Funding for clean energy technologies: inputs from SMARTSPEND Deliverables

Luca Pira – Zabala Innovation Consulting

ONLINE WORKSHOP – 30 September 2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°826044 **Disclaimer**: The sole responsibility for any error or omissions lies with the editor. The content does not necessarily reflect the opinion of the European Commission. The European Commission is also not responsible for any use that may be made of the information contained herein



More and better designed public support for energy technology research & innovation

www.smartspend.eu #SMARTSPEND_EU

- J Smartspend

Meet the Partners





Table of Contents

- The project/Definition of adequate financial strategies
- Report Mapping on funding instruments for energy innovation
 - Public funding
 - Private funding
 - Open reflections
- Report Analysis of the industry's funding needs for the realisation of the SET Plan Implementation Plans
 - Potential Measures & Improvements
 - Main Findings





The objectives



Foster efficiency in allocation of public and private funding





Better inform stakeholders and engage with policy makers.



- J SMARTSPEND

Definition of adequate financial strategies



Review European funding instruments for clean energy innovation to be promoted and matched against industry's needs.



Mapping of Europe's funding schemes in the energy sector



Analysis of industry's funding needs for the realisation for the SET Plan Implementation Plans



Recommendations for alternative funding models



Recommendations on supporting innovation in energy technology



- J Smartspend

Report - Mapping on funding instruments for energy innovation





Provide a mapping on public and private funding instruments dedicated to energy projects.



Methodology



Desk Research

- EU Transnational funding
- National funding
- Regional funding



Horizon 2020 + H2020 precommercial procurements (PCPs) + Eureka + European Investment Bank (EIB) + European Fund for Strategic Investment (EFSI) + CEF + LIFE + Interreg + EEA Norway grants + JPIS + Interreg + JPIs + ERA NETs + Inno Energy Investment round (KIC) + Innovation fund.





- EU Transnational funding
- National funding
- Regional funding

Sweden + Germany + France + Portugal + Spain + Italy + Denmark







- EU Transnational funding
- National funding
- Regional funding

Flanders Region – Belgium + Groningen region – The Netherlands + Ile de France region -France + Northern Ireland region – Uk + Provincia autonoma di Trento region - Italy + Schleswig-Holstein region - Germany + Mediterranean region - France + Basque country – Spain





Public funding instruments



- J SMARTSPEND

Alignment of EU Programmes with the SET Plan Key Actions

Energy Union				
Research, Innovation and Competitiveness Priorities		SET Plan 10 Key Actions	EU translational public funding instruments	
No 1 in Renewables		 1.Develop performant renewable technologies integrated in the energy system 2.Reduce the cost of key renewable technologies 	InnovFin Energy Demonstration Projects (EDP) InnoEnergy CSP ERANET	NTERREG, EIB,
Consumers in the Energy System		3.Create new technologies and services for consumers 4.Increase the resilience and security of the energy system	GEOTHERMICA InnoEnergy Fuel Cells and Hydrogen Joint Undertaking (FCH) JPI Urban Europe	.0, H2020 PCPs, I vation Fund
Efficient Energy Systems	ઽૼૢૺ૾૾ૢૼઽ	5.Develop energy efficient materials and technologies for buildings 6.Improve energy efficiency for industry	Energy-Efficient Buildings (EEB) JPI Urban Europe M-ERA.NET): HORIZON 202 ay Grants, Inno
Sustainable Transport		7.Become competitive in the global battery sector (e-mobility) 8.Strengthen market take-up of renewable fuels	CEF Transport Fuel Cells and Hydrogen Joint Undertaking (FCH) Next-Generation Batteries	INSTRUMENTS IFE, EEA & Norw
Carbon Capture Utilisation and Storage		9.Drive ambition in carbon capture and storage/use deployment	InnovFin Energy Demonstration Projects (EDP) InnoEnergy ACT	AL FUNDING I Esh, cef, li
Nuclear Safety	B	10.Increase safety in the use of nuclear energy	Euratom	TRANSVERS



Characterisation of the funding instruments

1.General call information	3. Financing	5.Evaluation	7. During execution
2.Call requirements	4. Proposal	6.Negotiation	







Type of investor	Angels	Venture Capital	Private Equity
Stage of Funding	Seed, Early	Seed, Early stage, Mid expansion.	Early, Mid to later stage, Mezzanine, Exit





Open reflections



• Financing is a **critical link** in the path between innovation and successful commercialisation.

• Lack of available reasonable finance is the **major barrier** to implementing commercial scale demonstration projects.



• The political and regulatory framework is **another critical link** to develop innovative energy projects.





Open reflections

- The public sector plays a vital role in funding projects at EU, Member State and regional level.
- Compatibility of different financing EU instruments
- Blending approach





Open reflections



Different tools exist for the dissemination and monitoring of the available financing instruments.





ERA LEARN webpage:

- support with general financing information and services on Public-Public-Partnerships (P2Ps)
- specific information on the implementation of joint calls, call evaluations and impact assessments, manuals, tools and workshops



Report - Analysis of the industry's funding needs for the realisation of the SET Plan





Provide an analysis of the funding needs of European industry to implement the respective implementation plan by each of the ETIPs/Partnerships involved in the project.





Share of participants per type of entity





Share of participants per sectors





Report - Analysis of the industry's funding needs for the realisation of the SET Plan

FUNDING MECHANISMS & ENTITIES

H2020 (programme) NER 300 (programme) InnovFin (programme) LIFE (Programme) Connecting Europe Facility – CEF (Programme) ERANETs (Initiative) EUREKA (Initiative) Joint Programming Initiative JPI (Initiative) <u>EFSI</u>

National funding mechanisms Regional funding mechanisms Other Funding Mechanisms EIT-KICs (Entity) InnoEnergy (Entity) EASME (Entity) EIB (Entity)

International Energy Agency (IEA) (Entity)

Barriers





- J Smartspend

Barriers





Barriers



Funding only given after the project 1% results are obtained Reporting is too complicated and time 35% consuming Lack of transparency in the evaluation 21% Geographic imbalance 11% Low success rates do not justify the 61% investment in the application Unpredictability of R&I programmes 18% 0% 10% 20% 30% 40% 50% 60% 70%

61% have believe that low rates success often do not justify the investment in the application

- J SMARTSPEND

Barriers

National Funding Mechanisms



Barriers

National Funding Mechanisms

Funding only given after the project 19% results are obtained Reporting is too complicated and time 23% consuming Lack of transparency in the evaluation 15% Geographic imbalance 11% Low success rates do not justify the 24% investment in the application Unpredictability of R&I programmes 16% 0% 5% 15% 20% 25% 30% 10%

One quarter highlighted that low success rates often do not justify the investment in the application

Barriers

Regional Funding Mechanisms



Barriers

Regional Funding Mechanisms

22% believe that, at times, the grants are not suited for industry-led projects





Barriers

Regional Funding Mechanisms

Funding only given after the project 10% results are obtained Reporting is too complicated and time 21% consuming 14% Lack of transparency in the evaluation Geographic imbalance 9% Low success rates do not justify the 17% investment in the application Unpredictability of R&I programmes 17% 0% 10% 15% 20% 25% 5%

21% believe that the reporting is too complicated and time consuming





The majority of the participants faced stronger barriers at EU level than at national or regional level.





Potential Measures and Improvements



Potential Measures and Improvements – Part 1

Shared infrastructures should be available for funded projects

H2020 reporting model should be used for national and regional mechanisms

Recognition of experience should include experience in other funding...

There should be a stage gate approach

Applications should have 2 stages - a first simple one and a second more elaborate.



70% believe that
Applications should
have 2 stages.
63% believe that
shared infrastructures
should be available for
funded projects.

Potential Measures and Improvements – Part 2

Projects which deviate from their original focus should be...

Projects should be encouraged to continue even if initial...

Projects should be cancelled if they are not performing. Their...

Mid-term reviews should be instated

VAT/Tax exemptions in initial stages of a project



47% that there should be VAT/Tax exemptions in initial stages of a project.

Potential Measures and Improvements – Part 3

100%

There should be more H2020 work programme calls but with.

There should be fewer H2020 work programme calls but with.

There should be investment not just for R&I but also new...

More capital is needed for SMEs to be able to upscale

EU funding needs to support industrial-scale market-uptake.

31% 27% 43% 30% 22% 50% 18% 70% 13% 22% 68% 11% 7% 81% 13% 0% 50% ■ No Opinion ■ Relevant ■ Not Relevant

81% believe that "EU funding needs to support industrialscale market-uptake and manufacturing in cutting edge technologies.

Potential Measures and Improvements – Part 4

The creation of an "Insurance and Guarantee Fund" could lower the uncertainty costs of projects

More funding is needed specifically for demonstrators

National regulations should be more in sync (e.g. licenses, authorisations)

Relevant

■No Opinion



80% believe that More funding is needed specially for demonstrators

- J Smartspend

Main Findings

- Difficulties in accessing funding = Obstacle
 Improved access to finance is needed.
 - More funding for demonstrators





Main Findings



• Need for more funding for certain funding schemes



• A better balance

• Shared infrastructures should be available for funded projects.







Main Findings



• Different Funding indicators

• Extend the topics of certain calls





• Need for a specific type of support

Main Findings



- Quicker Evaluation processes
- Shorter Project duration.
- Less complexity of certain funding schemes.







Luca Pira, R&I Consultant (Zabala)

lpira@zabala.eu

Link to the reports

