EUROPEAN PV POLICY GROUP -EUROPEAN BEST PRACTICE REPORT AND RECOMMENDATIONS

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ABSTRACT: The European Best Practice Report by the PV Policy Group shows which political-legal barriers still exist that prevent market deployment of photovoltaics (PV) in most EU countries. The report also presents best practices in the fields of regulatory frameworks, financial support schemes and monitoring systems that could be transferred into practice in countries that want to further develop their PV sector. The following major political shortcomings can be observed: a) missing overall PV strategies and thus missing consistent PV policies; b) shortcomings in authorisation procedures, legal practice and standardisation aspects; c) insufficient financial support schemes; d) unsatisfying monitoring of PV market and policy. The findings and outlines of good practice in the mentioned fields are presented in the text. The PV Policy Group is currently developing recommendations and concrete actions on the national and European level which will be presented at the turn of the year 2006/2007.

Keywords: Europe, Policy, Support

1 THE PV POLICY GROUP PROJECT

The EU project "PV Policy Group" aims to overcome political-legal barriers that are currently preventing investments in the majority of European PV markets: lack of political commitment and effective incentive schemes, insufficient and disparate monitoring systems and lack of co-operation between key actors in the definition of political action, especially on the transnational level.

Eight national energy agencies of key "solar nations" (DE, FR, NL, AUT, SL, POR, GR, ES) have formed the "PV Policy Core Group" to define common action for the improvement and alignment of national support systems for PV. Two countries informally joined the Core Group later on: Italy and Sweden. The Core Group focuses on policy issues and closely interacts with existing, more technology-oriented networks and complementary ALTENER projects in the PV area.

Before the background of an overall PV strategy the PV Policy Group deals with three political sub-areas:

- regulatory frameworks
- financial support schemes
- monitoring systems

The project consortium wants to achieve:

- a shared assessment of the current market situation in eight countries with a focus on national PV policies and strategic options for improvement
- a clear commitment to national PV targets (National Action Plans)
- a Joint Action Plan to improve and align activities for PV promotion in the partner countries
- a Joint Position Paper to political decision-makers on both Community and national level on how to improve the current support framework for PV investments

The project is co-financed by the European Commission within the Altener Programme, EIE. The project ends in April 2007.

2 PROJECT FINDINGS

In May 2006 the first project outcome, the European Best Practice Report (BPR) [1], has been published. It analyzes national policy frameworks for PV and presents 12 detailed country analyses as well as policy characteristics of benchmark countries. The BPR serves the PV Policy Group as knowledge base and is available to the public (free download: <u>www.pypolicy.org</u>).

2.1 Overall PV strategy

An effective and efficient PV policy should be linked closely to a consistent PV strategy. In most European countries a strategy for the promotion of PV is missing. Reasons for that are:

- PV is not considered a top priority for achieving energy and/or environmental political goals. In many countries PV is still seen as a technology in research & development phase and therefore neglected in politics. In most countries the focus is placed on more competitive and "larger-scale" technologies such as hydropower, wind energy or biomass.
- PV has not reached the status to be considered a top priority for achieving industrial political goals by developing a future industry.

PV promotion is in most cases undertaken only by a patchwork of political initiatives rather than according to a coherent, long-term strategy. This often results into "stop & go" effects that block rather than foster the development of a PV market.

Besides providing the guideline for the design of the policy tools for regulation, financial support and monitoring a country specific overall PV strategy would also comprise for instance the alignment of research and development with market introduction, PV education (e.g. in schools or universities), awareness raising in public etc.

As the thematic focus of the PV Policy Group does not cover these additional aspects only the overall quality of PV strategies and politics has been compared. In strategy issues Spain has been chosen as benchmark as a consistent PV strategy was established in the country in 2005 oriented along clear political targets. Overall the policy framework in Spain was considered very transparent and aligned to the specific needs of the sector in 2005.

2.2 Regulatory frameworks

The PV Policy Group identified the following problem categories:

- administrative procedures
- uncertainties in legal practice
- authorisation aspects
- technical and process standardisation

In most countries, administrative procedures for authorisation, grid access and approval of subsidies for PV installations still represent a major market barrier.

- Even small-scale PV installations are treated as any electricity production facility, so the requirements are often inappropriate for this type of technology (e.g. building permissions, environmental impact analysis etc.). Only in some countries sector regulators have introduced specific technical or administrative guidelines for PV developers.
- The application of general regulations in practice is rather diverse from region to region (or county, even municipality), so that the PV system developer depends very much on the co-operation of local authorities and utilities – in most countries common rules for practical issues such as approval periods, costs or contracts remain undefined.

 Local authorities in charge are still unfamiliar with PV installations and often overstrained or overcharged with applications – this leads to uncertainties, time-consuming administrative delays and inappropriately long lead times or "pre-project" phases for promoters.

The implementation of the regulatory framework has been measured by the overall complexity of administrative procedures, the number of required permissions and involved authorities and the duration of the planning process.

The average duration of the planning process for small-scale project ranges between 2 and more than 18 months (large-scale: 8-36 months). On average between one and four authorities are involved and one to five permissions needed.

In regulatory framework issues Germany has been chosen as benchmark since the administrative procedures have been developed by ongoing practice over several years. Not to be ignored, however, is the swift and nonbureaucratic manner by which Swedish authorities (county councils) handle permit and funding applications, i.e. only one authority is involved and one permission needed.

2.3 Financial support schemes

Although there currently are very promising developments especially in Southern Europe the effectiveness of the chosen financial incentives for PV is rather low in most countries except in Germany. The chosen incentives can be classified as follows:

- feed-in-tariffs (FIT) as single instrument
- other financial incentives (e.g. direct investment subsidies, tax reductions, soft loans etc.)
- combination of instruments (e.g. FIT with other subsidies)

Quota systems have not proved effective for promoting PV as they rather favor more competitive renewable energy technologies.

The BPR has shown that financial support schemes with considerable market impact – especially the **FIT system** - dispose of the following characteristics:

- sufficient profitability for the system operator
- long term perspective for suppliers
- little administrative effort
- regulations are easy to understand
- differentiation according to system types

In order to minimise the overall costs of their support scheme some countries have considered the following aspects:

- provide incentives for ongoing cost reduction
- encourage competition
- intrinsic quality control

Germany has been chosen as benchmark as its renewable energy law meets best these requirements.

Besides FIT systems **tax incentives** (tax credits, tax deductions and VAT reductions) have been assessed in the Best Practice Report. Quality criteria have been:

- monetary attractiveness of tax measures
- duration and stability of the measure
- accessibility (application processes)

The **French tax credit scheme** has been chosen as benchmark. The total refund level is high (50% of the material costs up to 8.000 for single persons and $\oiint{16.000}$ for married couples) and accessibility is acceptable (via annual tax declaration). Furthermore the French scheme is the only scheme with a guarantee of continuation past 2006. As it can be combined with the recently raised feed-in-tariffs the French overall support scheme has become even more attractive especially for the private sector.

Most other countries also run tax schemes but remain mostly without effect due to the following reasons:

- tax deduction: schemes often complicated, benefit depends on the tax level, contribution rather low
- VAT reduction: though easy to implement contribution rather low
- often caps for system sizes or low absolute contribution limits

The question of how to design a financial support scheme for PV that has to be effective at low costs remains a difficult task. There are certain minimum requirements as described above. The discussions within the PV Policy Group have shown that for instance the following general framework conditions should be considered:

- stage of the actual PV market introduction (ranges currently from no capacity installed to several GW)
- income of potential investors
- public acceptance and awareness
- knowledge about the technology
- etc.

2.4 Monitoring systems

The PV Policy Group considers monitoring as an important but often neglected topic in the context of PV market promotion. A sound and steadily updated data base would provide relevant information for political decisions. In the BPR two sub-areas have been assessed:

- PV market monitoring (measuring the effect of political support)
- PV policy monitoring (measuring the performance of political support)

No European country has a monitoring system that entirely covers both sub-areas. However experience with monitoring exists and could provide a good basis for a more comprehensive approach in single countries as well as on the European level. Generally the key questions when designing a monitoring system for both market and policy performance measurement are:

- Who is the target group?
- What are the key data?
- Which data collection method should be used?
- Where / who are the data sources?
- How to motivate groups that possess data?
- How to manage and interpret the collected data?
- What are the costs and benefits of monitoring?
- How to establish an EU-wide database?

The national approaches to **market monitoring** have been compared regarding the quality of project monitoring, market surveys and the national plant register.

As far as the demand side of the PV market is concerned, countries with subsidy schemes all collect data in the framework of these programmes (France, Italy, UK and also Germany until the end of the '100.000 roofs programme'). Assuming that all investors use subsidies, market figures are reflected quite well by these programmes. In countries with feed-in-tariffs the situation is more difficult because the utilities do not release fully reliable data.

In terms of effective market monitoring Spain and The Netherlands developed innovative tools.

In order to monitor the **Spanish** Renewable Energy Plan (PFER) a shared computer tool has been developed for **project monitoring**. Project participants, namely authorities and institutions on national, regional and community level submit data of renewable energy projects in their field of responsibility. Data is collected uniformly providing general project information, project descriptions, financial data, energy data and technology data. The harmonisation of quantitative and qualitative criteria ensures that all projects are fully comparable and interpretable as a whole.

The Dutch institutions Holland Solar, IEA PVPS (SenterNovem) and CBS (Statistical Agency by the Dutch State) developed an industry monitoring approach via surveys. They committed themselves to the following requirements: reliability, independence, confidentiality, applicability for all stakeholders, covering of all required data and availability soon after each year ending. Together with representatives of the industry a two-page questionnaire was developed which investigates figures such as installed power, production capacities, turnover, import / export, domestic trade, employment and RTD budget. The questionnaire was sent to more than 95% of the supply chain in Holland and about 80% of them (covering > 90% of the Dutch market) provided the requested data. The monitoring activities are conducted by CBS which is an entirely independent governmental organisation. By that confidentiality can be guaranteed.

In some countries **national plant registers** are in place. They are often part of an overall programme

monitoring as for instance in Spain, France or in Austria. Therefore these registers might not cover activities outside these programmes.

PV policy performance monitoring of course makes also use of the information provided by the market monitoring. But it adds requirements regarding interpretation and reporting in order to be able to prepare political decisions. To assess these requirements three criteria have been chosen for the assessment in the BPR: Consistency of the approach, data quality and transparency.

With its elaborate approach to PV policy performance measurement Austria has been chosen as benchmark for monitoring FIT systems. Germany is the benchmark for the monitoring of its former soft loan programme '100.000 roofs programme (HTRP)'.

The **Austrian monitoring** of its Green Electricity Act can be outlined as follows:

- PV systems have to be accredited as green power plant by provincial governments.
- The provided data is entered into a database by the regulator E-Control.
- The so-called Green power balance group representative (GPBGR) is obliged to buy the PV electricity and to pay the tariffs. It operates a database containing data about installed capacity, fed-in electricity and paid tariffs.
- The GPBGR reports the collected data to E-Control.
- E-Control publishes a detailed report including interpretation every year.

By this the Austrian monitoring delivers very reliable data. It also is efficient as the data are collected directly where they originate.

For the **German** '100.000 roofs programme' the credit grantor KfW performed the quantitative monitoring of the soft loan programme on its own. An advisory group was installed, in which practical problems in implementation and lessons learned were discussed. The statistical data and conclusions were provided in a detailed assessment report.

2.5 Recent developments

Three European countries recently enhanced their support instruments for PV: Greece, France and Italy. It is expected that the new legal frameworks will support a faster introduction of PV in these countries. From all three countries increased activities in the PV sector are reported. All three countries have in common that the feed-in-tariffs have been raised considerably. Further on administrative procedures have been simplified, but observers still see potential for further improvement in this regard. These developments confirm the findings of the European Best Practice Report and should be observed closely as each country provides a different approach.

3 CONCLUSIONS

The European Best Practice Report and the consultations within the PV Policy Group have shown:

- In most European countries the barriers are still too high for the development of activities in the PV sector. This is mainly due to not existing or ineffective PV strategies and/or policy measures.
- There is good practice and experience in all PV related policy fields.
- The starting position regarding PV is very diverse from country to country.

Based upon these overall findings and the detailed knowledge of the situation in several European countries the PV Policy Group is developing recommendations and concrete action proposals on national as well as on the European level by the end of 2006 (see section 4: OUTLOOK). The partners of the PV Policy Group commit themselves to the implementation of the recommendations and action plans.

4 OUTLOOK

The National Position Papers and Action Plans of Germany, France, The Netherlands, Austria, Slovenia, Portugal, Greece and Spain will be published during autumn 2006.

The Joint European Position Paper and Action Plan will be published and disseminated from January 2007.

These documents will be made available for free on the project website <u>www.pvpolicy.org</u>. The **European Best Practice Report** can already be downloaded.

5 REFERENCES

 PV Policy Group, European Best Practice Report – Assessment of 12 national policy frameworks for photovoltaics, May 2006, URL: http://www.pvpolicy.org