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Deliverable 4.5 – Best practice report

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Disclaimer of warranties



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About PV IMPACT

PV IMPACT will try out a variety of approaches to stimulate PV research, development and innovation initiatives in Europe. The first part of the project will focus on inviting companies to matchmaking events so they can find partners with whom to work on future projects under EU and/or national funding schemes. The project will also target two specific industrial companies: ENEL Green Power and Photowatt. Another important part of the project will be to monitor progress in PV. Data will be collected on public spending in the EU, on private spending, on the kinds of projects being funded and on the overall performance of PV technology. Forecasts for future spending will be made according to various scenarios. The project will track whether improvements in the performance of technology are keeping pace with expectations and will make recommendations to European funding authorities.

PV IMPACT Partners



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RE	Restricted to a group specified by the Consortium (including the Commission Services)	
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1. Introduction

This deliverable is about Task 4.5: “keep watch for [mechanisms for SET Plan countries to cooperate] and relay them to the SMARTSPEND consortium, and to bring ideas from SMARTSPEND to the PV area via PV IMPACT.”

[SMARTSPEND](#) is a Horizon 2020 project funded from the related call to that which funded PV Impact, [LC-SC3-CC-4-2018 - Support to sectorial fora](#). It started a few months before PV Impact, on 1 Dec 2018, and that was finalising its Grant Agreement at the time that the consortium behind PV Impact submitted its proposal. Its aims were known to the PV Impact consortium and the possibility for synergies between the projects was identified.

SMARTSPEND stood for “More and better designed national public support for energy technology Research and Innovation”. Organised under a “Synergies” Pillar and a “Financial Strategies” Pillar, its achievements were to highlight to Implementation Working Groups the synergies between their Implementation Plans and to track their exploitation, and to bring sectors together to discuss their common needs for financing. It organised five ‘Roadshows’, explained in 2.1 below.

2. PV Impact to SMARTSPEND

2.1 Exploiting D4.2 “Journal articles on R&D spending”

In Dec 2019, EURAC held the 3rd international conference *Smart and Sustainable Planning for Cities and Regions*, in Bolzano/Bozen, Italy. Among the papers presented was “[Public research and development funding for photovoltaics in Europe – past, present and future](#)”, later published in the journal *Green Energy and Technology*. In 2020, EURAC published “[A Comprehensive Analysis of Public and Private Funding for Photovoltaics Research and Development in the European Union, Norway, and Turkey](#)”, which appeared in *Energies*.

Both papers contained findings that could be used for ‘Roadshow meetings’ of the SMARTSPEND project that happened in 2021 in Spain and Poland. These were meetings organised by the SMARTSPEND consortium where the delegates took pre-agreed political messages to a high-level ministry official in a particular country. The messages concerned measures to support the SET Plan in those countries through national measures to directly or indirectly stimulate R&D spending by the public or private sector. The were delegations made up of 3-5 people working in a clean energy sector in industry and sometimes in academia from the SMARTSPEND partners’ networks, which extended into ETIPs or similar bodies. A representative for the PV sector found within [ETIP-PV](#) was present..



2.2 Relevant messages from PV Impact's conference or journal papers or other reports

2.2.1 Strategic Energy Technology Plan (SET Plan)

The authors recall that the SET Plan structure, namely its Steering Group, endorsed the "Implementation Plan for PV" in November 2017 – the same Implementation Plan that this project has supported. They refer to the importance of fulfilling the requirements of this and another strategy, Energy Union, by "improving the effectiveness of its research programs, especially by combining EU and Member State efforts [while] remaining technology-neutral." [Referencing the Fourth Report on the State of the Energy Union](#), they say "The role of the EU's research and innovation program Horizon 2020," is to "'de-risk' technology". They expect to see "increased collaboration between the European Commission and the EU Member States and across them, e.g., by systematically addressing public and private financing to research and innovation in the framework of national energy and climate plans (NECPs)."

These messages were conveyed by the SMARTSPEND delegations to their interlocutors in government. Budgets for R&D were a major topic in the Roadshow meetings and were discussed in one of PV Impact's papers (see [2.2.3](#)). [It refers](#) to "Some studies suggesting that ... [an] increase of R&D investment expected for renewable energy or clean technologies more generally, of two to five times is needed."

Other forms of support and their role were mentioned. PV Impact's work provided the SMARTSPEND delegations with interesting perspectives on the role of different forms of support. They suggested public grants for R&D can crowd out private spending, in spite of conditions attached to the funding that may reduce its attractiveness. To boost private sector spending, forms of funding that don't require onerous conditions or negotiation are better: tax rebates or direct subsidies for company R&D expenditure and feed-in tariffs. Care was taken in SMARTSPEND meetings to talk of these measures. In 2021 and in letters following up the Roadshow meetings in 2022, the idea of feed-in tariffs was re-iterated. In SMARTSPEND's vision, innovative clean energy technologies should be the object of a specific target in the Renewable Energy Directive. This target would be met by Member States putting in place supportive measures, which could include feed-in tariffs set at an appropriate level. It is envisaged that Member States will use the National Energy and Climate Plan revision process in 2023-24 to define in their countries which technologies they consider innovative and how to support them. The SET Plan could become the forum where these discussions regularly happen (at 3-year intervals, say) in the years that follow. This idea has also been suggested to the European Commission as part of its SET Plan revision in 2022

2.2.2 Mission Innovation and integrated PV



PV Impact's July 2020 report, [A Strategic Plan for Research and Innovation to Relaunch the Italian Photovoltaic Sector](#), pointed out the relevance of the SET Plan's fellow initiative at global level, Mission Innovation. It noted,

For Member States like Italy, who subscribed to Mission Innovation and to the commitment to double public spending on clean energy innovation, the scale of the actions is also expected to be coherent with this commitment. **Italy still does not have a specific scheme to fund R&I in the field of Photovoltaics within a clear strategic programme linked to technological, economic and environmental objectives and targets.**

The wish for Italy to correct the situation in bold was taken to the Undersecretary for State for Energy already in 2019 in [SMARTSPEND's Italy Roadshow](#).

That document contained a message applicable to the countries SMARTSPEND Roadshows 'visited' (in the COVID era, the meetings became virtual) in 2021: it called for the "Relaunch [of an] innovation-based PV industry in Italy and in Europe for utility-scale applications, both in the upper part of the value chain (the first priority being solar cell manufacturing) down to the very bottom of the value chain (operation, management and upgrade of existing PV plants)." This was underlined to the Polish and Spanish governments by the delegates representing PV in those meetings ([press release PL](#), [press release ES](#)).

The second key objective of the 'Strategic Plan' was to "Develop new and multisectoral value-chains for the development and manufacturing of innovative products with an integrated PV function (building components, vehicles, greenhouses, etc)". This message was specifically taken to Spain by Onyx Solar in that same 2021 meeting, where the representative asserted that that integrated PV is highly competitive worldwide and that demand for it should be stimulated.

Finally, the fourth key objective was "Maximise the coordination and the synergy across the network of Italian R&I organisations operating in the PV sector, in order to foster collaborative actions all along the TRL scale, make technology transfer more effective and strengthen the R&D effort towards high priority and high impact targets." This, we are glad to say, is the intention of the Polish government, which announced in its meeting with SMARTSPEND in 2021 that it would try harder to link industry and academia including possibly by creating a commercial chamber for energy under the auspices of the ministry, to bring all players together.

2.2.3 Funding for PV

PV Impact has noted that funding for [PV has declined](#) in Europe and in 2017 stood at 170 M EUR from public sources in the EU, Norway and Turkey. Spain was asked to spend more in the SMARTSPEND Roadshow meeting in 2021 and to make access to funding from the national agency CDTI easier. In so doing it is hoped EU spending can reach one of the two [Advanced scenarios](#) developed by PV Impact, which assumed in one case reaching the target to spend 3% of GDP on



research, and in the other that spending on energy R&D would double between 2015 and 2020 in line with Mission Innovation's tentative pledge.

3. SMARTSPEND to PV IMPACT

3.1 Presentations by SMARTSPEND to PV Impact

SMARTSPEND Deliverable 2.2, an [update to the Mapping report on funding instruments for energy innovation](#) produced in summer 2021, was presented by Juan Sanciñena on 10 June during the PV Impact organised matchmaking event focused on operation & diagnosis of PV plants. This gave the participating experts a direct opportunity to learn from the co-author of the report about funding opportunities for PV.

Agenda of the event and a list of participants are included in [Annex 1](#).

3.2 Link via partners and IWG - PV

EUREC and WIP were partners in the consortia of both SMARTSPEND and PV Impact. In SMARTSPEND, WIP had the responsibility to liaise with IWG-PV on the exploitation of synergies between IWGs' Implementation Plans as reported in SMARTSPEND Deliverable 1.1 ['Overlapping interests: A description of the common Ground between Implementation Plans'](#).

Via IWG-PV and via WIP, the PV Impact consortium was made aware of the synergies that exist between its work and aims in PV Impact and the areas of interest to other IWGs and the success or not in the exploitation of these synergies by IWGs. This helped PV Impact fine-tune its work and focus on areas where it could add the most value.



4. Annex 1



PV IMPACT Matchmaking Event Agenda – June 10th 2021

<i>Welcome and introduction to PV IMPACT</i>	14:00 -14:15
Presentations by: SMARTSPEND and 3E	14:15 – 14:45
Introduction to matchmaking principles	14:45 – 14:50
Matchmaking session (part 1)	14:50– 15:50
<i>Break</i>	<i>15:50 – 16:05</i>
Matchmaking session (part 2)	16:05 – 17:05
Wrap-up	17:05 – 17:15



Figure 1 - agenda of the PV Impact Matchmaking event on 10 June 2021 showing SMARTSPEND presentation slot

Full name	Company	Job title
Pierre-Jean Alet	CSEM	Section head, digital energy solutions
Joris Lemmens	imec	Researcher
Reina Truyma	SMA	Service Sales Manager Western Europe
Gaute Otnes	IFE	Scientist / reseracher
ESREF DENIZ	ENTEGRO ENERJI SISTEMLERI	CEO
Jonathan Leloux	LuciSun	Managing Director
Stephan Abermann	AIT - Austrian Institute of Technology	Head of Competence Unit "Energy Conversion and Hydrogen"



Pablo Sebastian Enriquez Paez	BayWa r.e.	Junior Researcher Performance Engineer
Jose Garcia	Isotrol	Innovation & Technology Director
Dirk Stellbogen	ZSW	Head of Test Lab
Mathilde Marchand Lasserre	Transvalor	Sales manager

Figure 2 - list of participating experts



5. Contacts

Project coordinator

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