European Commission

bridge

BRIDGE General Assembly 2024

DAY 1: 09 April 2024

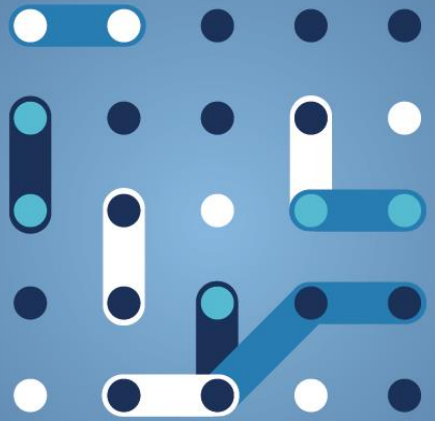
14:00 – 14:05

Welcome and introductions

by Secretariat & DG ENER

Vincent Berrutto
Head of Unit - Digitalisation, Competitiveness, Research and Innovation, Directorate-General for Energy, European Commission

Enrico Gaspari
Senior Manager at PwC



14:05 – 14:10

Welcome and introductions

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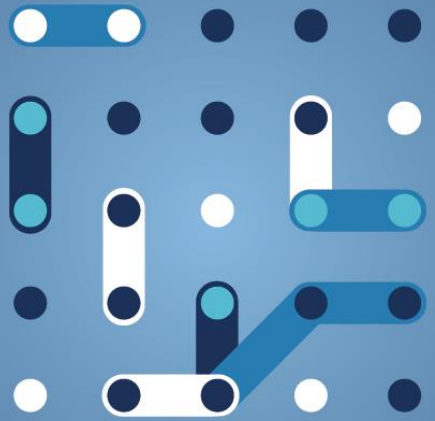


Welcome to the BRIDGE General Assembly!

The event will take place in hybrid form over two days

April 9th
14:00-19:00 CET

April 10th
9:00-17:30 CET

You can use Linktree to consult the **agenda** and all the necessary information for the General Assembly. In-person participants will also find the link on the badge (QR code).

Link to join the plenary session
Valid for both day 1 and 2

Link to the CCE breakout

Link to the DM breakout

Link to the BM breakout

Link to the REG breakout

Scan the QR code to consult all the relevant info on the event on Linktree

Welcome to the BRIDGE General Assembly!

To interact with speakers, **in person participants** can **raise their hands** or can scan the QR Code on the badge to submit questions through **Sli.do**. **Online participants** can access it through this link or by scanning the QR code

Scan for the Sli.do
The event code is # 3315732

Tuesday 9th of April Agenda Day 1

Item	Time	Session
14:00		**Start**
#1	14:00	**Welcome and introduction:** • Vincent Berrutto, Head of Unit - Digitalisation, Competitiveness, Research and Innovation, Directorate-General for Energy, EC • Enrico Gaspari, Senior Manager in PwC
#2	14:10	**Keynote speech:** Vincent Berrutto, Head of Unit - Digitalisation, Competitiveness, Research and Innovation, Directorate-General for Energy, EC
#3	14:20	**Policy updates session:** DG ENER providing updates on: (1) EU Action plan for grids by Ricardo Renedo Williams; (2) Network code on demand response by Adriana Guth; (3) Net Zero Industry Act by Pablo Riesgo Abeledo
#4	14:50	**Plenary Session: BRIDGE initiative** Achievements of the 4 WGs in 2023-2024 – Andrej Gubina, Helena Gerard, Michael Brenner-Fliesser, Olivier Genest (10 min per WG + 20 minutes Q&A)
15:50		**Networking Coffee & new BRIDGE projects showcasing**
#5	16:30	**Showcase of 6 BRIDGE completed projects** *(Platone; OneNet; Trinity; X-Flex; EUniversal; ebalance-plus)* Including benefits deriving from the participation in the BRIDGE initiative and related lessons learned
#6	17:00	**BRIDGE challenge interactive session** • *Given your experience in BRIDGE, what would you wish to see for 2024?* • *How could BRIDGE best contribute to support the latest policy developments in energy?* • *Which BRIDGE best practices should be replicated and maintained in the future?*
#7	17:30	**Spotlight session on other initiatives:** • ETIP SNET by Norela Constantinescu, Vice-chair of ETIP SNET • ISGAN by Mark Stefan, Senior research engineer, AIT Austrian Institute of Technology • European Commission international engagements by Peter Horvath, DG ENER
18:00		**Group photo**
18:10		**Networking Aperitivo**

Wednesday 10th of April Agenda Day 2

Item	Time	Session	
9:00		**Networking Coffee**	
#1	9:30	**Welcome and wrap-up from the previous day:** • Fabio D'Aversa, Senior Advisor in PwC • George Paunescu, Policy officer in DG ENER	
#2	9:35	**Policy updates session:** • DG CNECT providing updates on (1) Data Act; (2) AI Innovation package • DG ENER providing updates on SET Plan by Anna Sobczak	
#3	10:15	**Presentation of the Use Case repository** by Ugo Stecchi, Project Manager in GrupoETRA	
10:30		**Break**	
#4	10:40	Parallel Session 1 CONSUMER & CITIZEN ENGAGEMENT WG	Parallel Session 2 DATA MANAGEMENT WG
12:30		**Lunch**	
#5	13:40	Parallel Session 3 BUSINESS MODEL WG	Parallel Session 4 REGULATION WG
15:40		**Networking Coffee & new BRIDGE projects showcasing**	
#6	15:55	**Plenary: outcomes of the discussion of the breakout rooms** (15 minutes per WG) Drafting of conclusions from the moderators of the breakout rooms by Andrej Gubina, Helena Gerard, Michael Brenner-Fliesser, Olivier Genest	
#7	16:55	**Commission feedback on the outcomes of the breakout sessions** Mark Van Stiphout, Deputy Head of Unit, DG ENER Unit B.5	
#8	17:15	**Concluding remarks and next steps. BRIDGE going forward with high ambition:** • Fabio D'Aversa and Enrico Gaspari, PwC, presentation of the BRIDGE charter and wrap-up (5 min) • Andrej Gubina, Helena Gerard, Michael Brenner-Fliesser, Olivier Genest, wrap up by BRIDGE leaders (5 min) • Mark Van Stiphout, Depurty Head of Unit B.5, DG ENER concluding remarks (5 min)	
17:30		**End of the event**	

Housekeeping rules

This event offers valuable opportunities to **connect with other projects** and build fruitful collaborations. To help you identify BRIDGE members and projects covering similar topics, we have assigned key words for each project. **Colour code below**:

ELECTRICITY GRIDS	DECARBONIZATION	ENERGY STORAGE
MARKET DESIGN	DIGITALIZATION	GENERAL TOPICS
CONSUMERS PROSUMERS	OTHER	SYSTEM INTEGRATION

Check the bar at the bottom of the participants' badges to find out if you share common interests and goals!

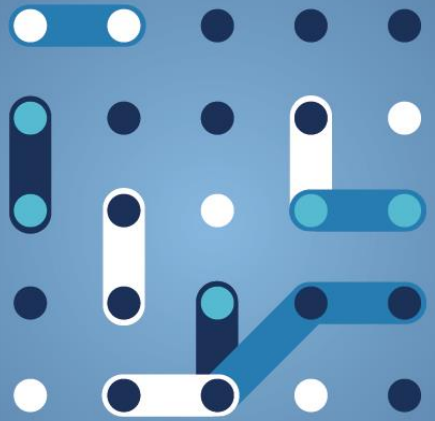
Be sure to be here for the **photo moment** (Day 1, 18:00) and share your favourite moments of the GA in your social media channel by using **#BridgeEU** and tagging **@CINEA** and **@Energy4Europe**

14:10 – 14:20

Keynote speech

by DG ENER

Vincent Berrutto
Head of Unit - Digitalisation, Competitiveness, Research and Innovation, Directorate-General for Energy, European Commission

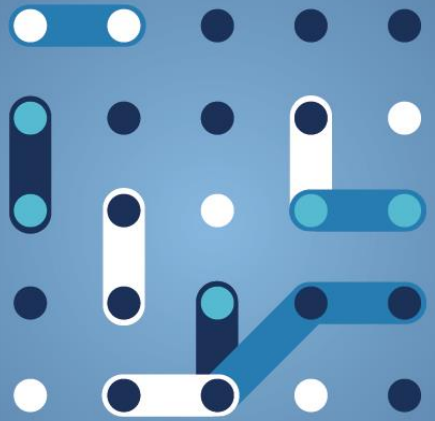


14:20 – 14:50

Policy Update Session: introduction

by DG ENER

Vincent Berrutto
Head of Unit - Digitalisation, Competitiveness, Research and Innovation, Directorate-General for Energy, European Commission



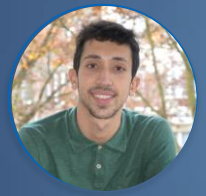
14:20 – 14:50

Policy Update Session

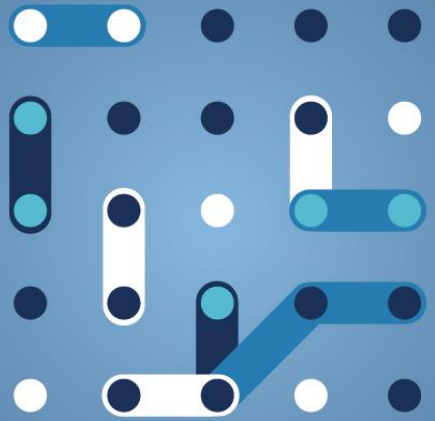
by DG ENER

Ricardo Renedo Williams
Energy Policy
DG ENER
Unit C4

Adriana Guth
Policy Officer
DG ENER
Unit C3



Pablo Riesgo Abeledo
Policy Officer
DG ENER
Unit B5



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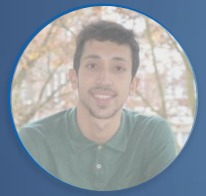

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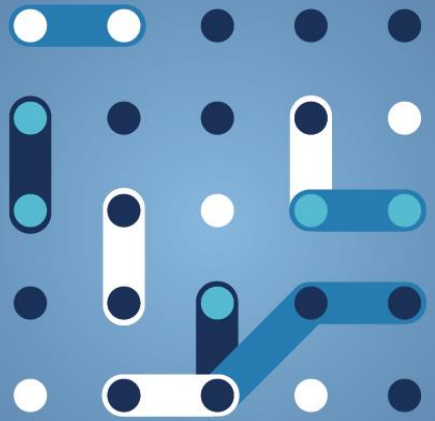


EU Grid Action Plan

BRIDGE GENERAL ASSEMBLY

9 April 2024

Ricardo Renedo Williams
DG ENER C.4

Importance of electricity grids

€584bn investment by 2030!

Capacity expansion (cables & substations), modernisation (40%) and smartening

Transmission grids

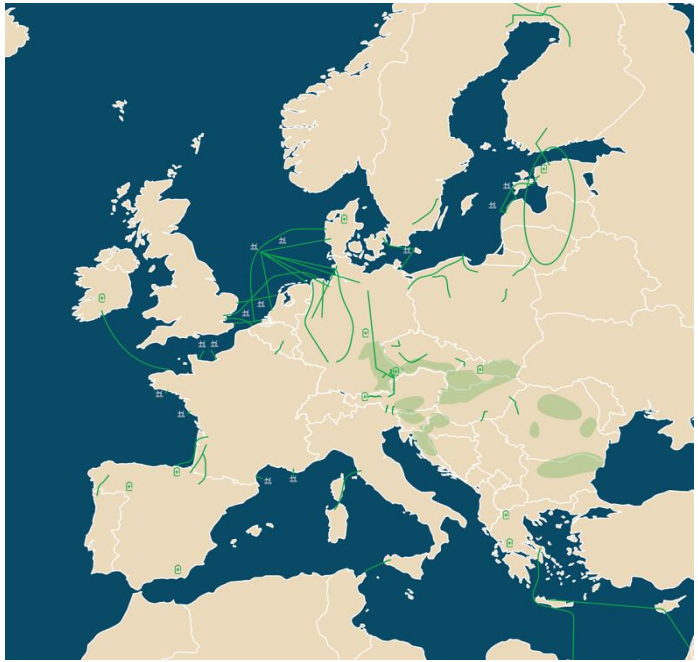
- Transport of renewables across Europe:
  - Cross-border capacity (PCIs)
    - ✓ x2 by 2030
    - ✓ ↓ Annual €9M generation costs by 2040
  - Offshore ~317 GW
  - Industry electrification
  - Between distribution areas

Distribution grids

- ~70% new renewables (1,000 GW by 2030)
- 40M electric vehicles by 2030
- Heat pumps deployment rate x2
- Smart grids
  - Digitalisation → Digitalising the Energy Sector Action Plan 2022
  - Flexibility
  - Prosumer

European Commission

First PCI/PMI list: Electricity



Features

- 85 electricity projects
- 5 new offshore corridors, 12 projects
- 7 Projects of mutual interest (PMIs)
- 5 smart electricity grid projects

European Commission

1

Network planning

HLGs reinforced monitoring, ministerials

COM to assess funding needs (CEF-Energy)

ENTSO-E to improve TYNDP

EU DSO Entity to support DSOs

2

Regulatory incentives

COM guidance on anticipatory investments

COM guidance on offshore cost sharing

European Commission

3 Smart & efficient grids

ENTSO-E and EU DSO Entity to enhance grid capacity transparency

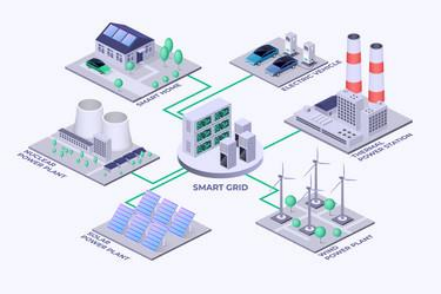
ENTSO-E and EU DSO to promote uptake of smart grids and innovative tech

ACER to recommend best practices on OPEX+CAPEX in tariff reports

4 Financing

COM –through Investors Dialogue– to address financing obstacles

COM to increase visibility on funding for distribution (ERDF, CF, RRF)



European Commission

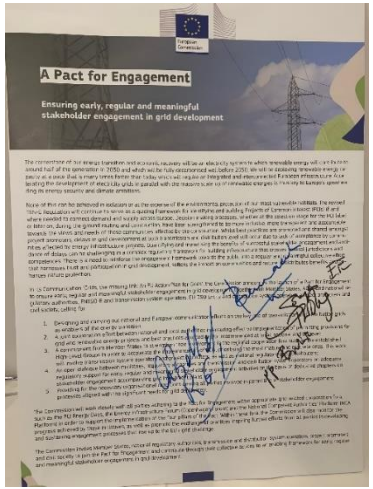
5 Permitting & public acceptance

MSs to use Emergency Reg + RED for grids

COM update ENV guidance for grids

NCA platform

Pact for Engagement



6 Supply chain

ENTSO-E, EU DSO and tech providers to develop standard specifications

Grid procurement plans

Common tech requirements for connection (NCs)

PLANS AND PERMITTING

European Commission

Thank you

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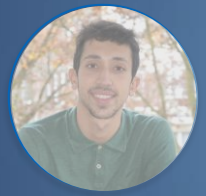

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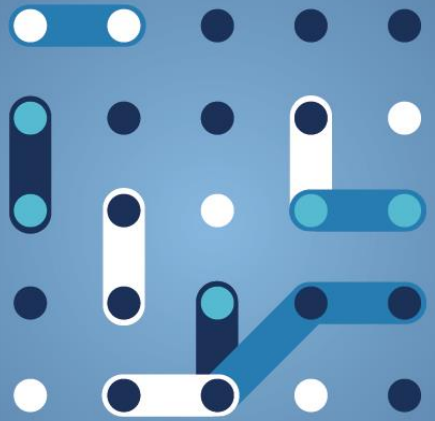


Recent regulatory developments on Demand Response

BRIDGE GA

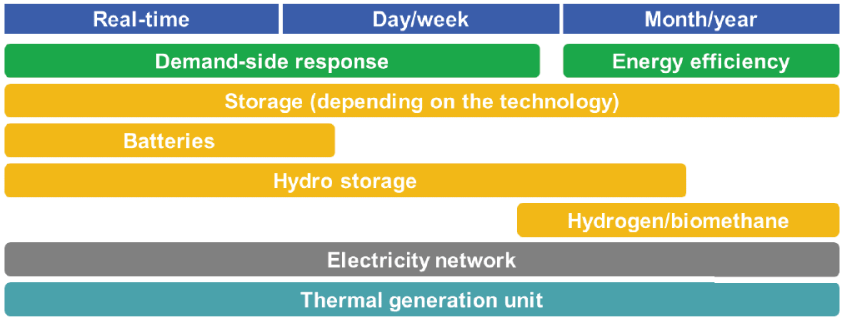
9 April 2024

European Commission – DG Energy
Internal Energy Market

Flexibility needs are diversified but are increasing

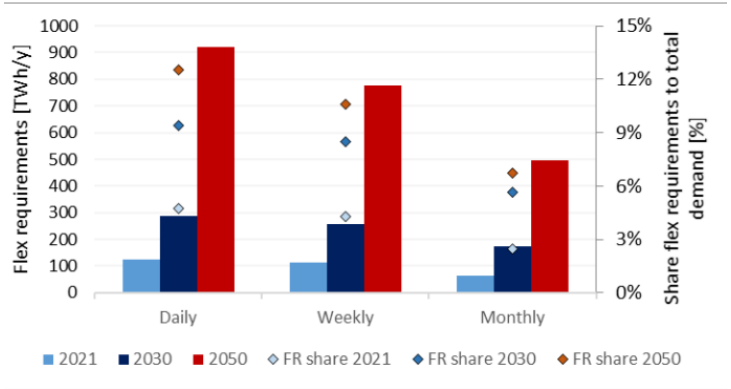
To cope with different requirements such as day-night generation differences, wind pattern fluctuations and seasonal patterns, various technologies will provide flexibility services.

Figure 18: Flexibility services provided by various technologies



Source: ACER.

Note: The list of technologies is non-exhaustive (with e.g. the storage category covering several different technologies). As mentioned, coupling electricity with other energy sectors (sector integration) may provide significant flexibility services.



Increase of flexibility needs, source: JRC

The need for all flexibility types will increase.

European Commission

First, implementation of Clean Energy Package

- **Non-discriminatory access** of demand response to **all electricity markets**, either directly or through aggregation (Art. 17)
- Full recognition of (independent) **aggregators** as market participants (Art. 17)
- Customer entitlement to contract with **independent aggregator** of their choice, without need for consent or prior agreement of their supplier (Art. 13)
- Strict **limits to compensation payments** (Art 17(4))
- **Use of flexibility** by system operators, in particular from distribution networks, for flexibility services including congestion management (Art. 32)

Complement the existing framework with rules on Demand Response

Objective: Address remaining regulatory barriers for the development of demand side flexibility and other flexibility resources in the electricity market.

How: By introducing a new network code on demand response, including rules on aggregation, energy storage and demand curtailment

When: Draft to be submitted by ENTSO-E and EU DSO Entity by May 2024 to ACER, submission to EC by end of 2024.

- According to the current draft, the codes would cover in particular:
  - Market access (aggregation models, baseline, settlement)
  - Prequalification and process to engage in the market
  - Market design for congestion management and voltage control
  - TSO-DSO coordination, data exchange

In parallel, the reform of the electricity market design defines new flexibility provisions

Objective: Boost non-fossil flexiblity: accelerate RES, impact positively the prices, bring system/grid services

New provisions:

1. **Assessment of flexibility needs at MS level**
   - Based on a EU methodology
   - ACER analysis at EU level and recommendations of cross-border relevance, including on removing barriers

2. **Indicative national objective for non-fossil flexibility**
   - including specific contributions of both demand response and energy storage

3. **Non-fossil flexibility support scheme**

4. **Enhance the use of flexibility services by system operators**
   - Network tariffs to incentivize the use of flexibility services
   - Possibility to use data from dedicated metering devices

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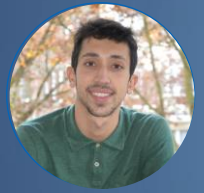

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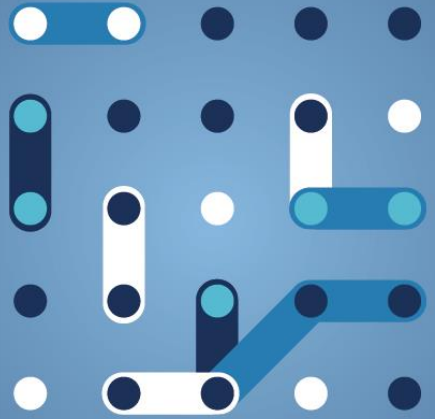


Net-Zero Industry Act

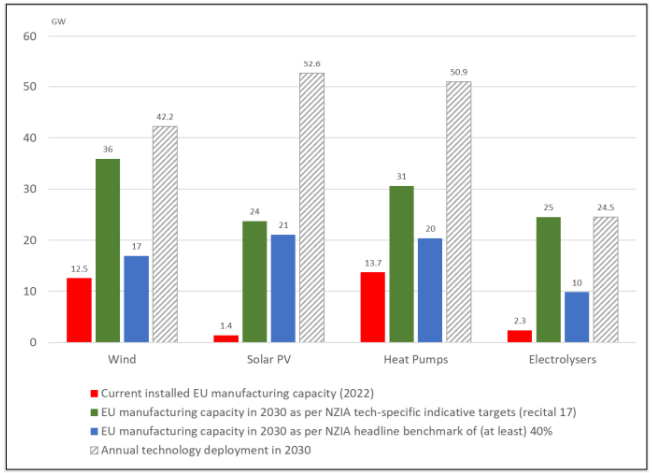
March 2024

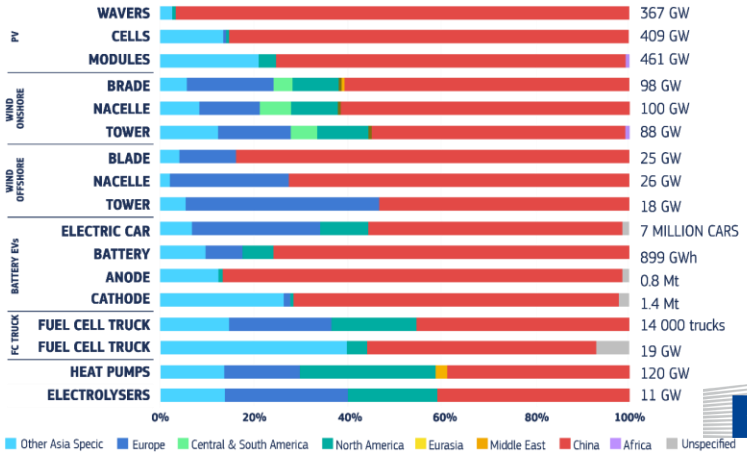
DG ENER.B5
Pablo RIESGO ABELEDO

European Commission

General objective of NZIA

Establishing a regulatory framework to ensure the Union's access to a secure and sustainable supply of net-zero technologies including by scaling up the manufacturing capacity of net-zero technologies and their supply chains.





European Commission

General objective of NZIA

> **"Establishing a regulatory framework to ensure the Union's access to a secure and sustainable supply of net-zero technologies including by scaling up the manufacturing capacity of net-zero technologies and their supply chains.**

Two political benchmarks

Commission & Member States shall support net-zero manufacturing projects to ensure the reduction of strategic dependencies by reaching a manufacturing capacity of:

- at least **40%** of EU annual deployment needs for the corresponding technologies necessary to achieve the Union's 2030 climate and energy targets;
- an increased Union's share for the corresponding technologies in view to reach **15%** of world production by 2040, based on the monitoring in the Act.

European Commission

To stimulate investment into net-zero technologies, the Act focuses on:

Scope (what type of projects are covered)

- 1 list of net-zero technologies.*
- Focus is on manufacturing facilities across full supply chain.
- Either via being listed in Annex or when project promoter can provide proof that product, component or machinery are “primarily used” for net-zero technology.
- Also in scope are energy intensive industry decarbonisation projects, CCS storage sites.

*
- solar technologies, including: solar photovoltaic, solar thermal electric and solar thermal technologies;
- onshore wind and offshore renewable technologies;
- battery and energy storage technologies;
- renewable energy technologies, not covered under the previous categories;
- heat pumps and geothermal energy technologies;
- hydrogen technologies, including electrolysers and fuel cells;
- sustainable biogas and biomethane technologies;
- carbon capture and storage technologies;
- **electricity grid technologies, including electric charging technologies for transportation and technologies to digitalise the grid;**
- nuclear fission energy technologies, including nuclear fuel cycle technologies;
- sustainable alternative fuels technologies;
- hydropower technologies;
- **energy system-related energy efficiency technologies, including heat grid technologies;**
- renewable fuels of non-biological origin technologies;
- biotech climate and energy solutions;
- transformative industrial technologies for decarbonisation not covered under the previous categories;
- CO2 transport and utilization technologies;
- wind propulsion and electric propulsion technologies for transportation;
- nuclear technologies not covered under previous categories.

European Commission

Permitting

- Covers the **entire permit-granting process**.
- Member States to set up **Single points of contact** within 6 months of entry into force.
- Single point of contact to provide **investment-relevant information** to clean tech projects.
- Authorities obliged to accept documents from project promoters in **electronic** format, including pre-existing and relevant studies, permits or authorisations.
- **Legally binding time-limits** for entire permitting: 9-12 months for strategic projects, 12-18 months for others. Member States shall ensure sufficient staff & expertise for this.
- **Streamlined environmental impact assessments**: scoping study, bundling, consultation.

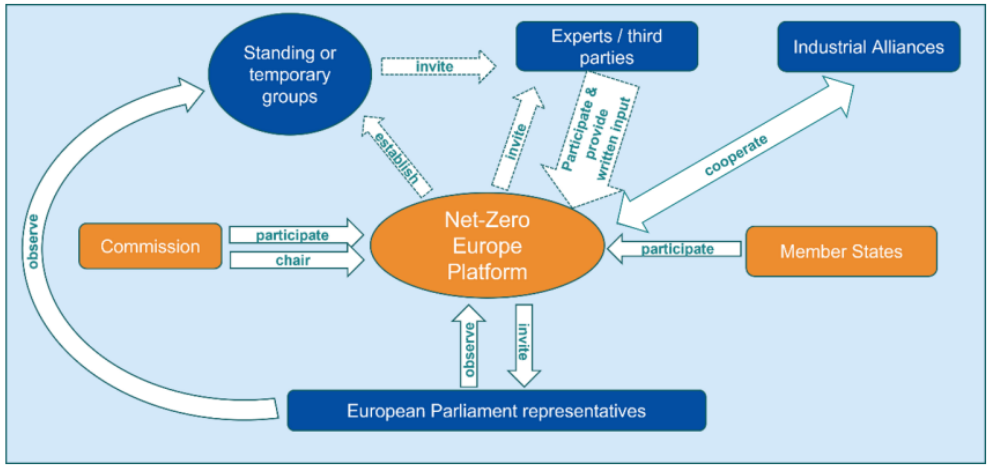
Net-Zero Acceleration Valleys

- Areas to foster net-zero industry clusters and further streamline administrative procedures.

Strategic Projects & NZ Platform

- Selection criteria in NZIA for projects to apply to Member State for **Strategic project** status.
- **Benefits**: Priority status, shorter permitting, discussed in the **Net-Zero Europe Platform** also in relation to providing advice on their financing.

NZ Project → **Strategic Project**



Access to Markets

- New mandatory rules on **Public procurement** to change how authorities procure goods, works and services related to net-zero technologies.
- Authorities must take into account the **environmental sustainability** contribution, while the **resilience** contribution will be applied if there is a third-country dependence of more than 50% for a specific net-zero technology (or for its components).

- When Member States design **auctions** for the deployment of renewable energy technologies, they should apply pre-qualification/award criteria which are not price-related, such as the auction's contribution to resilience, environmental sustainability, contribution to innovation or integration of energy systems.
- These criteria will have to apply to at least 30% (or minimum 6GW) of the volume auctioned every year.

Regulatory Sandboxes & Skills Academies

- If a project/solution is facing regulatory barriers to be implemented, it can require authorities to create a **NZ regulatory sandbox** to get time-limited exemption from the rule in question.
- Aim is to foster start-ups and innovative technologies, to allow for trials and to see if the regulatory framework can be adjusted.
- Important tool to support communication and collaboration between innovators and energy regulators or other responsible entities.

- Launch of **European Net Zero Industry Academies**, to be based on an assessment of skills shortages in net-zero technology industries and in full respect of Member State competence in the field of education and training.
- **Objectives:** to develop and promote the use of learning programmes, content and learning and training materials for training and education for the voluntary use by Member States' education and training providers.

Implementation Timeline

Landmarks

- **Entry into Force** — **July 2024**
- **NZIA Permitting & SPOC take effect** — **January 2025**
- **NZIA Auctions & support schemes take effect** — **January 2026**
- **NZIA PP rules take effect for all contracts** — **April 2026**

References to dates are tentative

European Commission

Thank you

Net Zero Industry Act - Website

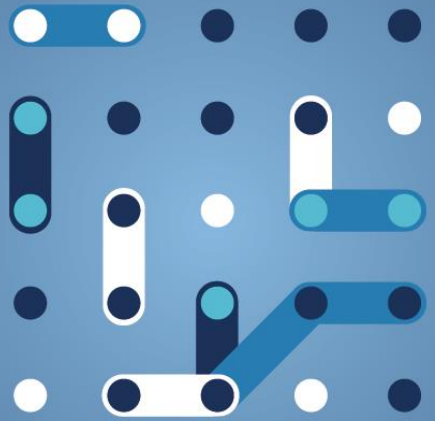
European Commission

14:50 – 15:50

WG Achievements: introduction

by DG ENER

Vincent Berrutto
Head of Unit - Digitalisation, Competitiveness, Research and Innovation, Directorate-General for Energy, European Commission



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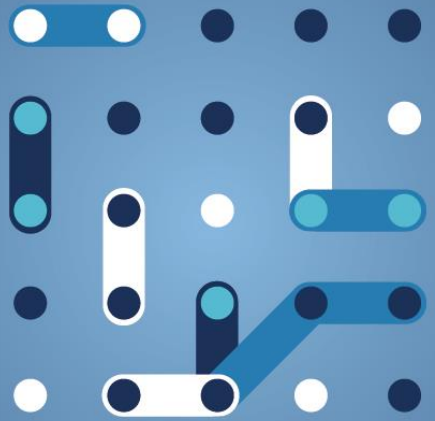
Achievements of the WGs in 2023-2024

Helena Gerard
Chair
Regulation
Working Group

Andrej Gubina
Task leader
Business Model
Working Group

Olivier Genest
Chair
Data Management
Working Group

Michael Brenner-Fliesser
Chair
Consumer and Citizen Engagement
Working Group



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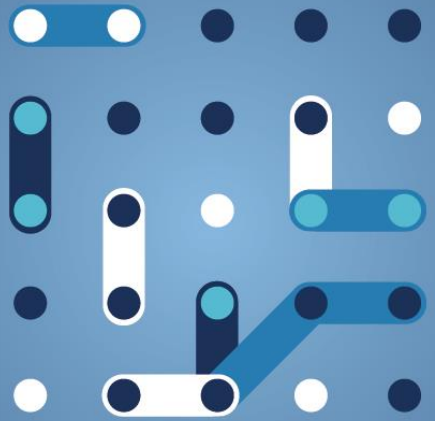


WG Regulation

The Regulation Working Group focuses on **various regulatory aspects in the energy sector to identify best practices and provide recommendations**. The Working group structures its activities addressing the regulatory challenges related to:

- **Market access** by exploring the elements that need to be addressed and would need further elaborations
- **Collective flexibility** to the grid in the context of overall market design, understanding the potential value of energy communities and peer to peer energy sharing
- **Sector coupling and integration**, addressing key barriers within the regulatory and market framework between various energy carriers and services across sectors to unlock synergies beneficial to consumers, market actors, and the overall system.
- **Market coordination and integration**, assisting system operators in grid preparation for 2030 by identifying how the absence of an integrated market hinder potential synergies in a more interconnected system, limiting the potential of recently developed energy and flexibility services, markets, and platforms
- **Data spaces**, underlining their importance in facilitating cooperation between regulated and commercial actors, focusing on definition of roles, allocation of responsibilities and clarification of regulatory aspects in this context

>65 projects

>110 people involved

WG Regulation

	Actions	Objectives	Outcome
01	Improve market access for consumers to value their flexibility	Which regulatory barriers for individual consumers exist that hinder the valorization of their flexibility via implicit and explicit flexibility mechanisms? What are possible solutions to overcome these barriers?	✓ Action has been initiated and detailed survey will be launched in Q2 2024
02	Peer-to-peer and energy sharing	What is the role of peer-to-peer and energy sharing in the overall market design? What are the barriers, and how are they an enabler for the uptake of energy communities?	✓ 13 projects contributed ✓ > 20 different types of barriers were identified Recommendations were made to tackle the main ones
03	Energy and flexibility market coordination and integration	What are existing 'market design' barriers to arrive at integrated and coordinated markets in Europe? What are possible solutions?	✓ Interactive workshop organized on 29/02 ✓ Report with preliminary recommendations ongoing ✓ Follow-up survey to deepen main topics from first analysis
04	Support the potential synergies coming from increased sector coupling	Which are current regulatory barriers that limit the potential of sector coupling and sector integration?	✓ Joint workshop with WG BM (> 50 participants) on 23/02/2024 ✓ Survey on identified barriers – 18 projects contributed ✓ Survey on best practices in projects in preparation
05	Support the system operators to prepare the grid for 2030	Which innovations are needed to advance processes and tools of network planning and network operation?	✓ Joint workshop with ISGAN WG6 organized on 11/01 - 12 projects contributed ✓ Report ongoing with main conclusions ✓ Further detailed actions TBD in support of Grid Action Plan
06	Data spaces	What are regulatory barriers to tackle in support of data spaces?	✓ Preliminary meeting organized between BRIDGE WGs and ETIP SNET (December 2023) ✓ Action to be further scoped in Q2 2024 (jointly with other WGs)

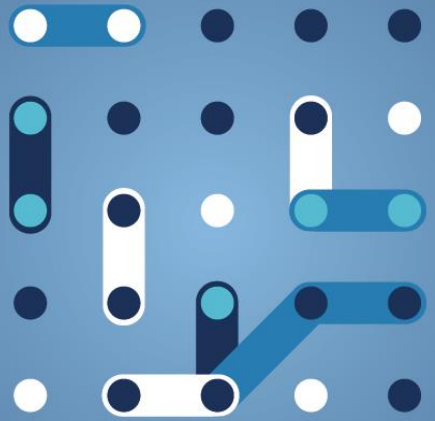
Achievements of the WGs in 2023-2024

Helena Gerard
Chair
Regulation
Working Group

Andrej Gubina
Task leader
Business Model
Working Group

Olivier Genest
Chair
Data Management
Working Group

Michael Brenner-Fliesser
Chair
Consumer and Citizen Engagement
Working Group



WG Business Models

10’

The Working Group on Business Models aims at **defining common language and frameworks around business model** description and valuation, identifying and evaluating existing and new or innovative business models from the project demonstrations or use cases. The efforts of the Working Group are directed towards two specific areas of interest, namely:

- The **design of tools to evaluate the benefit and values of the services and solutions** developed in the activities of the projects, including the investigation of the tools to capture business ideas and build the Business Model and the quantification methods for Business Models benefits of services and solution under various Use Case scenarios.
- **Designing a business model** that better incorporates the integration of the data value chain and the monetisation of data, where better observability creates additional social value.

>50 projects

>140 people involved

WG Business Model

	Actions	Objectives	Outcome
01	Investigate the tools to capture business ideas and build BM	Determine a standardized process for tools on BM, through a selection based on their features: main activities of this TF are overview and mapping of the BM tools , to identify barriers, gaps and best practices	• Most projects use the same tools (BMC, value proposition canvas) • Tools should be chosen according to the objective of the projects • Need to share experience between projects (e.g. which tool to use?)
02	Quantification methods for BM benefits of services and solution under various UC scenarios	Determine a Standardized process of using quantification methods along with the previous tools: main activities of this TF are overview and mapping of quantification methods and connection with innovative product and services to provide recommendations and best practices	• Project presentations on business models • Methodologies on economic, environmental, and social benefits • Recommendations on standardized processes for business models quantification
03	Investigate the types and characters of the data value chains in BMs of BRIDGE projects	Determine a standardized process for valorization of data through BM: main activities of this TF are to identify exploitable value from data generated within projects, and use of BM tools to identify exploitable value from data within projects	Two visuals: • Data spaces building blocks enabling the design of quantitative Business Models for smart energy. • Tentative mapping of supporting tools and services from the Bridge project perspective

Achievements of the WGs in 2023-2024

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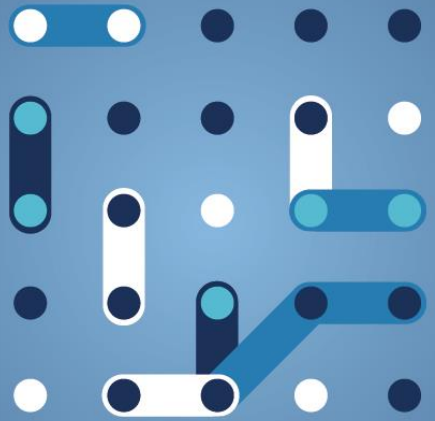

10’

WG Data Management

The Working Group on Data Management aims to cover a wide range of aspects ranging from the **technical means for exchanging and processing data** between interested stakeholders to the **definition of rules** for exchange, including **security issues** and responsibility distribution in data handling. The WG has identified 3 areas of collaboration:

- **Communication infrastructure** embracing the technical and non-technical aspects of the communication infrastructure needed to exchange data and the related requirements;
- **Cybersecurity and data privacy** entailing data integrity, customer privacy and protection;
- **Data handling** including the framework for data exchange and related roles and responsibilities, together with the technical issues supporting the exchange of data in a secure and interoperable manner, and the data analytics techniques for data processing.

>70 projects

>150 people involved

WG Data Management

	Actions	Objectives	Outcome
01	**Use Case Repository**	Provide an overall view of all the simplified and homogenized projects Use cases in a simple format; provide data set with detailed information for cross-project analysis; and **facilitate the reuse of existing use-cases** and solutions from past/on-going projects.	Test version of the UC repository included in EIRIE platform. Feedback from first users analysed to feed the backlog. Public release expected very soon.
02	**EU data exchange reference architecture (DERA)**	Contribute to the discussion and **practical steps towards truly interoperable and business process** agnostic data exchange arrangements on European scale.	Refinement and validation of Data Exchange Reference Architecture (DERA), now version 3.1, associated with recommendations on each interoperability layer and proposed modifications to data role model. Support towards implementation: instantiation of DERA in projects.
03	**Reference framework**	Develop a methodology and **reference framework to enable the interoperability within flexibility-based use-cases** but also beyond (e.g. P2P energy trading, energy monitoring, …).	Analysis of needs and expectations from projects regarding the Reference Framework. Launch of a task to define an updated Generic Actor List, in collaboration with CEN/CLC/ETSI CG-SG. Definition of guidelines for Settlement implementation.
04	**Bridge Standards User group (BSUG)**	**Gather and diffuse collective knowledge**, at system level, including outcomes such as a practices related to standards, and feedback from the scale-up and roll-out following finished projects.	BSUG meetings every month. Several webinars related to standards (see YouTube playlist). Active liaisons with CEN/CLC/ESTI CG-SG and ENTSO-E CIM EG. Identification and sharing of code components from projects, to be reused by other projects and standardisation activities.
05	**Interoperability of home appliances**	Characterize and compare the solutions used by BRIDGE projects to **achieve home appliances interoperability**. Investigates the functional commonalities of home appliances among BRIDGE projects **identifying takeaways from projects and existing standards**.	Analysis of the used approaches for home appliances interoperability in BRIDGE projects and identification of barriers. Definition of a common ground for interoperability and proposition of solutions to overcome the barriers. Identification of outcomes towards home appliance interoperability.

Achievements of the WGs in 2023-2024

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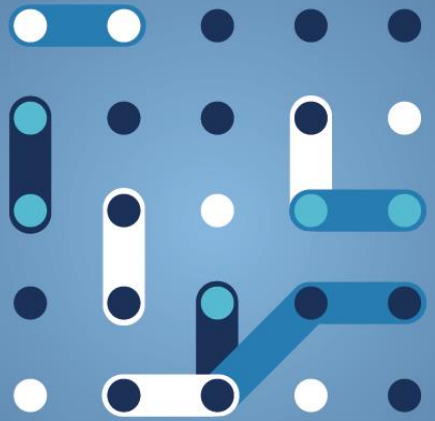


10’

WG Consumer and Citizen Engagement

The Working Group on Consumer and Citizen Engagement was established with the aim of **creating a structured cross-cutting understanding of the role and methodologies of engagement in European R&I projects** towards better understanding, triggering, and leveraging the action of consumers and citizens in the energy landscape.

Focal points are **smart tools, indicators, and engagement strategies**.

Consumers and citizens are crucial actors to consider and engage when aiming to realize a just and sustainable energy transition in Europe – and beyond.

>60 projects

>140 people involved

WG Consumer and Citizen Engagement

	Actions	Objectives	Outcome
01	Smart Tools	Analysing strategies and tools for a wider inclusion in the use of digital solutions, in terms of accessibility, affordability, and automation	• Identification of interoperability and user-friendliness as top priority for tool-development • Gaining consumer trust as crucial aspect for the sucess of smart tools • Co-creation with the users and contionous improvement leads
02	Indicators of engagement	Creating a scientific sound and practical relevant methodology of selecting and measuring indicators of engagement.	• Identification of theories of engagement for I indicators selection • Extension of collection of indicators • Special focus on the role of emotions within engagement
03	Strategies of engagement	Understanding the main categories of engagement strategies applied in European Energy projects and identifying challenges associated with these strategies	• Identification of 5 main categories of strategies of engagement • Engagement strategies should be best understood as a circular process with 4 phases • Current engagement strategies are typically not very inclusive

WG Consumer and Citizen Engagement

Johanna Hoeffken will step down as Chairwoman and
Michael Brenner-Fliesser will take over in the role of WG chair

Thank you Johanna
for your great work!!

European Commission

Q&A Session

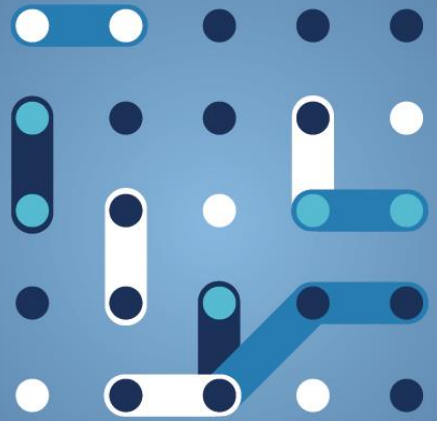
The event code is # 3315732

Scan the QR code or click here to access the Sli.do and **raise your questions**

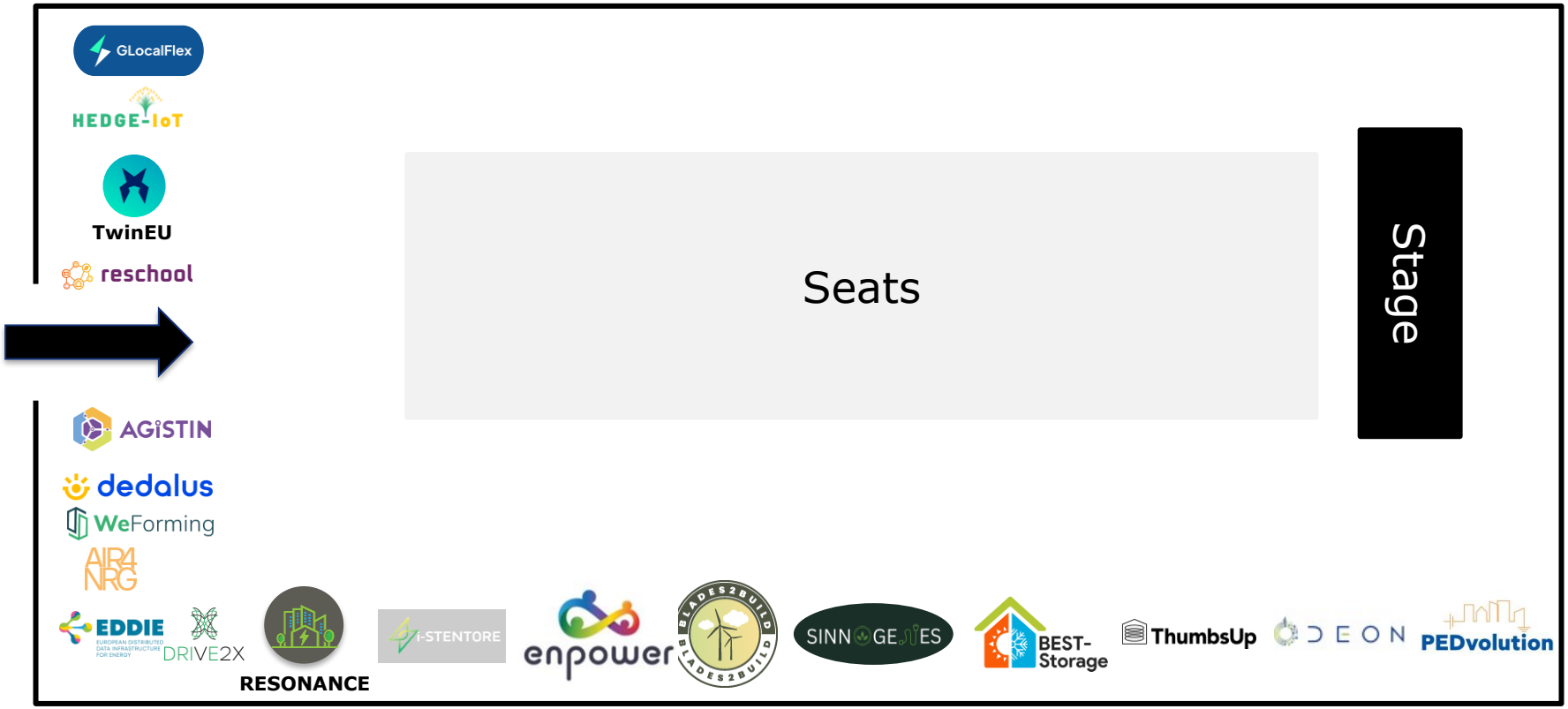
15:50 – 16:30

Networking Coffee & new BRIDGE projects showcasing

Meet here at 16:15



Showcase of new projects



16:30 – 17:00

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Showcase of 6 BRIDGE completed projects

PLATONE
Antonello Monti

OneNet
Antonello Monti

TRINITY
Manuel Serrano

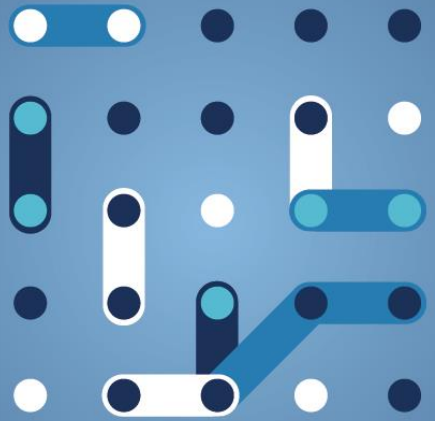
X-Flex
Manuel Serrano

EUniversal
Kris Kessels

ebalance-plus
Krzysztof Piotrowski

Moderated by

Fabio D'Aversa
Senior Advisor at PwC



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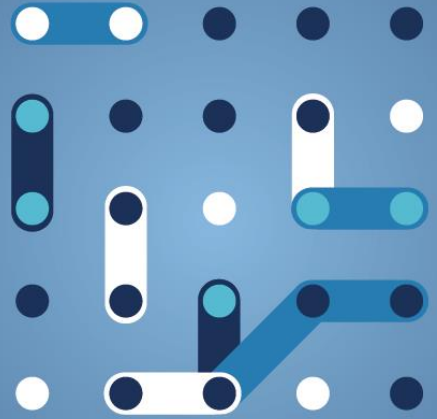

Timing: 5 min

Platone

Advanced Grid Management, Customer Inclusion, Local Flexibility

Objectives

PLATONE provided a seamless integration of operation and market simplifying the life of customers, distribution grid operator and aggregators, thanks to a multilayer platform architecture collecting data on the edge and delivering secure information both to Distribution Management Systems and to an open Marketplace for service provision.

Consortium

RWTH Aachen, acea Energia, areti, Avacon, BAUM, Engineering, RSE, HEDNO Siemens, NTUA, E.DSO, Apio

Organizational aspect

9,6 mln

1.10.2019 (start) - 30.09.2023 (end)

Initial TRL: 4-5
Final TRL: 7-8

Platone

Achieved outcomes and KERs

Key results is the Platone Open Framework based on the DSO Technical Platform as an open source solution for advanced grid management.
Other relevant KERs:

- Light Node and Blockchain Access layer
- Local Flexibility Market Platform
- Low Cost PMU
- Probabilistic Load Forecasting tool and Distributed Optimal Power Flow
- Flexible Network Tariff and State Estimation Tool
- Software Package for Use Case Description
- Educational video series

Impact and post conclusion results

The Platone Open Framework has been adopted by the italian regulator for the testing of flexibility market in Italy

The DSO Technical Platform is now a project in the Linux Foundation Energy and it has been commercially adopted by areti and other grid operators

Benefits from BRIDGE

Harmonization in use case description with the correspondent development of an appropriate software package

Work in the definition of the new version HEMRM for role models definitions

Lessons learnt & Best practices

- Real life experience in implementing local flexibility market
- Experiencing key role of open source in speeding up adoption of innovative solutions
- Creating appropriate conditions for customer engagement
- Coordination with local regulator for rapid adoption

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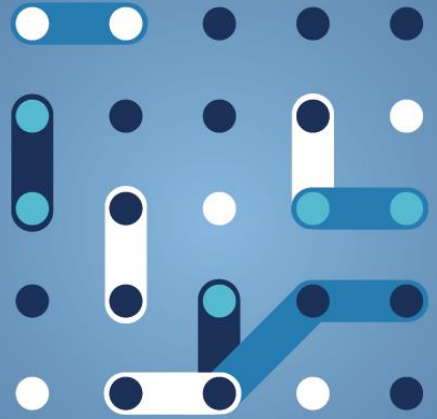

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OneNet

European Single Market, TSO-DSO-Customer coordination

Objectives

OneNet developed an **open and flexible architecture** to transform the actual **European electricity system**, which is often managed in a fragmented country- or area-level way, into a pan-European smarter and more efficient one, where market and network technical operations are reciprocally coordinated closer to real time i) among them, ii) across different countries iii) while maximizing the consumer capabilities to participate in an open market structure.

Consortium

Fraunhofer FIT Coordinator together with other 71 partners to cover a long list of grid operators across Europe

Organizational aspect

23 mln (EU funding)

01.10.2020 (start) - 31.03.2024 (end)

Initial TRL: 4-5
Final TRL: 7-8

OneNet

Achieved outcomes and KERs

- Development of the **OneNet Framework**
- Development and implementation of the OneNet **connector and middleware**
- Harmonized market products
- **Harmonization and organization of use cases** developed by previous EU projects
- Creation of the GRIFOn exchange concept
- Several local achievement in the long list of national demonstrations

Impact and post conclusion results

The OneNet Framework together with the Connector are becoming an **open source project in the LF Energy**. The Connector has been adopted by several new projects that are continuing the development. The connector anticipated the development of the **Common European Energy Data Space**.
Commercial adoption expected in 2024

Benefits from BRIDGE

Deep involvement in the Data Management Working group to develop solutions that could be quickly adopted

Deep involvement in the Regulation Working Group to align the work in the development on harmonized market products

Lessons learnt & Best practices

- Possibility to **work at continental level** while keeping in consideration the local requirements
- **Anticipating the role and concepts behind Data Spaces**
- Developing a **new concept of dissemination** to foster rapid adoption
- **Pushing the role of open source** to make sure results go beyond funding period

European Commission

Showcase of 6 BRIDGE completed projects

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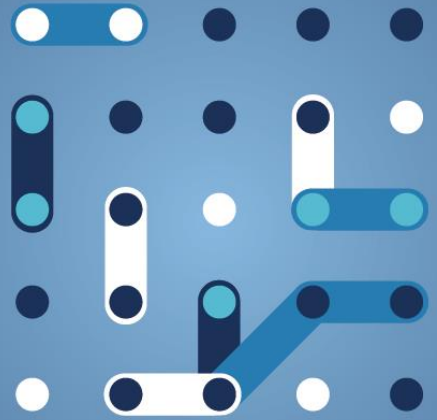

Timing: 5 min

Trinity

TSO, Cross-Border, Power Exchange, Digitalization, RES

Objectives

TRINITY is a project that **enhanced cooperation and coordination among the Transmission System Operators of South-Eastern Europe** (SEE) in order to **support the integration of the electricity markets** in the region, whilst promoting **higher penetration of clean energies.**

Consortium

ETRA INVESTIGACION Y DESARROLLO SA; JOINT STOCK COMPANY ELEKTROMREZA SRBIJE BELGRADE; CENTAR ZA; KOORDINACIJU SIGURNOSTI SCC DOO BEOGRAD-VOZDOVAC; RTE RESEAU DE TRANSPORT D ELECTRICITE SA; ELEKTROENERGETSKI KOORDINACIONI CENTAR DOO; SEEPEX JOINT STOCK COMPANY BELGRADE; CENTRUL ROMAN AL ENERGIEI – CRE; INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS; BERZA ELEKTRICNE ENERGIJE DOO PODGORICA; CRNOGORSKI ELEKTROPRENOSNI SISTEM AD PODGORICA; NEZAVISNI OPERATOR SISTEMA U BOSNII; HERZEGOVINI; KONCAR – DIGITAL; OPERATOR NA ELEKTROPRENOSNIOT SISTEM NA MAKEDONIJA AKCIONERSKO; DRUSHTVO ZA PRENOS NA ELEKTRICHNA ENERGIJAI UPRAVUVANJE SO ELEKTROENERGETSKI; ELEKTROENERGIEN SISTEMEN OPERATOR EAD; UNIVERSITY ST KLIMENT OHRIDSKI BITOLA; HUPX MAGYAR SZERVEZETT VILLAMOSENERGIA-PIAC ZARTKORUEN MUKODO RESZVENYTARSASAG; BULGARSKA NEZAVISIMA ENERGIJNA BORSA EAD; TERNA ENERGY AE; INSTITUT MIHAJLO PUPIN

Organizational aspect

9.85M €
funding
3.1M € budget

01.10.2019 (start)
– 30.09.2023 (end)

Initial TRL: 5
Final TRL: 8

Trinity

Achieved outcomes and KERs

T-MARKET COUPLING FRAMEWORK: This platform consists of four separate modules covering different areas: intra-day electricity trade, trade of a common regional capacity reserve, bilateral trading and Guarantees of Origins trading.
T-RES CONTROL CENTRE: It supports RES producers in the SEE region on the real-time supervision and control of large RES production units.
T-SENTINEL TOOLSET: TRINITY delivered a product for regional management and operation that will enhance existing regional structures managed by SCC in their capacity as Regional Security Centre (RSC).
T-COORDINATION PLATFORM: The T-COORDINATION PLATFORM tool is a distributed modular ICT platform which would serve for RSC-TSOs and for TSO-RES producers communication and coordination.

Impact and post conclusion results

- The **wind predictive maintenance methodology** that was tested in the Greek and Croatian pilot achieved benefits of **up to 15.000€/MW per year**.
- **Decrease of price volatility** on intraday markets.
- **Increase of price convergence**.
- **Reduction of Redispatching Costs** from 10% up to 66%.

Benefits from BRIDGE

To **contact other projects** also working with TSOs in order to **exchange knowledge.**

To **check Business Models from other RES related projects.**

Lessons learnt & Best practices

- Modular architecture design.
- Implementation of Kubernetes for deploying some modules.
- Skilled personnel / knowledge is needed for integration, proper training and knowledge-sharing initiatives.
- Redesign and regulatory changes needed for cross-border share.

Showcase of 6 BRIDGE completed projects

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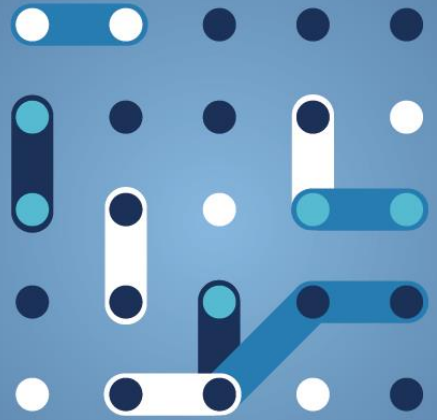

Timing: 5 min

X-Flex

Energy collection, conversion and storage, renewable energy, battery, power to heat, power to cold, demand response, DRES, holistic approach.

Objectives

- To provide the optimal combination of decentralised flexibility assets, to maintain a stable and secure electricity grid with a growing penetration of RES.
- To develop new market mechanisms, providing benefits to all the actors of the smart grid and energy market, offering an all-win scenario.

Consortium

ETRA I+D, UNIVERSITY OF LJUBLJANA, PETROL, ELEKTRO CELJE, ALBENA, ESO, ICCS, HEDNO, SUITE5, BLUEPRINT ENERGY, SUNLIGHT SOLUTIONS, JOANNEUM RESEARCH

Organizational aspect

7.3 M€ funding
9.5 M€ budget

01.10.2019 (start)
– 30.09.2023 (end)

Initial TRL: 5
Final TRL: 8

X-Flex

Achieved outcomes and KERs

GRIDFLEX: The tool for grid and microgrid operators to prevent congestion and power quality problems with the increasing share of intermittent RES. The tool will use flexibility as an alternative to network reinforcement when it is more cost-efficient than traditional reinforcement of the network.

SERVIFLEX: The tool for flexibility managers to take advantage of the value of flexibility resources towards the establishment of a holistic framework for flexibility extraction, profiling, forecasting, classification, clustering and management to serve different market and grid needs.

MARKETFLEX: This tool enables final consumers and prosumers to access and participate on different energy markets, such as wholesale market, local energy market or ancillary services market for TSO or DSO.

Impact and post conclusion results

- Impact 1: **Enhance the flexibility** of distribution grids with high RES shares.
- Impact 2: **Establish a local electricity market** which creates business case for stakeholders
- Impact 3: **Improve the capability to manage future energy loads** including EVs
- Impact 4: **Improve distribution grid operations**, avoiding unnecessary investments by solving congestion

Benefits from BRIDGE

The knowledge generated and exchanged thanks to BRIDGE initiative has been very valuable for X-FLEX project activities and helped to **identify obstacles to innovation in collaboration with other related projects**.

The BRIDGE **Use Case repository** (Action 1 of DM WG) has been based in X-FLEX Use case definition process.

Lessons learnt & Best practices

- **Skilled personnel** / knowledge is needed for integration, proper training and knowledge-sharing initiatives.
- Lock-in in the current (industrial) system hampers replication
- **Redesign and regulatory changes** needed for small-scale flexibility markets.
- **Basic technology** (smart meters, controllers..) needs to be in place otherwise replication is quite difficult.
- **User-friendly interface** and modular design of tools, increase potential for replication.

Showcase of 6 BRIDGE completed projects

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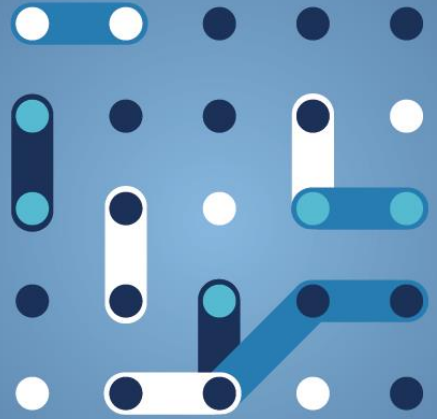

Timing: 5 min

EUniversal

Local Flexibility Markets, Consumer Engagement, DSO-toolbox, UMEI

Objectives

Facilitate the implementation of a flexibility market by addressing key challenges.

1) Develop a universal approach to interact with stakeholders (= information exchange) on a flexibility market without central platform
2) Develop a toolbox for DSOs to support them in increasing grid observability, needs forecasting, network planning and optimal bid selection.
3) Increase Flexible Service Provider (FSP) engagement
4) Identifying relevant market mechanisms for flexibility procurement

Consortium

Organizational aspect

9,774,227.50 €

01.02.2020 (start) – 30.11.2023 (end)

Initial TRL: 4-7
Final TRL: 5-9

EUniversal

Achieved outcomes and KERs: EUniversal KER overview

1) **UMEI, standardizing data exchanges among all market actors through OpenAPI specifications**
➔ **The UMEI step by step opensource available with manual** (software)
2) **DSO toolbox with 13 tools for network operation and planning, each having an individual business/exploitation plan, ranging from** (software)
3) **Improved aggregation algorithm for local flexibility markets** (software)
4) **Market design: improvement insights on different market mechanisms and dynamic tariffs** (knowledge)

Impact and post conclusion results

- UMEI allows stakeholders to focus on their business processes, **lowers IT efforts**, **eases market switching** for participants and **enables direct data sharing** between stakeholders.
- Being able to see **two platforms** with radically different market designs rely simultaneously on the same standard, interact with the same stakeholders in the same regions
- The EUniversal tools **improved observability of the distribution network** through more **data-driven approaches**, avoiding heavy investments in LV network monitoring equipment and taking advantage of smart metering.

Benefits from BRIDGE

Avoiding Redundancy: By sharing what each project has done, we could identify overlapping efforts and avoid duplicating work, thereby optimizing resources.
Quality Improvement: Analyzing the methodologies and approaches employed by other projects enabled us to identify best practices and adopt them to enhance the quality of their own work.
Increased Efficiency: Leveraging insights from other projects leads to process improvements and optimization, resulting in increased efficiency and productivity. For instance, we gained insights on data sharing and standard interfaces.
Stimulating Continuous Improvement: Encouraging open dialogue and knowledge sharing fosters a culture of continuous improvement

Lessons learnt

- **Market based solutions** for DSO services are possible without sharing detailed network information (e.g. concept of dynamic flexibility areas)
- **API-standardization** is needed but requires more market standards. Tools thus need to be adaptable in the short-run.
- **GDPR and consumer engagement** need to be accounted for early in the process
- **Improving DSO capability of forecasting and detecting** problems in MV & LV networks is key for enabling an effective use of flexibility

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Showcase of 6 BRIDGE completed projects

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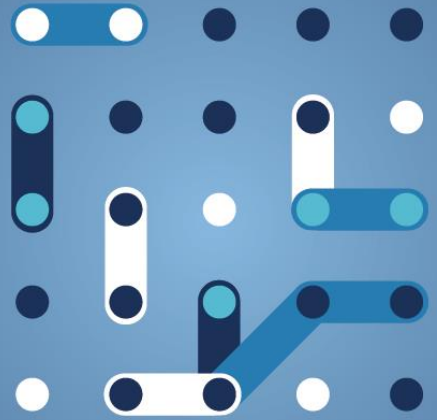


Timing: 5 min

Ebalance-plus

Grid resilience, Grid flexibility, Consumer engagement, Prosumers, DER, Electric Smart Storage, Smart Grid, Energy market

Objectives

To **develop smart-grid solutions to increase the energy flexibility and the electric grid observability**, providing new services for distribution grid operators, transmission system operators, aggregators, energy retailers, DER managers, building facility managers, prosumers, and consumers, empowering them with more functionalities to interact with the grid and manage the energy flows.

To **increase the use of flexibility** and **resilience** of energy networks, by means of an **energy balancing platform,** which integrates smart production, storage and consumption technologies.

Important aspect of the project is its **social and market orientation**. From the outset, the project takes into account **users' needs and concerns in terms of energy usage and innovation.** This increases the chances of the market adopting the technology.

Consortium

CEM, IHP, DTU, IPI, UMA, SOF, EMT, UNC, JUNIA, ESCI, MGC, ENF, TPS, AMP, REN (15 partners from 10 countries)

Organizational aspect

Funding: 8 M€
Budget: 9.4 M€

01.02.2020 (start) - 31.01.2024 (end)

Initial TRL: 4-5
Final TRL: 7

Ebalance-plus

Achieved outcomes and KERs

#	KER	Type
1	Energy balancing platform	Knowledge, Product/Service
2	Energy mobile app	Products/Services
3	Smart-storage solution to unlock and manage building flexibility	
4	Prediction models	
5	Cloud-based Microgrid Optimization Platform	
6	Integrated Smart Hubs - solar carparking, battery energy storage and V2G electric vehicle charge management	
7	Grid control and automation units	
8	Control and optimization models for energy management systems	Knowledge

Exploitation pathway **KER1**: A Special Purpose Vehicle is created by the consortium partners that licenses the ebalance-plus offering to an *energy supplier/retailer* to **operate additionally as a DR aggregator.**

Impact and post conclusion results

- **Key economic impacts:** New cutting-edge products/services; Increase competitiveness of EU SMEs on a global scale; Increase of self-consumption
- **Key societal impacts:** Increase in highly skilled jobs (energy and ICT); New knowledge in innovation and research; Reduction of energy poverty
- **Key environmental impacts:** Reduction of emissions through use of RES; Optimization: Increase of decentralization, energy produced locally, reduction of technical losses.

Benefits from BRIDGE

Sharing the experience and projects' cooperation is the key!

Lessons learnt & Best practices

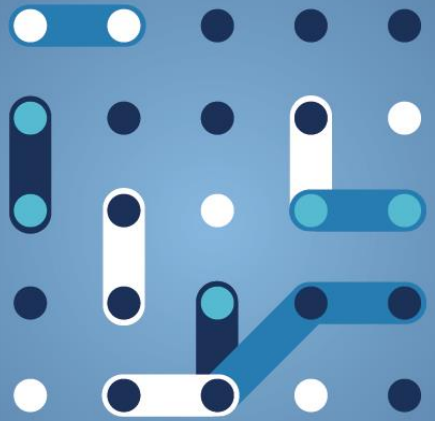
- DSOs still have a number of real problems; they **need more visibility** in their grids and DER management.
- Energy Mgmt Systems and electric devices are **not ready to manage flexibility**: interoperability and standards are needed.
- **Aggregation and optimisation** are crucial, but we do need to raise customer awareness. (Raising customer awareness does not mean creating new problems for users!)
- Energy retailers could integrate **flexibility schemes** in the bills.
- BMs need to include quantified value propositions to users.
- There is still a need for **new regulations / new energy acts**, especially for new local flexibility-based markets.

17:00 – 17:30

BRIDGE Challenge: Interactive session

by All BRIDGE Members, moderated by the Secretariat

Fabio D'Aversa
Senior Advisor at PwC



BRIDGE Challenge: Interactive session

The event code is # 3315732

Scan the QR code or click here to access the Sli.do and contribute interactively to the **BRIDGE Challenge**

BRIDGE Challenge: Interactive session

Given your experience in BRIDGE, what would you wish to see for 2024?

Topics

Data related aspects

Risk analysis

Cyber Security

Smart Interoperability

Artificial Intelligence

Energy Data Spaces

Energy related aspects

Non-electrochemical batteries

Energy Storage

Energy mapping

Grid balancing

Supply chain related aspects

LNG and H2 supply networks

Cold-to-power solutions

Cold supply chain

Industrial refrigeration capacities

Others

Cooling networks

Active employment of citizens

Mobility

EVSE availability

V2X interaction

Organizational aspects

Interactives tools to collect inputs during meetings

Harmonization

Case studies

Collaboration with external Initiatives

Involvement of external guests

WG Cross-collaboration

Interaction between WGs subgroups

Capacity building events

Knowledge Sharing

Networking opportunities

Dissemination of good practices and lessons learnt

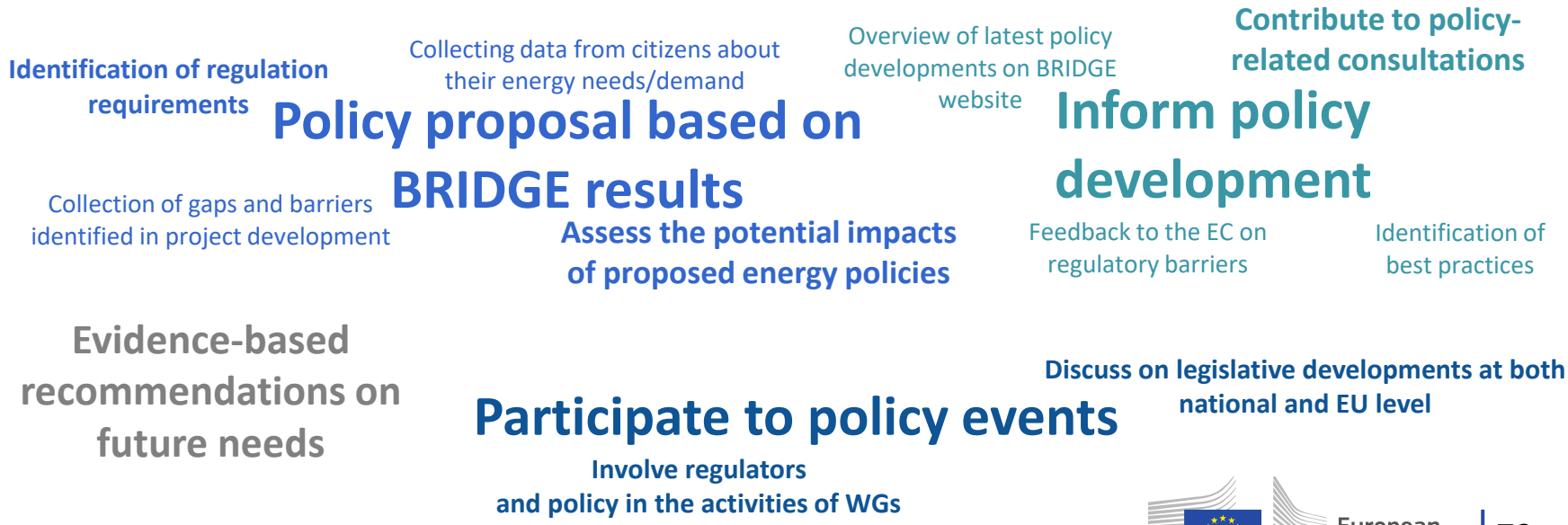
Website showcasing projects results

Results upscaling tools

BRIDGE Challenge: Interactive session

How could BRIDGE contribute best to support the latest policy developments in energy?

Insights collected from the survey



BRIDGE Challenge: Interactive session

Which BRIDGE best practices should be replicated and maintained in the future?

Insights collected from the survey

Interactive tools for meetings

Knowledge sharing

Diffusion of best practices

Cross actions which enables projects to cooperate on relevant topics

Sharing projects results

Interactive discussions across projects

Cross-WG collaboration

Mentorship programme

Use case repository

Incentives for partners that participate in BRIDGE

Synergies with external initiatives

Policy recommendations to the EC

Quantification of business models

Bottom-up approach to identify topics and research questions

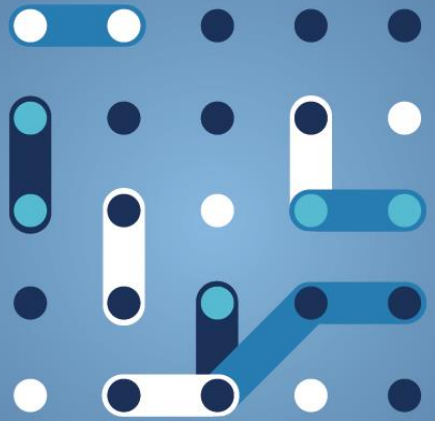
17:30 – 18:00

Spotlight Session on other initiatives

Norela Constantinescu
ETIP SNET
Co-chair

Mark Stefan
ISGAN, AIT

Peter Horvath
DG ENER



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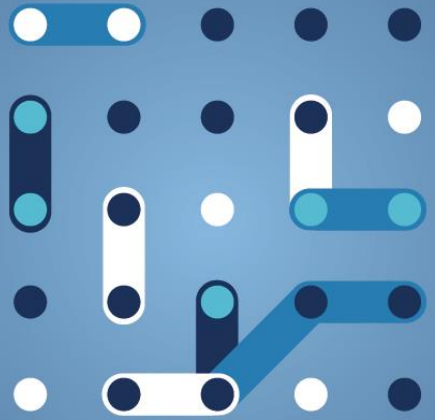


17:30 – 17:40

ETIP SNET

European Technology and Innovation Platform
Smart Networks for Energy Transition

Presentation of the ETIP SNET initiative

ETIP SNET

Vision and mission

Vision

Established with the vision of revolutionizing Europe's energy systems, the European Technology and Innovation Platform on Smart Networks for Energy Transition (ETIP SNET) focuses on **fostering collaboration between key stakeholders to guide research, innovation and development in smart energy networks**, ensuring that they are efficient, resilient and capable of meeting modern demands.

Mission

1. Develop **tools, solutions and technologies** for the creation of smart grids
2. Identify **innovation barriers**, related to **regulation and financing**
3. Bring together a **multitude of stakeholders and experts** from the energy sector
4. Update **Visions, Roadmaps and Implementation Plans** to bring consolidated stakeholder views on R&I for Smart network for the energy transition
5. Develop **knowledge-sharing mechanisms** that help bringing R&I results to deployment
6. Coordinate with other Initiatives at National, European and International level to **reinforce the alignment of R&I priorities and needs**

ETIP SNET

Governance of the initiative

ETIP SNET, an EC initiative, unites energy sector stakeholders and experts to **guide RD&I** for Europe's energy transition beyond smart electricity grids.

Its governance offers agile and efficient operation amongst the **5 permanent Working Groups**.

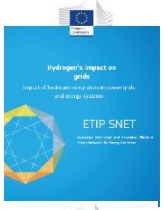
200 STAKEHOLDERS and **EXPERTS**

- *European associations*
- *Industry associations*
- *Large companies, Mid caps, SMEs, start-ups*
- *Research Centres*
- *Universities*

ETIP SNET

Working Group policy papers published in 2023

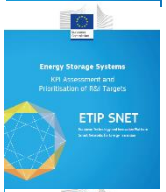
WG1



Hydrogen's impact on grids - Impact of hydrogen integration on power grids and energy systems

The report, published by WG1 in **July 2023,** focuses on the impact of hydrogen on electricity grids, underlining the importance of clear discussions on hydrogen options and the need for regulations for hydrogen systems.

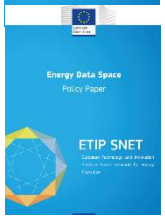
WG2



Energy storage systems - KPI assessment and prioritisation of R&I targets

The position paper, published by WG2 in **March 2023** analyses different energy storage and conversion technologies, highlighting their benefits, potential applications and specific challenges, while prioritising and proposing specific actions to address them.

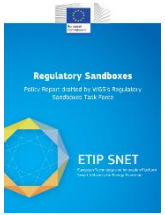
WG4



Energy Data Space policy paper

The policy paper, published by WG4 in **December 2023,** provides a short technical introduction to the topic of Energy Data Spaces and provides references for a deeper analysis, focusing on the identified opportunities, challenges and necessary actions for a rapid deployment of a common European Energy Data Space.

WG5



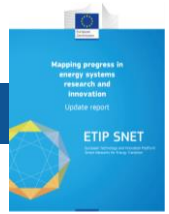
Regulatory sandboxes policy paper

The policy paper, published by WG5 in **July 2023**, examines regulatory sandboxes in the energy sector, and outlines their essential role in promoting innovation and competition, by presenting successful examples of regulatory sandboxes in different countries and preferred tools for conducting experiments.

ETIP SNET
Deliverables in 2023

ETIP SNET published **3 documents** that consolidate the views of more than **350 stakeholders** to **guide and identify research and innovation R&I priorities** and address the innovation challenges for the energy system:

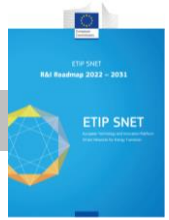
1



Mapping progress in energy systems research and innovation

Evaluates the progress of European Research and Innovation projects in relation to the ETIP SNET R&I Roadmap and the ETIP SNET Implementation Plans. The current report was published in **July 2023** as a continuation of the progress monitoring report published in 2021.

2



ETIP SNET R&I Roadmap

Describes the 10-year path towards a decarbonised energy system and is regularly revised.
The current Roadmap version was published in March 2023, and covers the 2022-2031 time horizon

3

ETIP SNET R&I Implementation Plan

Describes in more detail the most urgent R&I needs for the next 3-4 years and is revised every 2 years. The current Implementation Plan version was published in **August 2023** covers the 2025-2028 timespan with a total overall proposed budget of 954 M€ for R&I

ETIP SNET

Work planned for 2024

WG	Deliverables in pipeline
WG1 – Reliable, economic and efficient energy system	• Energy infrastructure planning • Energy Communities' impact on grids
WG2 – Storage technologies and system flexibilities	• District Storage
WG3 – Flexible Generation	• Ramp-up hydrogen based power generation • Ramp up of RE generetion and effects on system level
WG4 – Digitalisation of the electricity system and customer participation	• Digital skills • Citizen engagement playbook
WG5 – Innovation implementation in the business environment	• Energy communities as catalysts of energy transition

NEW FOCUS AREAS

01	**Grid integration of sustainable transport**
02	**Innovation Implementation to the grid**
03	**Enhance System Supervision and Control including Cyber Security and IOT**
04	**Flexibility provision by domestic and industrial sector**
05	**Sustainability of materials, supply chains and technologies for the future power system**
06	**Upskilling**

ETIP SNET

Possible synergies with BRIDGE

01 Organise cross-WG meetings with ETIP SNET and BRIDGE to share best practices and R&I projects results

02 Draft joint ETIP SNET and BRIDGE reports, including both policy and implementation aspects

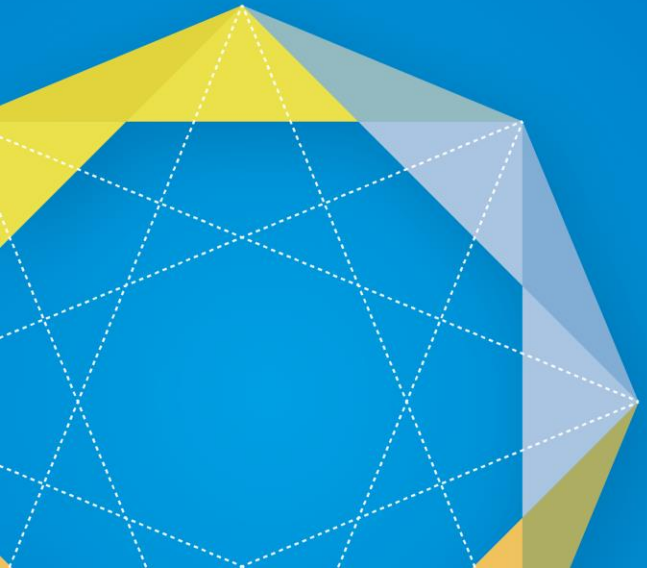
03 Leverage the stakeholder network of each initiative to foster the dissemination of results

European Commission

ETIP SNET

European Technology and Innovation Platform
Smart Networks for Energy Transition

Thank you!



Spotlight Session on other initiatives

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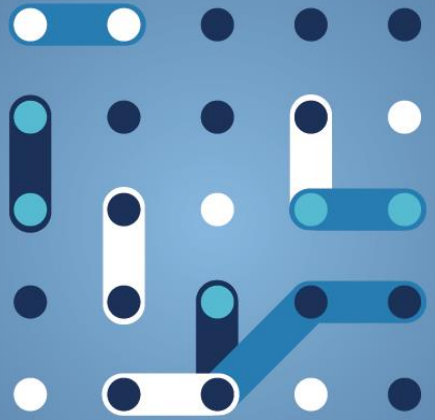


CLEAN ENERGY MINISTERIAL
Advancing Clean Energy Together

iea-isgan.org

ISGAN
INTERNATIONAL SMART GRID ACTION NETWORK

ISGAN International Smart Grid Action Network

Mark STEFAN, AIT Austrian Institute of Technology GmbH

09. April 2024

ISGAN in a Nutshell

ISGAN is the short name for the *International Energy Agency* (IEA) *Technology Collaboration Programme* (TCP) for a Co-operative Programme on Smart Grids (ISGAN – *International Smart Grids Action Network*).

It is also an initiative of the *Clean Energy Ministerial* (CEM) and was formally established at CEM2 in Abu Dhabi, in 2011 as an Implementing Agreement under a framework of the *International Energy Agency* (IEA).

The *International Smart Grid Action Network* (ISGAN) creates a strategic platform to support high-level government attention and action for the accelerated development and deployment of smarter, cleaner electricity grids around the world.

ISGAN in a Nutshell

- ISGAN currently consists of 27 Contracting Parties.
  Their nominated representatives form the Executive Committee headed by the Presidium, assisted by two co-Secretariats and the Operating Agent of ISGAN.
- The work of ISGAN is divided into 6 active Working Groups (WG)

Co Secretariat & Operating Agent

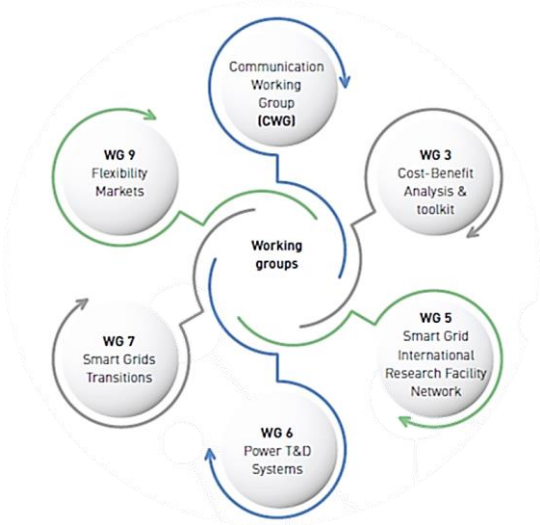
AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

ISGAN Presidium

ISGAN Executive Committee

Co Secretariat

KSGI Korea Smart Grid Institute



ISGAN Presidium

Russell Conklin	Wickie Lassen Agdal	Luciano Martini	John K. Ward	Atul K. Bali
ISGAN Vice Chair U.S. Department of Energy, U.S.A.	ISGAN Vice Chair Advisor, M.Sc. Centre for Energy Administration	ISGAN Chair Ricerca Sul Sistema Energetico S.p.A, Italy	ISGAN Vice Chair Research Director Energy Systems Energy CSIRO	ISGAN Vice Chair Director NSGM and Group Director EGSM
Russell.Conklin@hq.doe.gov	wbl@ens.dk	Luciano.Martini@rse-web.it	john.k.ward@csiro.au	atulbali@powergrid.in

ISGAN Executive Committee

The ExCo is a **decision-making body** of the ISGAN All members are nominated by the ISGAN Contracting Parties.

The ExCo sets the ISGAN annual **strategy and objectives** and takes **operational decisions.**

The ExCo is also responsible for setting-up and disbanding of Working Groups (working groups), **approval of their working scope and reports**; appointment of Working Group Operating Agent and Lead.
As the need arises, it may also set up ad hoc working groups for specific matters.

If you want to contribute to ISGAN's work you need to get in contact with your national representative, which can be found on the Website:
ISGAN. All Rights Reserved. - Members (iea-isgan.org)

Our work

ISGAN activities build a global understanding of smart grid, address gaps in knowledge and tools, improve peer-to-peer exchange and recognize excellence

- No direct technology development or demonstration activities
- Develop protocols, tools and best practices, identify environmental issues and mitigation options
- Focus on exchange and dissemination of information and perspectives
- A global benchmark and collaborative attitude among participating countries
- Indicate to emerging economies the technological alternatives available for their own development

Our work

The activities of ISGAN are organized into six Working Groups.

The Working Groups are standing working groups continuously dealing with certain topics and updating their plans and objectives for the upcoming year at spring ExCo meetings.

The Communication Working Group brings all tasks concerning communication and dissemination of ISGAN results together.

#	Working Group Manager	Country
CWG	University Comillas	Spain
3	University of Cagliari	Italy
5	DERLab	Germany
6	Research Institutes of Sweden, RISE	Sweden
7	AIT - Austrian Institute of Technology	Austria
9	Department for Business, Energy & Industrial Strategy	UK

Communication Working Group – CWG

- Synthesis of findings for stakeholders (Policy Messages)
- National priorities and best practices (Survey of drivers and priorities, Case-books, Events)
- Structured knowledge exchange (Knowledge Sharing Projects (KSP))
- Virtual learning (Webinars)
- Outreach and liaison functions (other IEA organizations and CEM initiatives)
- Public media (Website and Social Media content, Press releases)

Working Group 3 – Cost Benefits

Smartgrideval tool
Online (free!) tool for supporting decision makers in project assessment
Identification of the best smart grid option complying with international guidelines on project assessment (i.e. EU Joint Research Centre - JRC), taking into account 3 different areas:

- Economic
- Smart grid
- Externalities

Multi Criteria Analysis – Cost Benefit Analysis approach

CBA
Monetary evaluation

MCA
Non-monetary evaluation

Recent publications

Strategic decision-making support for distribution system planning with flexibility alternatives (JOURNAL)
Link: www.sciencedirect.com/science/article/pii/S2352467723001467
A multi-objective approach to design integrated multi-energy systems for efficient and sustainable decarbonization at the regional level (POSTER): meetingorganizer.copernicus.org/EGU23/EGU23-5983.html

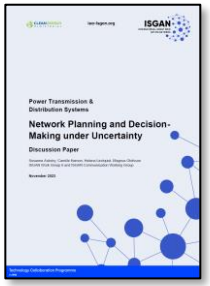
WG Manager

Working Group 5 – SIRFN Testing Labs

- Research and testing facilities, test beds, testing projects: identification of collaboration opportunities among test facilities, state of the art testing practices, identification of testing protocols needing attention
- Strong and active community of researchers engaging in applied research and impactful work on Smart Grids testing: DER, power systems, microgrids, protocols for advanced inverter functions for PV and storage integration etc.
- Smart Grid Modelling: Server and interfaces to use these systems and topologies. SunSpec Alliance System Validation Platform, to reduce barriers to testing in emerging / developing economies
- Open-source software tools, test cases and procedures to be used by DER vendors, universities, research institutions, certification laboratories, standards organizations, etc.

Lead WG Manager

Working Group 6 – Power Systems



Working Group 7 – Transitions

Smart Grid Transitions on Institutional Change

Transition processes
policy instruments and governance processes incl. regulatory experimentation as a policy instrument of regulatory learning

Future models and translation function
between domains role and implementation of the public sector in security of supply and the operation of critical infrastructures

Structures of institutional change
regulation, tariff setting and incentives in smart grids

WG Manager

Working Group 9: Flexibility Markets- development and implementation

- The aim of WG 9 is
  - To enrich and disseminate participant's understanding of flexibility market design
  - To create and curate an evidence base all can draw upon to support decision making in the flexibility market space
  - To further the debate on best practice in market design
- It is structured in the following three topics:
  - End-Use Flexibility Characterization and Grid Utilization
  - Interoperability
  - Operational and Long-term Planning

WG Manager

ISGAN Award of Excellence (AoE)

Since 2014 ISGAN, in partnership with the Global Smart Grid Federation (GSGF), recognizes and showcases leadership and innovation through an annual **ISGAN Award of Excellence** competition

The international jury panel recognizes excellence in innovation, integration, and transformation of smart grid systems, by selecting winning projects based on their potential impact, economic rationale, potential for replication or adaptation, innovation and other benefits.

Partnerships

- ISGAN's current partners include:
  - International Energy Agency
  - Clean Energy Ministerial
  - Global Smart Grid Federation
  - 21st Century Power Partnership
  - Clean Energy Solutions Center
  - Mission Innovation Power Mission

GSGF Global Smart Energy Federation

MISSION INNOVATION accelerating the clean energy revolution

iea International Energy Agency

21st Century POWER PARTNERSHIP

CLEAN ENERGY SOLUTIONS CENTER ASSISTING COUNTRIES WITH CLEAN ENERGY POLICY

CLEAN ENERGY MINISTERIAL Accelerating the Transition to Clean Energy Technologies

For more information

ISGAN Website:
www.iea-isgan.org

ISGAN Chair,
Luciano Martini:
Luciano.Martini@rse-web.it

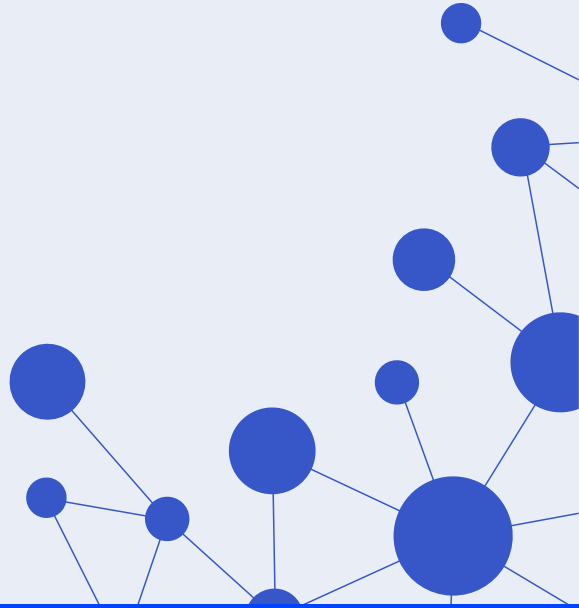
ISGAN Operating Agent:
ISGAN@ait.ac.at

Clean Energy Ministerial:
www.cleanenergyministerial.org

IEA Energy Technology Network:
https://www.iea.org/tcp/

Thank you

Mark STEFAN



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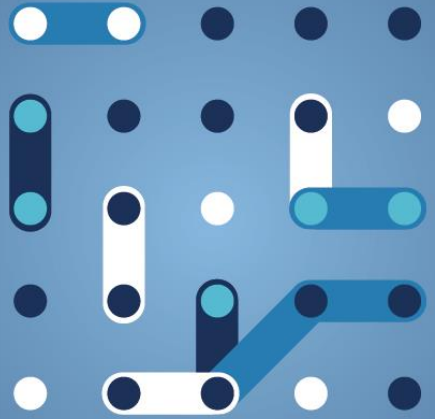
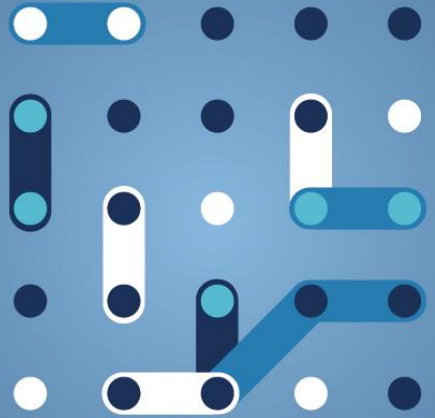


17:50 – 18:00

DG ENER international engagements

Group photo

Please come on stage!



Networking Aperitivo