



European Technology and Innovation Platform
Photovoltaics
(ETIP PV)

Terms of Reference (ToR)

May 2024



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1. Vision

The European Technology and Innovation Platform for Photovoltaics (ETIP PV) envisions a world with 100% renewable electricity supply where electricity is accessible to all and where electricity makes major inroads into satisfying final energy demand for living including communications, transport, efficient heating and even fuels. In line with the REPowerEU plan of the European Commission, the ETIP PV supports the EU solar strategy that aims to deploy over 320 GW of solar photovoltaic by 2025 (more than doubling compared to 2020) and almost 600 GW by 2030. Thanks to the ubiquitous availability of sunlight, the technology's modularity and continuous cost reductions, solar photovoltaics (PV) can be the largest source of electricity worldwide by 2040. Massive deployment of solar should also reinforce the EU's industrial leadership. The ETIP PV seeks to promote the manufacturing of PV components and technologies in Europe and the export of advanced, high-quality PV technology at a significant scale, and accelerate the deployment of PV technologies that provide innovative energy services and benefits from integration, to the grid and in terms of circularity.

Through research advancements and the deployment of PV technologies, ETIP PV aims to contribute to energy security in Europe and ensure that Europe has access to a reliable and sustainable source of energy, which will be essential for meeting the needs of Europe in the future.

The advancements of PV research and the deployment of solar will allow the EU to achieve its climate goals as defined by the European Green Deal, which strives for a carbon neutral Europe by 2050. ETIP PV recognizes the importance of the EU Green Deal's climate goals and the crucial role that solar energy will play in achieving them. The deployment of solar energy is seen as one of the key solutions for reducing greenhouse gas emissions and mitigating the effects of climate change.

2. Mission

The ETIP PV's mission is in line with the Energy Union and the SET Plan priorities with focus on "Renewable technologies at the heart of the new energy system" and Europe to become "number 1 in renewables". ETIP PV gathers all the relevant stakeholders of the PV sector, with arrangements for cooperative discussions with member states (MS), associated countries (AC), and the Commission services. Its main role is to provide consensus-based strategic advice on all issues relevant to progressing research and innovation (R&I) efforts.

The ETIP PV is a continuation of the European PV Technology Platform (EU PVTP) and the Solar European Industry Initiative (SEII) in a single platform under the new SET Plan governance. It is the recognised interlocutor for the European Commission, Member States and Associated Countries about the PV sector-specific R&I needs.

ETIP PV is looking to actively contribute to the European Solar PV Industry Alliance (ESIA) set up in 2022, which aims to accelerate investments in production and deployment of PV in Europe, notably via the acceleration of research and innovation in the PV sector. ETIP PV foresees arrangements for involving representatives of the interested Member States and Associated Countries and working relationships with the relevant national/regional platforms to ensure synergies between EU and national and regional activities.

2.1 Context

ETIP PV is anchored in the SET Plan and Energy Union and its Terms of Reference concord with the EC's strategy for PV as expressed in these EU initiatives. ETIP PV has supported and will continue to support SET Plan activities focused on raising the profile of PV or on helping policymakers to craft legislation or tailor research programmes to optimally support it.

2.2 Scope of work

ETIP PV provides advice on photovoltaic solar energy policy. It is an independent body recognised by the European Commission and the SET Plan Steering Group as representative of the photovoltaic sector. Its recommendations may cover the areas of

- Research and innovation
- Market development including competitiveness
- Education
- Industrial policy
- Environmental, Social and Governance (ESG) and circular economy

The focus of ETIP PV's activities is on the opportunities and challenges facing the European photovoltaic sector. Our recommendations are made with a view to improving the competitiveness of the European PV industry, both the upstream segments (incl. feedstock supply, equipment manufacturing, cell and module production) and the downstream ones (incl. technical solutions for grid integration, market solutions for grid integration, installation, inverters).

Where appropriate we bring experts from neighbouring sectors into our discussions.

2.3 Outputs

ETIP PV produces reports on the topics above, holds workshops and conferences and aims to update the Strategic Research and Innovation Agenda (SRIA PV) thanks to the different working groups.

All finalised documents are made public. All workshops and conferences that ETIP PV organises are open to the public, although there may be a charge to attend them.

2.4 Audience

The target audience is the European Commission and the administrations of Member States and Associated Countries¹.

ETIP PV keeps other ETIPs or equivalent organisations informed of its work.

ETIP PV intends its documents, which also contain recommendations directed at the private sector, to be read and debated by industry players, professionals and end users, too.

¹ Countries associated to the current Research Framework Programme, Horizon Europe

2.5 Financial support

The good functioning of the ETIP PV is predicated on financial support for its operations. This support must come without any conditions that might pose a threat to its independence. The European Commission has thus far provided the support in an entirely satisfactory way, and has indicated its continued willingness to do so.

3. Membership of ETIP PV

3.1 Member profile

ETIP PV members will share ETIP PV's Vision as defined in these Terms of Reference and possess a skill or experience that enables ETIP PV to pursue its Mission, also as defined herein. The only time that an ETIP PV member does not have to support the Vision is when the Terms of Reference are open for amendment (see section 4, About these Terms of Reference / Revision).

To be a member of ETIP PV means to be a member of one of ETIP PV's Working Groups or its Steering Committee, which each have a different application process. These are detailed below.

ETIP PV members participate in a personal capacity. Nevertheless, they should demonstrate or at least confirm that they have the support of their employer for the time that they will dedicate to ETIP PV tasks.

3.2 Expert Pool

The "Expert Pool" is a group of experts who agree to be approached to participate in ETIP PV work through a Working Group (see below).

Little commitment is asked of Expert Pool members until such time as they agree to join a Working Group (detailed below). Once they have joined one of these groups they are expected to contribute fully to the group's activities.

Applications

- Applications to join the Expert Pool take the form of a CV (an abbreviated version is acceptable) assessed by the Executive Committee. The CV is circulated to the Steering Committee for information;
- Applications are accepted at any time;
- There is no upper limit on the size of the Expert Pool;
- Every six years from December 2013 the Expert Pool is fully renewed, meaning all members at the time of renewal must re-apply to join the new Expert Pool.

Working Groups

Working Groups (WG) are proposed for specific tasks by the Steering Committee. Such tasks may be, for example, to prepare a short document to assist the European Commission or to explore a relevant topic in depth. The nature of the work is often to draft passages of text and consult fellow experts from research or industry.

The mandate and duration of Working Groups and any new ones shall be decided by the Steering Committee, as well as their leadership, structure and reporting mechanisms. WGs shall be reviewed every two years with a view to extending or ending their mandate.

The leader(s) of the Working Groups are elected by the Steering Committee from among the Steering Committee members themselves. The Steering Committee members can join one or several of the Working Groups.

Working Groups and their leaders are listed in Annex II.

If required, Working Groups may set up sub-Working Groups. The decision to establish a sub-WG will be made by the leader(s) of the WG. People belonging to the Expert Pool will be invited to join Working Groups when such a group is created and every time a new sub-group or task is created. The Working Group leader will have the right to form his/her working group from the talent in the Expert Pool. They will announce the opportunity to join their Working Group and may refer to the CV sent by applicants when they joined the Expert Pool to see if their profile is suitable, or they may request an updated version of it, and/or request an email from the candidate member in which (s)he sets out their motivation for joining. Once inside, Working Group members are expected to contribute actively to the group until its work is complete. If they do not, they risk not being listed as a contributor in the group's output.

Appeals against decisions by the leader not to include a particular applicant or to exclude a member considered not to have made a meaningful contribution will be heard by the Executive Committee. If the Executive Committee's decision is not accepted, the Steering Committee will have the final say.

From time to time, a task may be asked of ETIP PV that falls outside the work plan of any of the Working Groups. A recent example is the preparation of an 'Input Paper' as an exercise for the SET Plan. Expert Pool members will be invited to contribute to these tasks. They will also be kept informed of the work of Working Groups via a newsletter, with an open invitation to join them mid-way through their tasks if they are particularly motivated to do so.

3.3 Steering Committee

The Steering Committee is ETIP PV's permanent decision-making body, but it gives a mandate to the Executive Committee to take decisions on its behalf if the decisions are of minor importance or need to be made in a hurry.

Tasks

- Sets up Working Groups and gives them tasks
- Monitors the work of the Working Groups
- Decides how ETIP PV's work is to be publicised
- Is the interface of ETIP PV to the European Commission, Member States and other ETIPs or similar bodies
- Determines how the ETIP PV positions itself in policy debates or inputs

Commitment

Steering Committee members commit to attending Steering Committee meetings, which take place three or four times a year in different towns in Europe or online if required and to preparing for these meetings (See subheading 'Executive Committee' => 'Responsibilities of the Executive Committee' for more details).

Steering Committee members who fail, in a two-year period, to attend more than half of all meetings and who do not input substantially in written form to the Committee will be considered inactive and may be invited to step down.

Steering Committee members who manifestly no longer support the ETIP PV Vision will be asked to step down.

Steering Committee meetings

- It is not generally allowed for a Steering Committee member who cannot attend a meeting to send a stand-in. Exceptions may be granted at the ETIP PV's Chairperson's discretion.
- Five fixed seats from each of the following organisations: (1) EERA (the European Energy Research Alliance) PV, (2) EUREC (The Association of European Renewable Energy Research Centers), (3) ESMC (The European Solar Manufacturing Council), (4) SPE (SolarPower Europe) and (5) PVthin (Thin-Film PV Technology association).
- Preferably no two members of the Steering Committee may be employed by the same employer.
- The size of the Steering Committee is not fixed, but the aim is to keep it close to 30.
- Steering Committee members may join Working Groups.
- The Steering Committee, like the Executive Committee of ETIP PV may validly deliberate provided half of its members are present.
- In cases where the Steering Committee must decide by voting, one seat on the Committee = one vote and a motion is passed by a simple majority of votes cast. Stand-ins are allowed to vote. In case of a tie, the vote of the Chairperson or his/her delegate is deciding.

Applications and renewal

Every two years approximately one third of the seats on the Steering Committee are renewed, meaning that one third of members resign their seats, making them available for newcomers (or an outgoing Steering Committee member may re-apply for his post). The process to determine the number of members who must resign and who those members are is as follows:

1) the current Steering Committee members are asked if any of them wish to step down

Check if this number is greater than one third of the size of the Steering Committee. If not,

2) Demand the resignation of inactive members

Check if the sum of seats freed up by step 1 and 2 is greater than one third of the size of the Steering Committee. If not, let the difference be N.

3) Pick randomly 5+N further members of the Steering Committee among those who have been deselected the smallest number of times. They are deselected, meaning if they wish to remain in the Steering Committee, they must reapply for the position.

Applications

Anyone may stand for the Steering Committee, including representatives from civil society, NGOs, the legal profession or the financial community, but they must support ETIP PV's Vision.

Call for Expression of Interest for SC Membership is widely distributed at least two months ahead of elections and opened at least for 30 days. Candidates for a Steering Committee seat send their CV and an outline of how they would contribute to the mission of the Platform. They describe their personal vision for the platform in a few lines.

The application dossiers are reviewed at a meeting of the Steering Committee. Each candidate is marked out of five (0-5) on anonymous ballot papers by the Steering Committee holding office. The re-applications of existing members are discussed without that member being present, although (s)he may vote for her/himself on their ballot paper. The main determinant of the order in which they are let into the Steering Committee is their average score, however an additional methodology may be devised that will ensure that there is balanced representation of industry/research, public/private, country of work, gender or other relevant criteria. In any case, the precise methodology will be spelled out ahead of the vote.

Candidates who achieve an average score across all ballots cast of less than three out of five are rejected outright. Among candidates who passed this threshold preference is given to candidates from PV businesses as long as they do not represent the majority in the Steering Committee.

3.4 Executive Committee

Responsibilities of the Executive Committee:

- Internal coordination and overall day-to-day management;
- Prepares ETIP PV meetings and decisions;
- Chairperson (or delegated Vice-Chairperson) chairs Steering Committee meetings;
- Approves new Expert Pool members
- Proposes and monitors implementation activities;
- Promotes the Platform to the European Commission and other Public Authorities;
- Meets regularly in the form of teleconferences;
- Takes decisions preferably by consensus (if not possible by majority voting);
- Establishes and manages international co-operations with comparable initiatives;
- Reports to the Steering Committee all its decisions and initiatives at least at the same frequency as Steering Committee meetings.
- Organises the annual ETIP PV conference

Composition

The Executive Committee comprises the ETIP PV Chairperson, two Vice-Chairpersons, the leaders of the Working Groups and the vice/deputy/co-leaders of working groups.

Additionally, upon invitation by the Chairperson, other experts of the ETIP PV may attend the Executive Committee meetings, without voting rights on decisions that may be taken there.

The Chairperson and Vice-Chairpersons are members of the Steering Committee. These three are elected by the Steering Committee. Rounds of voting to eliminate candidates will be held, if there are more candidates than positions to fill.

The election of the Chairperson and Vice-Chairpersons takes place at the same meeting. First the election of Chairperson is held. Once a candidate for Chairperson has a majority of the votes cast, (s)he is elected to the position.

Next the election for Vice-Chairpersons takes place. Unsuccessful candidates for Chairperson may stand for two Vice-Chairperson positions. Once the combined votes for two candidates for Vice Chairperson is greater than 50% of all votes cast, the candidates with the first and second highest share of the vote are elected to the two Vice-Chairperson positions.

An election for Chairperson and Vice-Chairperson is held every two years from Dec 2014.

The current Chairpersons are listed in Annex I.

3.5 Observers

ETIP PV will cultivate contact to the administrations of Member States and Associated Countries. The purpose of maintaining this contact is to understand the position of Member States and Associated Countries, and promote the recommendations of ETIP PV to them.

SET Plan Steering Group representatives or other ETIP representatives are welcome to Steering Committee meetings as observers. For effective communication two specific liaison officers should be delegated by the EC to follow the ETIP's work for at least a two-year period - a representative from DG RTD / DG Energy and a representative from DG JRC to attend Steering Committee meetings as observers.

3.6 Secretariat

The Secretariat of ETIP PV provides organisational support to the Steering Committee and the other bodies of the Platform. Employees of relevant associations or companies work in the secretariat.

Main responsibilities of the Secretariat

Organisational, secretarial and operational support to the Platform, including the Executive Committee, the Steering Committee and the WGs

Preparation and organization of the Platform meetings as well as the Annual ETIP PV Conference and the ETIP PV workshop(s), round-table(s) or other event(s) in support of the SET Plan activities

Coordination of the flow of information within the platform and between the platform and its target audience, and provide expert support and advises to the platform on European policies and institutions

Perform editing and graphic-design work on the ETIP PV's written output.

Publish, publicise and present the main outputs of the WGs and the Platform to relevant audiences and in the relevant policy making processes

Participation in meetings

The Secretariat members participate in the meetings of the Executive and Steering Committee without voting rights.

4. Revision of Terms of Reference

A minimum of two out of the Chairperson and the two Vice-Chairpersons, or a minimum of 20% of the members of the Steering Committee may open the Terms of Reference for amendment. This may happen at any time.

Any amendment will be discussed with the Steering Committee and a new version reflecting those discussions will be put to the Steering Committee for vote.



Annex I ETIP PV Chairpersons (as of May 2024)

Chairperson of the ETIP PV:

- **Rutger SCHLATMANN**, Helmholtz Zentrum Berlin, Germany

Vice-Chairpersons of the ETIP PV:

- **David MOSER**, Eurac Research, Italy
- **Jutta TRUBE**, VDMA Photovoltaic Equipment, Germany

Annex II Working groups of the ETIP PV (as of May 2024)

Working Group 1: PV LCOE and competitiveness

Working Group Leader: **Eero VARTIAINEN**, Fortum Growth Oy, Finland

Working Group 2: PV Industry

Working Group Leader: **Peter Fath**, RCT Solutions, Germany

Working Group 3: Integrated PV

Working Group Leader: **Bonna Newman**, Lightyear, The Netherlands

Working Group 4: Digital PV Systems and Grid

Working Group Leader: **Venizelos Efthymiou**, University of Cyprus, Cyprus

Working Group 5: Reliability and Circularity

Working Group Leader: **David Moser**, Eurac Research, Italy

Working Group 6: Social PV

Working Group Leader: **Ivan Gordon**, Imec, Belgium