

EPIA / EUREC Agency joint response to 'A Vision for PV Technology for 2030 and Beyond'

We congratulate the authors of 'A Vision for PV Technology for 2030 and Beyond' on their work. We support the targets they outline and share their belief that photovoltaics have a major part to play in the supply of electricity in Europe in the medium term and long term.

With its 50 members, EPIA is the world's largest industry association devoted to the photovoltaic market. It has taken a lead role in commenting on the market issues and the structure of the Platform. As befits an organisation comprising leading European renewable energy research centres including PV, EUREC Agency has concentrated mainly on the Strategic Research Agenda presented in the Vision, collecting the opinions of experts in both the device and system areas.

I] A strong market...

The report recognizes that *a coherent, long-term, market-oriented strategy* is necessary for PV. This will be achieved through the twin pillars of a strong industrial policy for the sector and an ambitious research policy.

The economies of scale that mass production can deliver will improve manufacturing efficiency and reduce costs. Efficiency must be improved all along the value chain and include balance-of-system components, an area that is quite often neglected (see bullets in next section).

It is EPIA's view that the only way to successfully implement a common policy for the deployment of PV in Europe is to develop an EU Directive on feed-in tariff policy. Varying parameters for each country could be foreseen. This Directive will have to be adapted by all EU-25 member states within a reasonable time.

EPIA considers that PV is already competitive in specific applications and should not be compared only with the minimum prices of conventional electricity. As an example, in the islands the electricity production varies between €0.10 per kWh up to even €1 per kWh in the case of centralized power production and LV/MV grid.

II] ...accompanied by an ambitious research agenda

Whilst it is clear that the detailed goals for PV will be modified over time in response to the changing characteristics of our energy supply, EUREC Agency and EPIA support the 2030 vision of PV technology laid out in section 2.2 of the report ('Technology') as both reasonable and consistent with the overall contribution targets presented in section 2.5 ('The role of PV in the 2030 energy picture'). We are particularly pleased to see the reference made in Section 3 to the core role of research and development in achieving the goals and the need for continuous long-term support in European research programmes.

Section 3.5 ('The Strategic Plan') summarizes well the scope of the research required over the next 20-30 years within the usual uncertainty that projection into the future implies. It provides a good basis for subsequent discussions by the European Technology Platform on photovoltaics on the priorities, detailed programme and budget requirements. Nonetheless, we have a few suggestions for strengthening this part of the document:

- We support the approach of setting overall cost goals for particular dates as the judgment criterion, rather than setting specific goals for efficiency or other technical parameters. This allows internal targets to be set for the technical parameters for individual technologies, according to their specific features. It is the approach that EUREC Agency and EPIA have adopted in their discussions.
- However, relating to the above, we feel that combining the 2010 and 2020 goals only with technologies based on current devices and the 2030 goal only with emerging technologies prejudices the issue of which routes will be able to achieve those goals (both in terms of current technologies being advanced to meet the substantial cost reductions of the long term goal and of emerging technologies achieving sufficiently rapid development to meet the medium term goal). We therefore suggest that the goals are presented at the beginning as overarching targets, before the different 'current' or 'emerging' strands of research.
- Whilst the PV module cost is the dominant factor at present, the challenging cost goals presented in the Report will also require significant cost reductions in balance-of-systems aspects, (hardware and implementation). We do not feel the SRA as it stands gives sufficient weight to the BOS aspects and have some detailed suggestions for strengthening this area (see next point).
- We expect the Vision's SRA to provide the basis from which the Technology Platform develops a co-coordinated, long-term research programme. EUREC Agency and EPIA have therefore provided detailed replies regarding suggested modifications to the SRA in separate documents for the consideration of PV-TRAC. These suggestions concern the expression of some of the items in the SRA, but are supportive of the general approach and scope of the existing document.

III] Proposed PV Technology Platform

a) the platform as a vehicle for technology transfer

We welcome the emphasis that the 2030 Vision places on technology transfer. EUREC Agency and EPIA are already strengthening the interaction between research and industry through an ongoing dialogue. Together we are preparing a joint statement on the priorities for research and development in photovoltaics and this joint response is provided in the context of that collaboration. Specifically, better technology transfer could include, for instance, finding opportunities to commercialize basic research results faster, finding agreement more quickly in areas relating to standardization and certification and up scaling more rapidly from the laboratory to prototype scale. The Platform will speed up this process.

b) the structure of the platform (see scheme)

Steering Committee

In addition to what is proposed in the report, we would like to see representatives from the following Directorates-General participating in the Steering Committee:

- Development
- External Relations
- Environment
- Trade
- Competition

We would also like to see the Economic and Social Committee and the Committee of the Regions represented as well as the other main European associations representing the PV community besides EPIA and EUREC Agency.

Secretariat

The PV Technology Platform will require its own secretariat, the tasks of which might be to coordinate the different actions undertaken within the PV platform, to motivate stakeholders outside the Platform to participate and contribute to its work, and to serve as a bridge between participants within the Platform by facilitating interaction between the sub-committees.

Sub-committees of the Platform

We propose eight different working groups rather than PV-TRAC's five, in order to cover the whole range of activities of the Technology Platform. They should have the following responsibilities:

- Policy issues considering national and European level
- Marketing including promotion, education and training and public awareness
- Research and development issues and policy (FP 7, EUREKA, COST), targets and Roadmaps and novel devices.
- New applications as building integrated PV, hybrid systems, PV and hydrogen.
- Developments in non EU markets giving priority to developed countries and to the markets already established as well as opt for a sustainable development in developing countries.
- Innovation and quality assurance issues dealing with standardization, certification, guarantees and technological know how transfer.
- Society Issues should be treated separately considering their importance for civil society. Issues as employment, environment, economics including external costs, are of major importance.
- International networking between associations, international agencies, research institutes and manufacturers.

Each of these groups should be led by an expert from industry or research, whose responsibility it will be to manage and co-ordinate the work efficiently.

To conclude, let us make it clear that EPIA and EUREC Agency welcome the intention to establish a European Technology Platform in Photovoltaics, which we see as a major step forward in ensuring a coherent and sustained programme of development in photovoltaics. Such a programme is necessary to achieve the consistently high growth rates required to meet the PV electricity contribution targets laid out in the Vision. The involvement of all stakeholders from within and outside the PV community will help the Technology Platform develop a coherent set of policies required for a competitive industry.

PV TECHNOLOGY PLATFORM ORGANISATIONAL STRUCTURE

