CLEAN ENERGY MINISTERIAL
Advancing Clean Energy Together

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ISGAN
INTERNATIONAL SMART GRID ACTION NETWORK

FLEXIBILITY FOR RESILIENCE AND POWER SYSTEM STAKEHOLDER INTERACTION: INSIGHTS FROM PILOT PROJECTS

JOINT WORKSHOP

The electrical energy system is transitioning in the way that electricity is generated, transmitted and distributed. Due to these changes, system operators are faced with various challenges (technical, ICT, regulatory and economic) to accommodate new technologies due to the drive toward modern power systems. However, these changes have also allowed for the increased opportunity for system development and the inclusion of new market players. Flexibility will provide network operators (together with other stakeholders such as prosumers, aggregators, etc.) with the possibly to increase the stability of the electrical system and ensure the safe, secure and reliably of supply. Stakeholder interaction is key to facilitate and enable the integration and utilization of flexibility in future power systems. Furthermore, flexibility has traditionally been utilised in the operation stage, for balancing power flows, solve congestions, maintain stability; now, the next level of flexibility can be defined and deployed since the power system planning stage, being integrated into procedures for long-term planning and correspondent market mechanisms for procuring and adequately reward the flexibility providers also in terms of resilience increase.

GOALS AND OBJECTIVES

- Engage in discussion and collaboration to address the topics related to flexibility and power system resilience
- Share experiences and lessons learned based on the outcomes of various pilot projects related to stakeholder interaction
- Share best practices on the topic of “Flexibility for resilience” in integrated systems, through collaboration.
- The information collected from the workshop will be incorporated into dissemination material (policy briefs, discussion paper, etc)

WORKSHOP DETAILS

	29 September 2023
	09:00- 15:00
	Utrecht, the Netherlands

REGISTER HERE

***Note:** *Due to limited seating capacity we cannot guarantee that your registration will allow for your participation in the workshop. Workshop participants will receive an official confirmation.*

AGENDA

Time		Topic and activity
09:00	09:15	Welcome and introduction
09:15	10:00	Presentation 1: Flexibility for resilience Presentation 2: Stakeholder interaction
10:00	10:15	Break
10:15	12:00	Interactive session - Part 1
12:00	12:30	Lunch
12:30	15:00	Interactive session - Part 2
15:00	-	End

CONTACT

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Technical

- **Modeling and analysis** providing illustrative options of various scenarios **for flexible energy systems integration**.
- Technologies to enable **data collection, asset management, automated** demand response.
- Deployed **digital technologies** e.g., smart metering for data acquisition and dynamic tariffs.
- **Stakeholder coordination / coordination schemes implementation**
- Flexibility aggregation, especially at the TSO-DSO interface, can provide a wide range of techno-economic benefits.
- **Increased stakeholder interaction** and integrated **system planning approaches** can be optimised, thereby providing a wide **range of advantages** from technical and economic perspective.

Economic and Market

- **Implemented reliable flexibility services** from the demand side, with consumer engagement, tariff design, markets and/or roles of service providers and aggregators.
- **Business model(s)** on resilience and flexibility to ensure a secure and functioning power system.
- Analysis of costs, **benefits and risks are not evenly distributed across stakeholders**
- Investment and integration of systems needs to be made today to get flexibility from consumers that will pay off in the future.
- New mechanisms need to be developed to enable **investments in power system modernization, and resilience**.
- Clear roles and responsibilities need to be defined. There are currently many challenges in **market functions in the commercial domain vs. regulated domain**,
- Clarification regarding neutral market operator vs. DSO / TSO is needed as market operator's diverge and there is a **lack of established aggregation framework.**

Standardisation & Regulation

- **Interoperability** of technologies, systems and data to access new flexibility sources.
- Review of actual standards. **National, regional, and international standardization processes,** ongoing initiatives.
- Flexibility markets practices, **costs and benefits assessment and pricing**, decision making through regulatory processes. *What is needed is to find a way to put a price to resilience, embedding it into regulation and decision making?*
- There should be clear understanding regarding of **data ownership when exchanging data.**

R&D and Education

- There is a need to better understand how to better **integrate *flexibility for resilience*** into energy system.
- Action for **education and R&D**. *What is needed?*
- **Knowledge transfer** options and methodologies