Navigating the Roadmap for Clean, Secure and Efficient Energy Innovation

Workshop Proceedings Paper on
Revitalising the SET-Plan: The Role of Innovation in Transforming the Energy System

SET-Nav Stakeholder Dialogue Kick-Off Event

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www.set-nav.eu

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# Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Description</th>
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<tbody>
<tr>
<td>14:00 – 15:30</td>
<td><strong>SESSION I: Introduction to the project</strong></td>
<td>This session will provide an introduction and an overview of the SET-Nav project that started in April 2016 as well as an introduction to the EU Horizon 2020 programme, under which the project is co-funded. The findings of the project are intended to support the further development of the SET-Plan, which aims to accelerate the development and deployment of low-carbon energy technologies. Thus, this session will also present the SET-Plan to provide a background to the motive of the project.</td>
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<tr>
<td>14:00 - 14:05</td>
<td>Welcome by Arno Behrens, Head of Energy, CEPS Energy Climate House</td>
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<tr>
<td>14:05 - 14:20</td>
<td>Introduction to the EU Horizon 2020 programme and the SET-Plan, Henrik Dam, Policy Officer, DG Energy, European Commission</td>
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<tr>
<td>14:20 - 14:40</td>
<td>Overview of the SET-Nav project, Gustav Resch, Senior Researcher, Vienna University of Technology and Daniel Huppmann, Research Scholar, IIASA</td>
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<tr>
<td>14:40 - 14:50</td>
<td>Pathway development from a stakeholder’s perspective, Claus Huber, Axpo</td>
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<td>14:50 – 14:55</td>
<td>A representative of the REEEM project, Louise Coffineau</td>
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<tr>
<td>14:55 - 15:15</td>
<td>Stakeholder involved Q&amp;A and concluding remarks by the chair</td>
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<tr>
<td>15:15 - 15:30</td>
<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>15:30 – 16:45</td>
<td><strong>SESSION II: An innovation systems perspective to inform the SET-Plan</strong></td>
<td>The transformation of Europe’s energy system requires solutions and policies informed by systemic analysis and energy innovation. A systemic perspective on innovation emphasises that innovation stages and processes like R&amp;D and market diffusion are supported by a broader innovation environment comprising knowledge, actors &amp; institutions, resources, and adoption &amp; use. This session will host a panel of experts from policy, academia and industry to discuss the policy brief on energy innovation systems and the SET-Plan, which uses a systemic perspective on energy innovation to provide recommendations for the SET-Plan. There will be the chance for a discussion at the end.</td>
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<tr>
<td>15:30 - 15:35</td>
<td>Introduction by the chair, Mario Ragwitz, Professor, Fraunhofer ISI.</td>
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<td>15:35 - 15:45</td>
<td>Presenting the policy briefing: “Innovation Systems and the SET-Plan”, Charlie Wilson, Lecturer and Researcher, Tyndall Centre for Climate Change Research, University of East Anglia</td>
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<tr>
<td>15:55 - 16:05</td>
<td>Claude Ayache, European Affairs, KIC InnoEnergy S.E.</td>
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<tr>
<td>16:05 - 16:15</td>
<td>Shane Thomlinson, Director, E3G</td>
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<td>16:15 - 16:25</td>
<td>Elena Donnari, Assistant to the Director - DG JRC Institute for Energy and Transport, European Commission</td>
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<tr>
<td>16:15 - 16:45</td>
<td>Discussion and stakeholder involved Q&amp;A</td>
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<tr>
<td>16:45</td>
<td><strong>END OF THE WORKSHOP</strong></td>
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2 Minutes

2.1 Welcome
This event was used to introduce the project and the planned activities to a targeted audience of stakeholders. The aim is to awake interest from stakeholders right from the beginning of the project as well as give interested actors the opportunity to bring their views and guide the analytical process within the project.

2.2 Session 1: Introduction to the SET-Nav project
This session provided an introduction and an overview of the SET-Nav project that started in April 2016 as well as an introduction to the EU Horizon 2020 programme, under which the project is co-funded. The findings of the project are intended to support the further development of the SET Plan, which aims to accelerate the development and deployment of low-carbon energy technologies. Thus, this session also presented the SET Plan to provide a background to the motive of the project.

- **Henrik Dam** from the European Commission introduced the SET-Plan and the EU Horizon 2020 programme. He guided the stakeholders through the EU-28 energy and climate objectives, highlighting the details of the Intended Nationally Determined Contributions (INDC). The five dimensions of the Energy Union were introduced (energy security, integrated internal energy market, energy efficiency, low-carbon energy and research & innovation) by him, along with the next steps for the SET Plan, which are:
  - Declaration of Intent (DoI) to be adopted by autumn 2016
  - Member States to develop implementation of the SET Plan "DoI" supported by the European Commission by spring 2017.

- **Gustav Resch** from TU Wien, who is also acting as the SET-Nav project coordinator, provided an overview of the project. This overview involved a description of the partners and the three pillars of the SET-Nav project, which include enhancing modelling capacities, strategic policy analysis and stakeholder dialogue & dissemination. Additionally, an introduction to the models that will be utilised over the course of the three years was also communicated.

- **Claus Huber** from Aexp and also a project partner, provided an industry perspective to the SET-Nav project, touching on the evolution of environmental policy, the pathway from policy objectives to market rules and the crucial role of the SET-Nav project.

- Due to a change on the day, **Francesco Gardumi**, a post-doc researcher at the KTH Royal Institute of Technology, replaced **Louise Coffineau** and provided a brief introduction to the REEEM’s project. REEEM stands for the Role of technologies in an Energy Efficient Economy – Model-based analysis of policy measures and transformation pathways to a sustainable energy system. This project is very similar to the SET-Nav project and therefore there will be synergies created through sharing data, joint events and policy papers.
Figure 1: Session 1

Q&A:

- What are the next steps and what do you need from stakeholders?

A key element to the project is looking at case studies, but when we expand out further we do that via pathways. During this process, we need stakeholder engagement to confirm we incorporate all aspects and have stakeholders provided their view of the future.

- Which timeline is being looked at?

We look at 2030, which is the SET Plan focus, but we give equal weight to the long term perspective.

- Do you think we are done with innovation, we now need to focus on market change in this energy transition?

Innovation is larger than just technology innovation, there is system innovation and process change that is also under this umbrella term. The second session highlights this as we now need to see the system as a whole.

2.3 Session 2: An innovation systems perspective to inform the SET Plan

The transformation of Europe’s energy system requires solutions and policies informed by systemic analysis and energy innovation. A systemic perspective on innovation emphasises that innovation stages and processes like R&D and market diffusion are supported by a broader innovation environment comprising knowledge, actors & institutions, resources, and adoption & use.
This session hosted a panel of experts from policy, academia and industry to discuss the policy briefing on energy innovation systems and the SET-Plan, which uses a systemic perspective on energy innovation to provide recommendations for the SET-Plan.

- **Charlie Wilson**, a lecturer and researcher at the Tyndall Centre for Climate Change Research and the University of East Anglia, as well as a SET-Nav project partner, presented his policy briefing on “Innovation Systems and the SET Plan”. A clear message from the paper is that systems transformation needs systemic analysis and policies. Institutions are critically important in innovation and institutional misalignment can strongly inhibit innovation. Therefore institutions should be aligned to build user demand for technology innovation.

- **Jonathan Köhler**, from Fraunhofer Institute for Systems Innovation research, provided his comments on Charlie Wilson’s briefing from an academic perspective. He claimed that multiple policy goals requires multiple policies. Policies can be assessed and redirected to provide a common vision, strong innovation system networks, demand supported by institutions for standards/procedures, stable innovation policies, and learning and adaptation, which are all essential for new technologies to be taken up. Fundamental institutional changes and energy efficiency are required. In response to the policy briefing, Jonathan stated that what was missing in the report is analysis and policy recommendations on how the system will change.

- **Claude Ayache**, working on European Affairs from KIC InnoEnergy provided an introduction to KIC InnoEnergy and comments on the policy briefing presented in the session. KIC InnoEnergy supports and invests in innovation by training young professionals and funding start-ups that are creating sustainable businesses to grow rapidly to contribute to Europe's energy ecosystem. One idea was proposed, appropriation on the demand side to engage in innovative energy areas is needed.

- **Shane Thomlinson**, a director of E3G provided his comments on the policy briefing presented in this session. There is a fundamental choice on how we characterise our energy systems, we can’t have policies for both. For example decentralised vs. centralised energy supply, conventional large-scale generation is the “dinosaur” of the system. Secondly, there is not a single shared vision, therefore we need a pathways approach. There is the challenges of a high penetration of renewables, the question is, how will we innovate inside this system?

- **Elena Donnari**, the assistant to the director at the DG Joint Research Centre Institute for Energy and Transport at the European Commission, is in the steering group of SET-Nav and wrapped up the session responding to the policy briefing and comments made from other speakers. She stated that nothing in the paper the Commission disagrees with.
Q&A:

- What future do you see in the energy sector, i.e. what energy system should we characterise?

Shane: A decentralised system is likely the most obvious future, batteries, modular renewables (i.e. solar) are clear signals to suggest that it is going along this path. How quickly and how fast a move to a decentralised system? Well not that soon, but we can start to see the energy system going towards a decentralised system, so we need to think about the pathway and steps towards this.

Jonathan: If you want to move to a more decentralised system you need millions of users to change, this implies large institutional changes.

Shane: Regulatory changes are required to encourage the consumer to change the market from the demand-side.
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About the project

SET-Nav aims for supporting strategic decision making in Europe’s energy sector, enhancing innovation towards a clean, secure and efficient energy system. Our research will enable the European Commission, national governments and regulators to facilitate the development of optimal technology portfolios by market actors. We will comprehensively address critical uncertainties facing technology developers and investors, and derive appropriate policy and market responses. Our findings will support the further development of the SET-Plan and its implementation by continuous stakeholder engagement.

These contributions of the SET-Nav project rest on three pillars: modelling, policy and pathway analysis, and dissemination. The call for proposals sets out a wide range of objectives and analytical challenges that can only be met by developing a broad and technically-advanced modelling portfolio. Advancing this portfolio is our first pillar.

The EU’s energy, innovation and climate challenges define the direction of a future EU energy system, but the specific technology pathways are policy sensitive and need careful comparative evaluation. This is our second pillar.

Ensuring our research is policy-relevant while meeting the needs of diverse actors with their particular perspectives requires continuous engagement with stakeholder community. This is our third pillar.

Who we are?

The project is coordinated by Technische Universität Wien (TU Wien) and being implemented by a multinational consortium of European organisations, with partners from Austria, Germany, Norway, Greece, France, Switzerland, the United Kingdom, France, Hungary, Spain and Belgium.

The project partners come from both the research and the industrial sectors. They represent the wide range of expertise necessary for the implementation of the project: policy research, energy technology, systems modelling, and simulation.

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