



ETIP SNET

EUROPEAN
TECHNOLOGY AND
INNOVATION
PLATFORM

SMART
NETWORKS FOR
ENERGY
TRANSITION

PLAN.
INNOVATE.
ENGAGE.



ETIP SNET Workshop for defining the upcoming ETIP SNET Roadmap 2020-2030

Defining Energy System Integration Actions with enablers,
objectives, project types/priorities and roles

Wednesday, 19 June 2019, Brussels

Proceedings

Authors: ETIP SNET Core Team
Delivery date: July 2019



TABLE OF CONTENTS

1. INTRODUCTION	3
2. INITIAL AGENDA	4
3. MINUTES OF THE EVENT	6
ANNEXE 1: LIST OF PARTICIPANTS	14

1. INTRODUCTION

The ETIP SNET workshop held the 19 June 2019 aimed at:

- providing an opportunity to define the Energy System Integration Actions and learn about the ETIP SNET's Roadmap 2020-2030 including inputs, measurable outputs, prioritized RD&I project types and actor roles for Europe's energy system integration needs, and
- defining a framework for RD&I Energy System Integration Actions with enablers, objectives, project types/priorities and roles. Integration Actions will be key elements of the ETIP SNET Roadmap 2020-2030 and ETIP SNET Implementation Plans.

In line with the ETIP SNET's 2019 core activities, the ETIP SNET Roadmap V1.0 was discussed, in an interactive format, keeping in mind the upcoming ETIP SNET Implementation Plan 2020-2023 with more details on selected integration actions.

Besides the experts engaged in ETIP SNET Working groups including the NSCG and the ETIP SNET Governing Board, participants of these high level talks were the expert members of European technologies and Innovation Platforms (ETIPs) of the SET Plan as well as PPPs, European Associations with particular reference to those that deal more closely with energy system integration as well as innovation initiatives at European level (Set Plan IWGs, PPPs, EERA, ERA-Net, etc.) and international institutions and initiatives (IEA, Mission Innovation).

2. INITIAL AGENDA

The agenda of the workshop is reminded below. About 100 people attended the event. The list of participants is provided in Annex 1.

8:30	Registration & Welcome Coffee	
9:00	Welcome , Nikos Hatziargyriou, chair of ETIP SNET	
9:10	ETIP SNET Vision and Targets for EUROPE's energy system integration needs <ul style="list-style-type: none"> - 09:10-09:20 - From ETIP SNET Vision towards the ETIP SNET Roadmap 2020-2030 and the ETIP SNET Implementation Plan 2020-2023 (Rainer Bacher, Bacher Energie / INTENSYS4EU) <ul style="list-style-type: none"> o Integration Actions by using Integration Enablers for achieving Integration Objectives; by Integration Roles (Actors) in three different Integration Project Types - 09:20 – 11:00 Consultation in May 2019: Views of the ETIP SNET WGs on the proposed structures, elements and action needs (Chairs/co-chairs of ETIP SNET WG 1, 2, 3, 4 and 5) <ul style="list-style-type: none"> o WG1 (Antonio Iliceto): 09:20-09:35 (+ 5' Q&A) o WG2 (Yves Schlumberger): 09:40-09:55 (+ 5' Q&A) o WG3 (Michael Ladwig): 10:00-10:15 (+ 5' Q&A) o WG4: 10:20-10:35 (+ 5' Q&A) o WG5 (Venizelos Efthymiou) 10:40-10:55 (+ 5' Q&A) 	
11:00	COFFEE BREAK – Schuman Lobby	
11:30	Draft conclusions of the core team on the consultation	
11:45	Free discussion about the overall concept of the roadmap	
12:15	Morning Parallel sessions on the inputs and outputs of the Integration Actions in the upcoming ETIP SNET Roadmap 2020-2030	
	1.1 Integration Objectives (Outputs of Integration Actions)	1.2 Integration Enablers (Inputs to Integration Actions)
	<p style="text-align: center;">Room 1</p> <p><i>Moderator: Michele de Nigris (ETIP SNET Core team)</i></p> <p><i>10': view of ENTSO-E (Norela Constantinescu) on the topic</i></p> <p><i>Interactive discussion forum on the detailed specification of the Integration</i></p>	<p style="text-align: center;">Room 2</p> <p><i>Moderator: Rainer Bacher (ETIP SNET Core team)</i></p> <p><i>10': view of EDSO (Florian Gonzalez) on the topic</i></p> <p><i>Interactive discussion forum on the detailed specification of the Integration Enablers and the related milestones of Integration Actions</i></p>



	<i>Objectives and the related milestones of Integration Actions</i>	
13:00	NETWORKING LUNCH – Schuman Lobby	
14:00	Parallel sessions on the inputs and outputs of the Integration Actions in the upcoming ETIP SNET Roadmap 2020-2030 ⇒ Same rooms and switch of moderators and subjects (Room 1 Enablers and Room 2 Objectives)	
14:45	Afternoon parallel sessions on the Integration roles and Project Types of the integration actions in the upcoming ETIP SNET Roadmap 2020-2030	
	2.1 Integration Roles (in Integration Actions)	2.2 Integration Project Types (for Integration Actions) and Priorities
	<p style="text-align: center;">Room 1</p> <p><i>Moderator: Antonio Negri (ETIP SNET Core team)</i></p> <p><i>10': view of EASE (Yves Schlumberger) on the topic</i></p> <p><i>Interactive discussion forum on the detailed specification of the Integration Roles and the related milestones of Integration Actions</i></p>	<p style="text-align: center;">Room 2</p> <p><i>Moderators: Coralie Badajoz (ETIP SNET Core team)</i></p> <p><i>10': view of EERA on the topic</i></p> <p><i>Interactive discussion forum on the detailed specification of the Integration Project Types and their priorities and the related milestones of Integration Actions</i></p>
15:30	COFFEE BREAK – Schuman Lobby	
16:00	Concluding session – next steps <i>ETIP SNET Core team</i>	
16:30	End of Event	

3. MINUTES OF THE EVENT

This section highlights the **main topics** (not already mentioned in the different PPTs) addressed during the different sections of the agenda, and relevant for the work on the ETIP SNET Roadmap 2020-2030. When actions are suggested to feed the list built by the ETIP SNET core team, they are **highlighted in brown**.

The evolution of the structure of the workshop compared with the initial planning is also stressed. The specific PPT presentations are provided throughout the document with specific **Hyperlinks**.

8:30	Registration – Welcome Coffee
9:00	Welcome , Nikos Hatziargyriou, chair of ETIP SNET
Main topics addressed	The ETIP SNET Chair reminded the process of work within the ETIP SNET (Vision 2050, roadmap,..) as well as the challenging aim to be achieved with the agreement of the energy systems stakeholders in the different steps of the process. The three goals of EU Energy policy, as well as those of the 2050 vision were provided. The objectives of the day were finally set: the stakeholders should define the ETIP SNET roadmap for 2020-2030.
09:10 - 09:20	ETIP SNET Vision and Targets for EUROPE’s energy system integration needs <ul style="list-style-type: none"> - From ETIP SNET Vision towards the ETIP SNET Roadmap 2020-2030 and the ETIP SNET Implementation Plan 2020-2023 (Rainer Bacher, Bacher Energie / INTENSYS4EU) <ul style="list-style-type: none"> o Integration Actions by using Integration Enablers for achieving Integration Objectives; by Integration Roles (Actors) in three different Integration Project Types
Main topics addressed	<p><u>Short presentation of the day</u></p> <ul style="list-style-type: none"> - The ETIP SNET roadmap: structure framework and topics to be addressed with all the stakeholders - Reminder of the agenda and highlight of key discussions: discussion about the overall structure of the roadmap, as well as the integration objectives and enablers. <p><u>Rainer Bacher’s presentation (ETIP SNET Core team member):</u></p> <p>Presentation of the update process of the ETIP SNET Roadmap and Implementation Plan. Between 2020 to 2030: 4 implementation Plans, updated every 2 years and for a length of 4 years. Monitoring and project survey to update both the roadmap and implementation Plan.</p> <p>Presentation of the goals for today: NEW Roadmap 2020-2030 with 5 dimensional Hyper Matrix => converge on a common ETIP SNET roadmap. Reminder of the Monitoring exercise over 121 projects made in 2018 and the activities that will need more demonstrations at larger scale (cf coverage analysis of the present roadmap (2017-2026)).</p>



	<p>Presentation of the proposed ETIP SNET roadmap: first, action aiming at reaching an objective, then the enablers as input to the action, finally the project types associated to an action and the actors needed to participate in each action. Roles and project types will be fine-tuned in the Implementation Plan.</p> <p><u>Michela Marasco (INTENSYS4EU Project Officer):</u></p> <p>From the EU point of view, the Vision 2050 is centered on the integration of systems. The EU needs to see how all the <u>components</u> are necessary, what are the implications for the network and what is missing to achieve the 2050 goals.</p>
<p>09:20 – 11:00</p>	<ul style="list-style-type: none"> - Consultation in May 2019: Views of the ETIP SNET WGs on the proposed structures, elements and action needs (Chairs/co-chairs of ETIP SNET WG 1, 2, 3, 4 and 5) <ul style="list-style-type: none"> o WG1 (Antonio Iliceto): 09:20-09:35 (+ 5' Q&A) o WG2 (Yves Schlumberger): 09:40-09:55 (+ 5' Q&A) o WG3 (Michael Ladwig): 10:00-10:15 (+ 5' Q&A) o WG4: 10:20-10:35 (+ 5' Q&A) o WG5 (Venizelos Efthymiou) 10:40-10:55 (+ 5' Q&A)
<p>Main topics addressed</p>	<p><u>WG1 (see specific PPT HERE)</u></p> <p>Questions & Answers:</p> <ul style="list-style-type: none"> - “Roles” category: proposal to replace ICT by “Data and communication”. - Important not to over-define a project - ETIP SNET Chair: Some overlap between roles. Need to be better defined. Enablers are the categories needing the most research effort <p><u>WG2 (see specific PPT HERE)</u></p> <p>Questions & Answers:</p> <ul style="list-style-type: none"> - Importance of discussing integration actions. Shall be clearly defined <p><u>WG3 (see specific PPT HERE)</u></p> <p>Questions & Answers:</p> <ul style="list-style-type: none"> - Targets for 2030: 2030 targets shall be in line with 2050. - The ETIP SNET Roadmap must be simplified. <p><u>WG5 (see specific PPT HERE)</u></p> <p>Questions & Answers:</p> <ul style="list-style-type: none"> - Enablers could be put close to the objective as an intermediary step - Need an holistic view of power system including power generation regardless size and technology. White paper from WG1 should be considered in the roadmap



	<ul style="list-style-type: none"> - The ETIP SNET Roadmap shall not be too prescriptive, need to let free space for other research. Need the link between former FO and the new actions suggested. Need to identify where research is needed <p>Final comment from ETIP SNET Chair: “<i>Let’s make the ETIP SNET Roadmap as simple as possible but not simpler. Consumer inputs not existing at the moment: need to address energy poverty, sustainability, etc. Maybe develop a specific channel to link with the consumers.</i>”</p>
	11:00 – 11:30 COFFEE BREAK – Schuman Lobby
11:30 -11:45	Draft conclusions of the core team on the consultation
Main topics addressed	<p><u>Highlight of the new outputs of the morning discussion:</u> how often to update the vision? the Roadmap should not be overdefined. Remain more open to all our topics, some Actors are missing (R&D, O&M), the targets shall be specified?</p> <p>Regarding targets 2030: proposal to link them with the actions by answering the question: What do we want to achieve in 2030 (in terms of research)</p>
11:45 – 12:15	Free discussion about the overall concept of the roadmap
Main topics addressed	<p>Main outputs from the discussions:</p> <ul style="list-style-type: none"> - ETIP SNET vice chair: research prioritization is important to bring technologies to the point they can begin to be deployed in the market. Examples of platform coordinating electricity, heating and cooling... Suggestions exist already. Each of them should come with a TRL, and a TRL progression over the next years. Combination of official goals 2030 and TRL for 2050 will help to assume what is needed for the 2030 roadmap - Financing aspect shall be considered - Open Questions: how this roadmap will support the changes of the power system in the next 10 years? How will decision making take place? Which regulation do we need? <p><u>Proposal of action: How to handle changes in the roadmap?</u></p> <ul style="list-style-type: none"> - Need to have a checklist to evaluate the projects to help the EU to compare the different actors, technologies - INTENSYS4EU Project Officer: expectations from the roadmap and Implementation plans are to be able to tell the EU what is needed to be done to achieve the vision 2050. Proposals need to be as concrete and clear as possible - ETIP SNET Chair: need to be more specific with the quantitative targets of 2030 - The RM shall provide certain targets towards 2030. Need intermediary steps or activities. Need to make it visible and understandable by all. Consider the framework available (Horizon Europe). Focus less on very detailed information so as not to be too rigid - Speed of implementation and diversity of actors: question about who will implement the solution? Actors at local level (citizen, regulators, etc.)? What step



	<p>to take to involve all those actors. What can be done at the community level to change the dynamic?</p> <ul style="list-style-type: none"> - Use the material existing to better define actions and converge to 2030. Need to see all the systems and all the solutions and try to build on that. Use the framework of Horizon Europe - INTENSYS4EU Coordinator: consumers representatives are more than welcome to join the project. If contacts available, to be sent to the project. - Energy Communities shall be considered - ETIP SNET vice Chair: several levels to be considered. First, 2050, then 2030 with quantifiable targets for EU, and finally the TRLs (research, demonstration, deployment)
<p>12:15 - 13:00</p>	<p>Morning Parallel sessions on the inputs and outputs of the Integration Actions in the upcoming ETIP SNET Roadmap 2020-2030</p> <p>1.1 Integration Objectives (Outputs of Integration Actions)</p> <p style="text-align: center;">Room 1</p> <p><i>Moderator: Michele de Nigris (ETIP SNET Core team)</i></p> <p><i>10': view of ENTSO-E (Norela Constantinescu) on the topic</i></p> <p><i>Interactive discussion forum on the detailed specification of the Integration Objectives and the related milestones of Integration Actions</i></p>
<p>Main topics addressed</p>	<p>Objectives: First round of discussion</p> <p>Presentation from the Core team and ENTSO-E (See PPT available).</p> <p>Main outputs from the discussions:</p> <ul style="list-style-type: none"> - General understanding <ul style="list-style-type: none"> o The three first Objectives shall be given by priority o INTENSYS4EU PO: decarbonizing the energy system is a priority, according to ETIP SNET 2050 vision o Europe vision calls are for a «Decarbonized, prosperous and competitive Europe», therefore need to modify the central box of the Objectives. The Objective related to “Users” could be part of all the other ones o The first three Objectives are reflecting what is in the ETIP SNET Vision; the last one should be seen as «Competitiveness» and should remain. The «Users» should be kept. Proposal of modification of the central box, by «Decarbonized energy system by 2050» o ETIP SNET Chair: the Objective «Welfare and affordability» could be integrated in the other ones <p>Detailed discussion about the list of Objectives (see specific slides):</p> <ul style="list-style-type: none"> - Sustainability: <ul style="list-style-type: none"> o proposal to substitute Compliance in the Objective list with Driving - Welfare and Affordability: <ul style="list-style-type: none"> o Specify the term Efficiency too general term o Replace Efficiency by «Optimization of CAPEX (or Cost-effectiveness)»



	<ul style="list-style-type: none"> ○ Insert the Competitiveness in this Objective - Security, Quality of service: <ul style="list-style-type: none"> ○ Add the concept of «Coordination, both vertical and horizontal» ○ Add a point dedicated to «Planning» <p>Eliminate «real time» restoration, or better substitute «restoration» with «(smarter)defence plan»</p> <ul style="list-style-type: none"> ○ Add a point dedicated to «Demand response» - Users: <ul style="list-style-type: none"> ○ Use «Energy Communities» together with Citizens - EU Excellence <p>Could be reformulated by «EU Energy governance and Competitiveness»</p>
<p>12:15 - 13:00</p>	<p>1.2 Integration Enablers - IE (Inputs to Integration Actions)</p> <p style="text-align: center;">Room 2</p> <p><i>Moderator: Rainer Bacher (ETIP SNET Core team)</i></p> <p><i>10': view of EDSO (Gareth Bissel) on the topic</i></p> <p><i>Interactive discussion forum on the detailed specification of the Integration Enablers and the related milestones of Integration Actions</i></p>
<p>Main topics addressed</p>	<p>Enablers: First round of discussions</p> <p>Main comments:</p> <ul style="list-style-type: none"> - ETIP SNET Core team: Reminder of the significance of IEs for the participants - EDSO representative: First impressions: Complexity of the structure, Iterative approach for definition of IEs suggested, Flexible definition of IEs recommended <p>Questions and answers:</p> <ul style="list-style-type: none"> - General understanding of the concept: <ul style="list-style-type: none"> ○ where are the technology providers? They shall be included in the roles ○ What is the difference between roles and enablers? Enablers are techno/legal enabler. Roles are more with actors ○ Shall the Integration Enablers be at the level of the roadmap or the level of Implementation Plan? Need to provide milestones - Main gaps identified: <ul style="list-style-type: none"> ○ Training and education to be added in the list of enablers ○ Within the ICT and digital enablers, blockchain technology (digital ledger) shall be included ○ Institutional aspects (broader aspects like marketing) could appear in the list of enablers ○ The enablers are gaps needing to be worked on. The list is too high level: shall be a little bit more concrete ○ Data management shall not be only linked to ICT but also to regulations, research <p>Proposal of action: need to work on a cross section way and not only in blocks</p>



	<ul style="list-style-type: none"> ○ Proposal to add another sector “the investment sector” ○ ICT could be replaced by “Data management and automation” ○ Make a link between ICT infrastructure and non-electricity energy infrastructure ○ Social science is still missing <p>Proposal of action: Need trans-disciplinary project including social science (legal, social, etc.)</p> <ul style="list-style-type: none"> ○ Regarding research: need a limit for researchers to remind them what is needed outside. Need a check box to evaluate the different projects (on needed type of actors) ○ Need of projects that are cross-cutting with the integration of different system ○ Need to have relevant assessment: use cases, best practices port folio, KPI being able to resolve some assessment with the results (see ETIP SNET monitoring exercise) <p>Proposal of action: Learning platform communities of practices</p> <ul style="list-style-type: none"> ○ The detailed list is too detailed. Can create silos, redundancies, etc. Maybe live an open scope with “other” ○ Enablers are not only technology driven ○ Need to address not only technology but also other dimension ○ Crypto currency and social network could be added to ICT. Comment about the methodology: what about the obstacles? Need to think about to define the objectives ○ Enablers missing: risk taking people, pioneers shall be considered for open innovation <p>Proposal of action: Support pioneers in projects</p> <ul style="list-style-type: none"> ○ Consider the development of sandboxes and link it with training and other aspects.
13:00	NETWORKING LUNCH – Schuman Lobby
14:00 – 15:30	<p>Parallel sessions on the inputs and outputs of the Integration Actions in the upcoming ETIP SNET Roadmap 2020-2030</p> <p>⇒ Same rooms and switch of moderators and subjects (Room 1 Enablers and Room 2 Objectives)</p>
Main topics addressed	<p>Enablers: Second round of discussions</p> <p>The participants from the morning “Objectives” session have switched room to address the “Enablers” aspect.</p> <p>Main comments:</p> <ul style="list-style-type: none"> - Regarding ICT (Monitoring, control and automation): control and automation could be part of the Enablers “infrastructure” bubble - ETIP SNET chair: Electricity infrastructure enablers, is not really accurate - Electricity infrastructure enablers: keep technology independence in enabler; storage should be “long term duration and short-term duration”, “max. capacity of storable energy” and “max. power into and out-of storage” [and also losses] - Control centers should not be in ICT enablers



	<ul style="list-style-type: none"> - Electricity Infrastructure enablers: indicate (in one single group) Transmission and Distribution and Distributed (for isolated area, Islands, etc) - Legal and regulatory enablers: Regulation for storage shall be considered as inter connector - Legal and regulatory enablers: Services (such as inertia, etc.) shall be considered - Network planning could be more an enabler (forecasting, etc.) than an objective. Planning is about: scenario, grid and system planning - Interoperability and standards shall be under ICT and Electricity Infrastructure enablers <p>Proposal of action: retrofitting of existing infrastructure</p> <ul style="list-style-type: none"> - Proposal of activity: reviewing the plan of the Hydrogen community <p>Proposal of action: need pro-active grid planning to decrease the cost</p>
<p>Main topics addressed</p>	<p>Objectives: Second round of discussions</p> <p>Main outputs from the discussions:</p> <ul style="list-style-type: none"> - General understanding <ul style="list-style-type: none"> o Three different level of Objective to be considered. Highest level: Sustainability and Social Welfare. Second level: security, quality etc., Low-carbon energy system. Third level: Innovation and Industrial policy at EU level o Objective «EU excellence» should be clarified o All the Objectives could be included under the Sustainability o The Objectives could not be addressed all together by a defined project. o ETIP SNET vice chair: The main aim is to describe R&D actions and in this sense each project will contribute to one or more of the actions <p>Detailed discussion about the list of Objectives (see specific slides):</p> <ul style="list-style-type: none"> - Sustainability: <ul style="list-style-type: none"> o There could be some confusion among Objectives, Actions, Enablers... In the Roadmap, consider only high level objectives, adding just a description, without highlighting specific sub-objectives o The Roadmap, however, should go in greater detail with respect to the Vision 2050 o Necessary to have tools and metrics to identify how far we are from a certain goal o Substitute «Reduction of GHG» with «Reduction of impact on Climate» - Welfare and Affordability <ul style="list-style-type: none"> o EU recently focused on Local Energy Communities, based on non-profit organization. Proposal to avoid speaking ONLY of market tools - Security etc. <ul style="list-style-type: none"> o Necessary to take into account RES volatility o Could be rephrased saying just two aspects: 1-Safety and 2-Security - Empowered users



	<ul style="list-style-type: none"> ○ Proposal to specify the difference among citizens, consumers, Local Energy Communities - General remark <ul style="list-style-type: none"> ○ In the ETIP SNET 2050 Vision the Objectives are already presented and this reference should be kept throughout the Roadmap (in order to avoid misunderstanding and to be “rigorous”)
15:30 – 16:00	COFFEE BREAK – Schuman Lobby
16:00 – 16:15	Afternoon plenary session on the Integration roles and Project Types of the integration actions in the upcoming ETIP SNET Roadmap 2020-2030
Adaptation of the agenda based on the discussion regarding Enablers and Objectives	Regarding Roles and Project types, the initial parallel sessions were adapted in a single plenary session. The two first parallel sessions focusing on Objectives and Enablers provided large amount of information and comments. Moreover, a majority of participants considered that the Roles and project types shall be kept at the level of the Implementation Plan and not on the Roadmap level. Meaning that specific discussions shall be planned more in second step, once the roadmap is well specified.
16:15	Concluding session – next steps <i>ETIP SNET Core team</i>
Main topics addressed	<p>Main conclusion from the workshop:</p> <ul style="list-style-type: none"> • Keep the Project types and Actors/Roles at the level of the Implementation Plan • Enablers/ Objectives: List relatively robust and proposals made by the participants to be considered • Try to keep the wording of the Vision 2050 <p>Next step of the Core team:</p> <ul style="list-style-type: none"> - Prepare the version 2 of the Roadmap (in word format) - Work on the draft structures of implementation Plan in parallel - Inform the associations and WGs about their next involvements to be discussed among the core team
16:30	End of Event



ANNEXE 1: LIST OF PARTICIPANTS

First name	Last Name	Organisation / Company	Parallel Sessions	
Soraya	AMMI	RTE	1.1	2.2
Imrich	ANDREJČÁK	VPS - SLOVAKIA	1.1	2.1
Ana Inés	ARIZTI-BONALDI	ASSOCIATION ROYALE DE LA PRESSE NORD-SUD	1.2	2.2
Carlos	ARSUAGA	CIRCE	1.2	2.2
Rainer	BACHER	BACHER ENERGIE / INTENSYS4EU	1.2	2.1
Coralie	BADAJOZ	DOWEL	1.1	2.2
Liam	BEARD	VODAFONE GROUP	1.2	2.1
Lucie	BEAUMEL	EGVIA	1.1	2.1
Vitezslav	BENDA	CZECH TECHNICAL UNIVERSITY OF PRAGUE	None	2.2
Mathias	BERGER	UNIVERSITY OF LIÈGE	1.2	2.1
Zsolt	BERTALAN	MVM GROUP	1.2	2.2
Gareth	BISSELL	ENEL	1.1	2.2
Andrea	BOGI	EGEC	1.1	2.2
Elena	BOSKOV-KOVACS	BLUEPRINT ENERGY SOLUTIONS	1.1	2.1
Helfried	BRUNNER	AUSTRIAN INSTITUTE OF TECHNOLOGY (AIT)	1.1	2.2
Chris	CAERTS	VITO / ENERGYVILLE	1.2	2.2
José	CAMPOS COSTA	EDP NEW R&D	1.1	2.1
Paula	CARROLL	UNIVERSITY COLLEGE DUBLIN ENERGY INSTITUTE	1.2	2.2
Gaëtan	CLAEYS	EUGINE	1.2	2.1
Sonia	CLARENA BARON	EUTURBINES	None	2.1
Stefaan	DE MUYNCK	INFRABEL	1.1	2.1
Laurens	DE VRIES	EERA JOINT PROGRAM ON ENERGY SYSTEMS INTEGRATION	1.1	2.2
Johan	DRIESEN	KU LEUVEN	1.2	2.2
Claude	DUBUS	IEI EUROPA	1.2	None
Clemens	DÜPMEIER	KARLSRUHE INSTITUTE OF TECHNOLOGY (KIT)	1.2	2.2
Venizelos	EFTHYMIU	FOSS	1.1	2.1
Aurélié	FAURE	ETIP SNET WG5	1.2	2.2
José	FREITAS	FLUPOL	1.2	2.2
Miguel	GARAGORRI	IBERDROLA	1.1	None
Michaela	GIGLI	INEA (EC)	1.2	2.1
Gianluca	GIGLIUCCI	ENEL	1.1	2.2
Kirsten	GLENNUNG	E.DSO	1.2	2.2
Cristina	GONEZ	ENTSO-E	1.1	2.1
Florian	GONZALEZ	E.DSO	1.1	2.1
patrikc	GRIGNARD	UNIVERSAL PRESS	1.2	2.2
Marina	GRUJIC MILOSEVIC	VATTENFALL ELDISTRIBUTION	1.2	2.1



First name	Last Name	Organisation / Company	Parallel Sessions	
Pedro	GUEDES DE CAMPOS	FUEL CELLS AND HYDROGEN JOINT UNDERTAKING (FCH JU)	1.2	2.1
Seppo	HÄNNINEN	VTT (TECHNICAL RESEARCH CENTER OF FINLAND)	1.1	2.2
Atle	HARBY	SINTEF	1.2	2.1
Nikos	HATZIARGYRIOU	HEDNO / NTUA	1.1	2.1
Mahboubeh	HORTAMANI	BAAM-CONSULTING	1.2	2.2
Mark	HOWITT	STORELECTRIC	1.1	2.2
Michael	HÜBNER	BMVIT	1.1	None
ANTONIO	ILICETO	ENTSO-E	1.1	2.1
Albana	ILO	TU WIEN	1.1	2.2
Gustavo	JACOMELLI	ZABALA INNOVATION CONSULTING / INTENSYS4EU PROJECT	1.2	2.1
Dagmar	JARÁSOVÁ	SFÉRA	1.2	2.1
LORENA	JIMENEZ CHILLARON	INSTITUTO TECNOLÓGICO DE LA ENERGÍA (ITE)	1.2	2.2
Emmanouil	KAKARAS	MITSUBISHI HITACHI POWER SYSTEMS EUROPE	1.1	2.2
Shafiuzzaman	KHADEM	INTERNATIONAL ENERGY RESEARCH CENTRE	1.1	2.1
Rune	KIRT	KIRT X THOMSEN	1.1	2.2
Silke	KRAWIETZ	SETA NETWORK	1.1	2.2
Klaus	KUBECZKO	AUSTRIAN INSTITUTE OF TECHNOLOGY (AIT)	1.2	2.2
Lauri	KUMPULAINEN	UNIVERSITY OF VAASA	1.2	2.2
Michael	LADWIG	GENERAL ELECTRIC	1.1	2.1
Marie	LATOUR	ZABALA INNOVATION CONSULTING / INTENSYS4EU PROJECT	1.1	2.2
Frederik	LOECKX	FLUX50	1.2	2.2
Ilaria	LOSA	RICERCA SUL SISTEMA ENERGETICO	1.2	2.1
Marie T.	LUBS	ARPNS	1.1	2.2
Slobodan	LUKOVIC	UNIVERSITY OF LUGANO	1.1	2.2
Nikolaos	LYMPEROPOULOS	FCH JU	None	2.2
Michela	MARASCO	EUROPEAN COMMISSION	1.1	2.1
Paola	MAZZUCHELLI	EUREC	1.2	2.2
Henk-Jan	MEBIUS	RPS GROUP	1.2	2.1
Andrei	MORCH	SINTEF / EERA JP SMART GRIDS	1.1	2.2
Enrique	MORENO	UNIVERSIDAD LOYOLA ANDALUCÍA	1.1	2.2
bulto	OLIVIER	K CITY	1.1	2.2
Thomas	OTUSZEWSKI	EASE	1.2	2.1
Antonis	PAPANIKOLAOU	HYPERTech	1.1	2.2
Jan	PEDERSEN	AGDER ENERGI	1.2	2.1
Diederik	PEEREBOOM	T&D EUROPE	1.1	2.2
Alessandro	PROVAGGI	EUROHEAT & POWER / DHC+	1.2	2.2
Marieke	REIJALT	EUROPEAN HYDROGEN ASSOCIATION (EHA)	1.2	2.2
Yves	SCHLUMBERGER	EDF	1.1	2.1



First name	Last Name	Organisation / Company	Parallel Sessions	
Mohamed	SHALABY	DERLAB	1.1	2.2
Anastasiya	SHAPOCHKINA	EDF	1.1	2.2
Karim	SIDI-AL-CHÉRIF	CEA		
Ugo	SIMEONI	EUROPEAN TURBINE NETWORK	1.1	2.2
Nuno	SOUZA E SILVA	R&D NESTER	1.1	2.2
Stefano	SPINACI	EUROPEAN PARLIAMENT	1.1	2.1
Konstantin	STASCHUS	ENTSO-E	1.2	2.1
Johan	STEINMETZ	FEDERAL AUTHORITY	None	2.2
Alina	TOURGUIEVA	FLOWER GARDEN	None	2.1
Jose	TRINDADE	ZABALA INNOVATION CONSULTING / INTENSYS4EU PROJECT	1.1	None
Anastasios	TSITSANIS	SUITE5	1.2	2.1
Roland	TUAL	RESCOOP.EU	1.1	2.2
Inès	TUNGA	ENERGY SYSTEMS CATAPULT	1.2	2.2
Björn	UHLEMEYER	VDE / WG ENERGY SUPPLY 4.0	1.2	2.2
thierry	VANCROMBRUGGE	BELGIAN FEDERAL AUTHORITY	1.1	2.1
Alexander	WIEDERMANN	MAN ENERGY SOLUTIONS	1.2	2.2
Frank	WIERSMA	TENNET	1.1	2.2
Achim	WOYTE	INEA (EC)	None	None



ETIP SNET

EUROPEAN
TECHNOLOGY AND
INNOVATION
PLATFORM

SMART
NETWORKS FOR
ENERGY
TRANSITION



This publication has been developed in the frame of the INTENSYS4EU project, which supports ETIP SNET activities and has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731220

www.etip-snet.eu