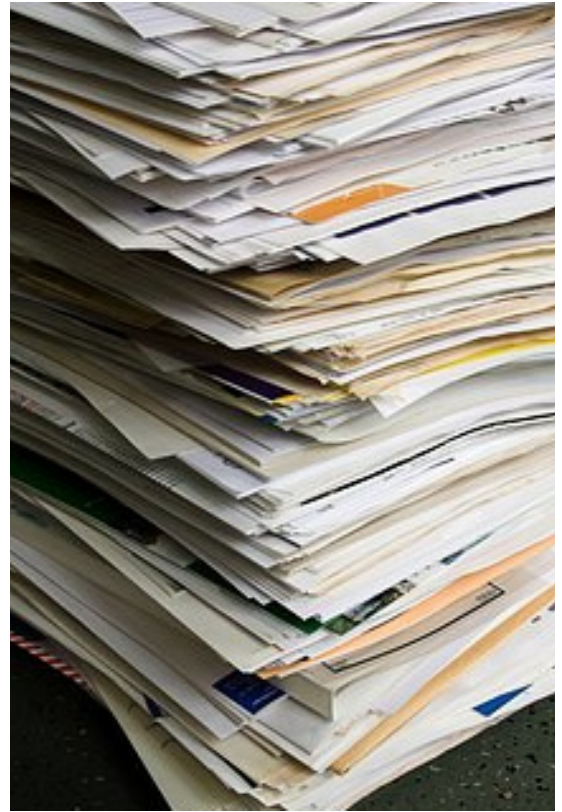
As PV technology becomes a significant factor in the energy supply system, it will be crucial to involve the PV industry in defining technical standards. Industry know-how is needed when revising grid codes or setting up grid connection rules to accommodate for the needs of distributed energy generation 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.

## 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.

## 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 example, has recently set up a mechanism that requires the PV developer to prove the seriousness of its intentions.



# PV LEGAL

*make it simple!*

Reduction of Bureaucratic Barriers for Successful PV Deployment in the EU  
[info@pvlegal.eu](mailto:info@pvlegal.eu) • [www.pvlegal.eu](http://www.pvlegal.eu)

## Project Consortium

### Coordinator



### Work Package Leaders



## Partners and Subcontractors

