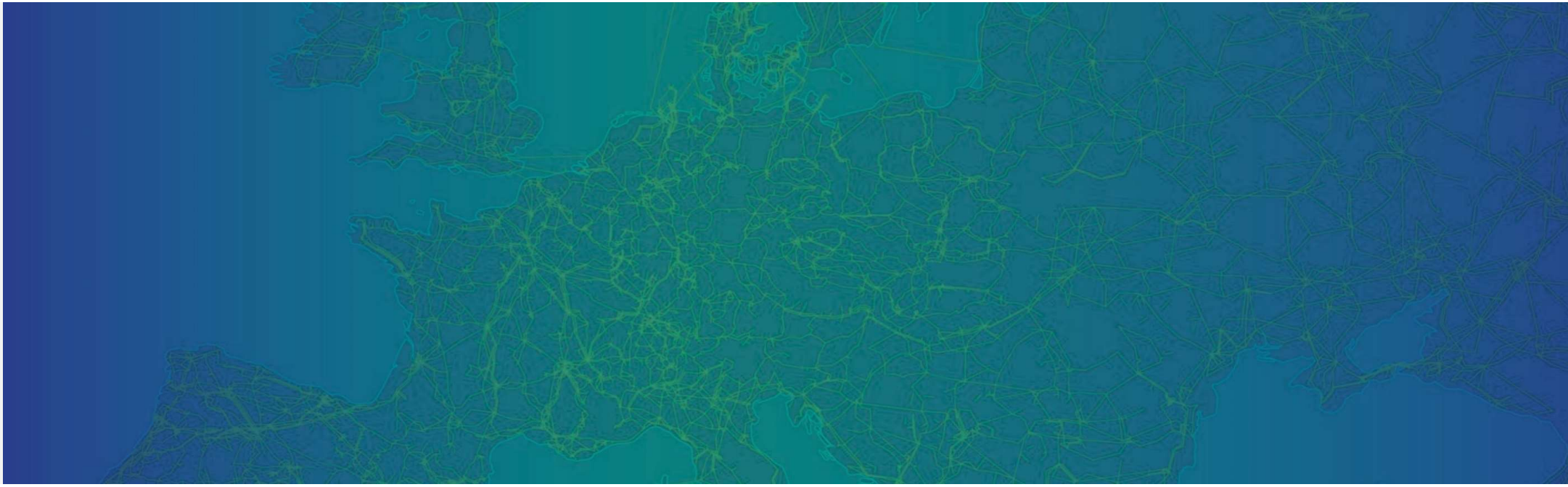
DSO Entity and ENTSO-E Public Webinar on Flexibility Needs Assessment Methodology
24 April 2025



Hubert Dupin, Co-convener, DSO Entity
Mario Sisinni, Co-convener, ENTSO-E
Mehtap Alper, Senior Coordinator, DSO Entity

DSO ENTITY
DSOs FOR EUROPE

entsoe
Reliable Sustainable Connected

Mehtap Alper, on behalf of DSO Entity & ENTSO-E

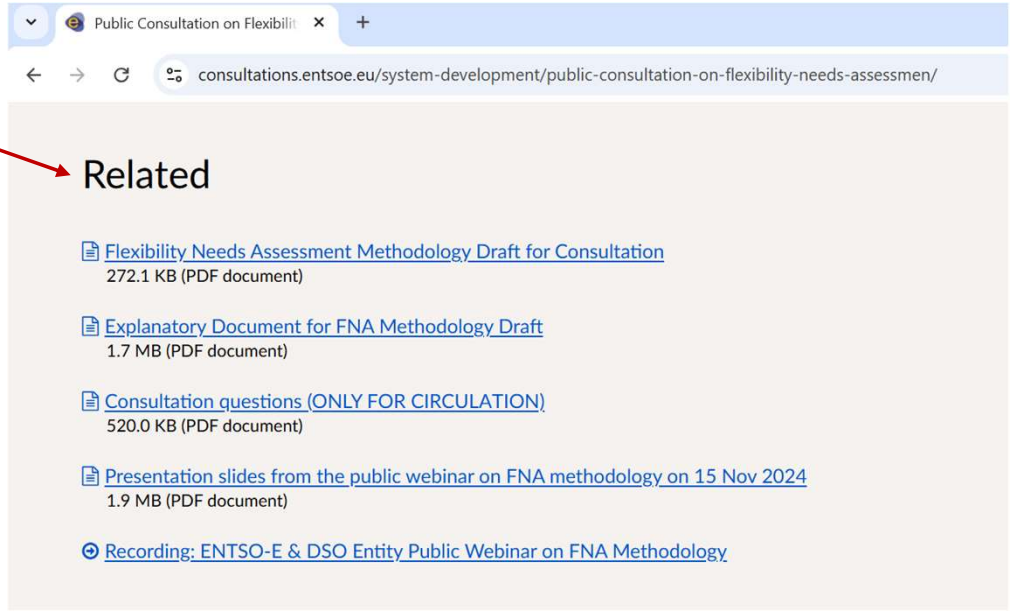
- Housekeeping
- Agenda
- New EU Methodology for Flexibility Needs Assessment: Process & Content

Introductory Remarks

Housekeeping

- This session will be recorded
- Please keep your microphone muted
- Q&A session at the end of the presentation
- The slides and recording will be available in the Public Consultation page in the coming days
- For questions and/or more information, please contact:
  - Shilpa Bindu, (sbindu@entsoe.eu) TSO-DSO Specialist, ENTSO-E.
  - Mehtap Alper, (mehtap.alper@eudsoentity.eu), Senior Coordinator, DSO Entity.

QR to the FNA Public Consultation page →



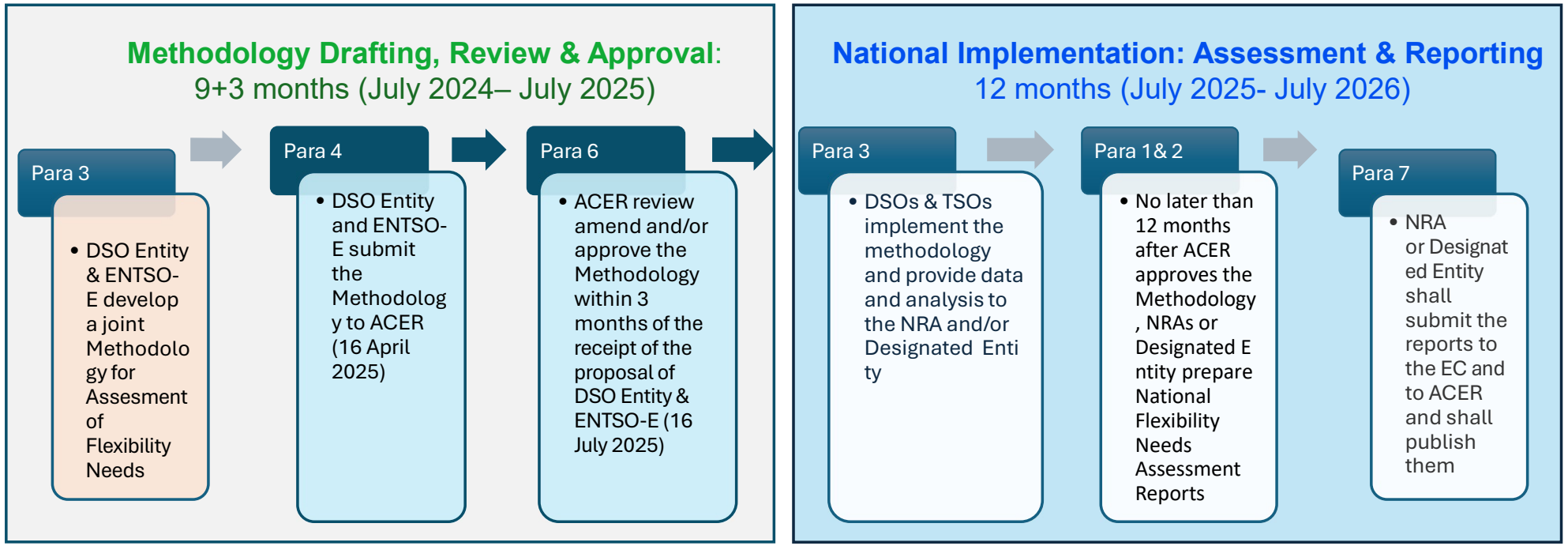
Opening: Agenda

Webinar Items	Indicative Time	Presenter
Introductory remarks	14:00-14:10	Moderator: Mehtap Alper, on behalf of DSO entity ENTSO-E Joint Task Force
Overview of Methodology & Scope	14:10-14:15	Hubert Dupin, Convenor-DSO Entity
Roles and responsibilities & National Implementation	14:15-14:25	Hubert Dupin, Convenor-DSO Entity
Data and analysis	14:25-14:30	Mario Sisinni, Convenor-ENTSO-E
System flexibility needs	14:30-14:40	Mario Sisinni, Convenor-ENTSO-E
DSO flexibility needs	14:40-14:50	Hubert Dupin, Convenor-DSO Entity
Fine-tuning and guiding criteria	14:50-15:00	Mario Sisinni, Convenor-ENTSO-E
Market barriers and contribution of digitalisation	15:00-15:05	Hubert Dupin & Mario Sisinni
Concluding remarks and Q&A session	15:05-15:30	Moderator: Mehtap Alper, on behalf of DSO entity ENTSO-E Joint Task Force

EMDR Art 19e

Assesment of Flexibility Needs: **What is it about?**

Legal Basis: *New Provisions of EMDR (EU (2024)1747)*



Process based on Article 19e of Electricity Regulation

EU Wide Assessment
12 months (July 2026-July 2027)

ACER

Within 12 months of receipt of the reports, ACER shall issue an EU wide Assessment Report :

- recommendations on issues of cross-border relevance
- recommendations on removing barriers to the entry of non-fossil flexibility resources.

EMDR
Art 19e

The Flexibility Needs Assesment (FNA) report adresses 5 different issues regarding the estimated flexibility needs for a period of at least the next 5 to 10 years at national level

TSOs & DSOs data

1. **evaluate the different types of flexibility needs, at least on a seasonal, daily and hourly basis**, to integrate electricity generated from renewable sources in the electricity system, inter alia, different assumptions in respect to electricity market prices, generation and demand;

TSOs to consider while performing (market simulation for system needs)

2. consider the **potential of non-fossil flexibility resources** such as demand response and energy storage, including aggregation and interconnection, to fulfil the flexibility needs, both at transmission and distribution levels;

National Entity / Authority to assess

3. **evaluate the barriers for flexibility in the market** and propose relevant mitigation measures and incentives, including the removal of regulatory barriers and possible improvements to markets and system operation services or products;

4. evaluate the **contribution of digitalisation** of electricity transmission and distribution networks;

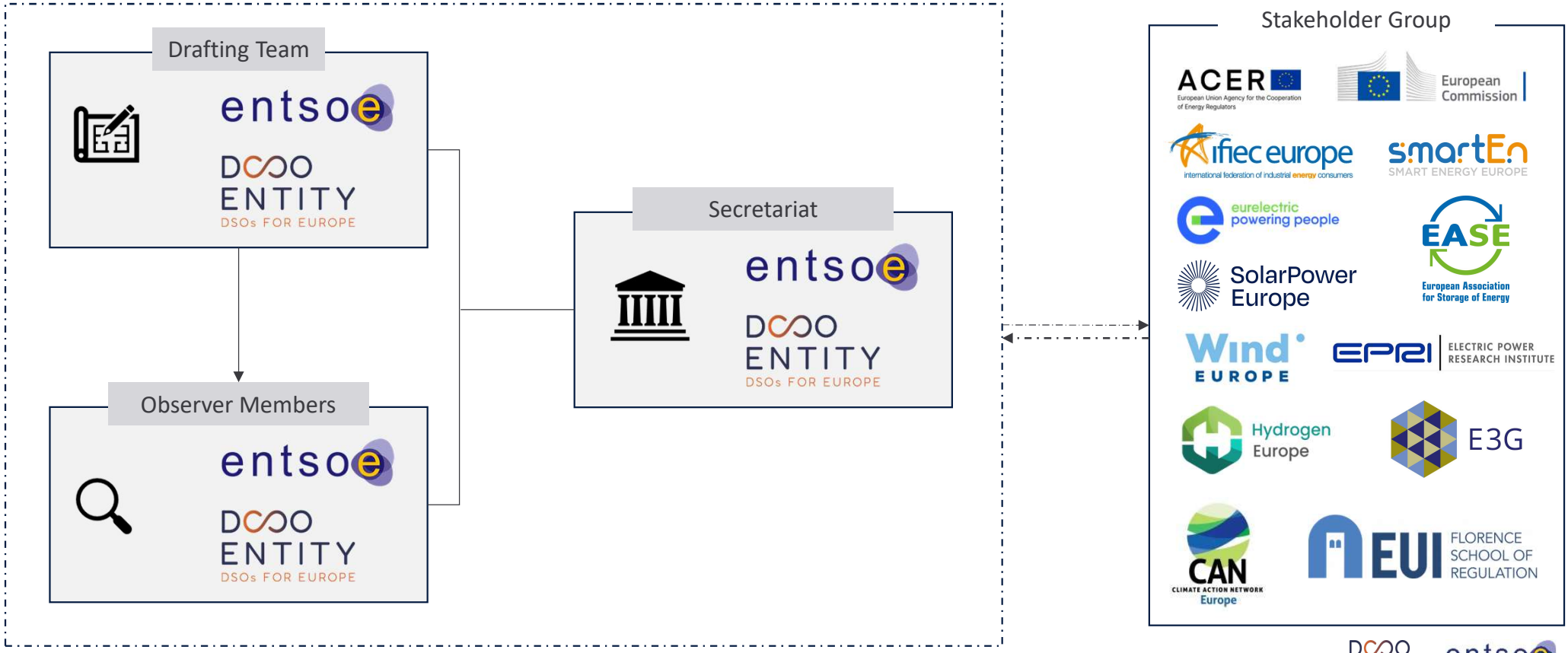
TSOs to consider while performing (market simulation for system needs)

National Entity / Authority to assess

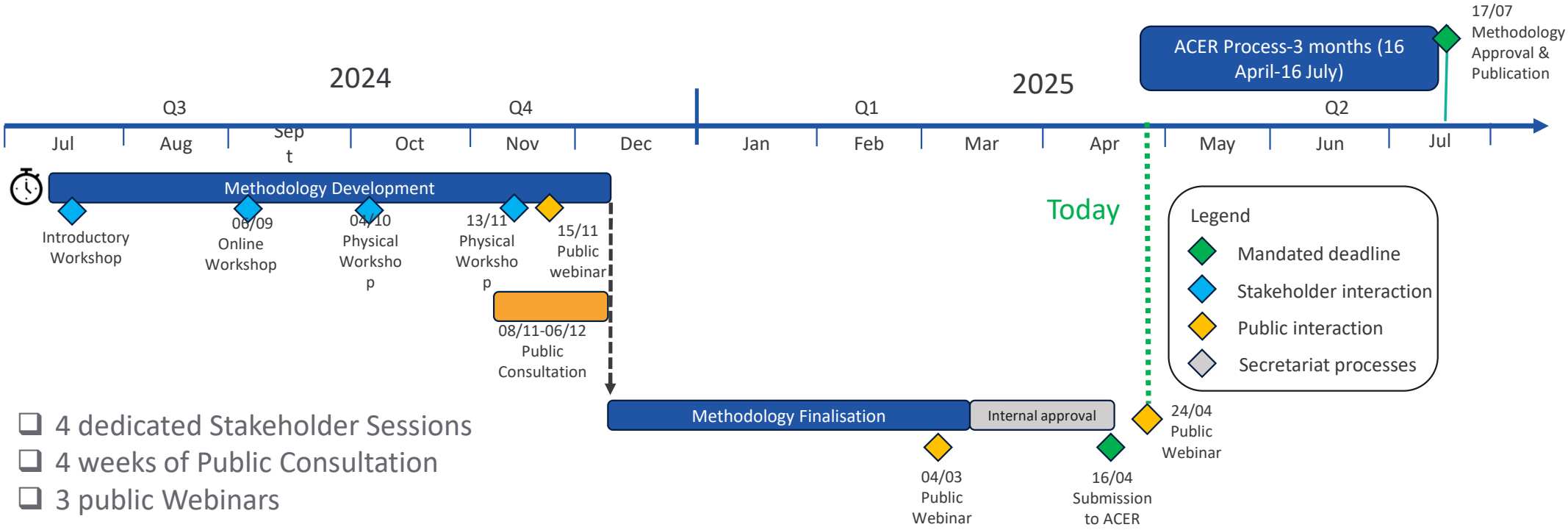
5. take into account **sources of flexibility** that are expected to be **available in other Member States**.

Drafting Process & Stakeholder Engagement

ENTSO & DSO Entity established a joint Task Force in April 2024.
The drafting Team is represented by 9 TSOs and 10 DSOs. Observer group composes of 20 TSOs and 22 DSOs



Development of the Flexibility Needs Assessment Methodology – Project Timeline



- ❑ 4 dedicated Stakeholder Sessions
- ❑ 4 weeks of Public Consultation
- ❑ 3 public Webinars

DSO Entity & ENTSO-E Joint proposal for FNA Methodology submitted to ACER on 16 April 2024!

Public Consultation Responses are published!

Hubert Dupin

14:10-14:15

Overview of the Methodology & Scope

The Flexibility Needs Assessment (FNA) Methodology addresses both Network Needs and System Needs, and goes beyond the “copper plate” assumption of other system studies

'DSOs consider this **Flexibility Needs Assessment methodology** as a valuable and necessary opportunity to highlight the **importance of DSO and distribution grids in the energy transition**':

- Provides insight to policy makers and stakeholders to make flexible resources available in the future when forecasted flexible network needs will arise , and to foster DSOs access to flexibility in cost efficient manner in order to reduce the grid reinforcements and to optimise grid costs
- High level analysis of the policies as drivers for flexibility needs (development of DER, EV, storage ...)
- Acknowledges the relevance of DSOs, with the same level of importance as TSOs and with a complementary perspective, to address and contribute to issues regarding the electricity system
- Synthesizes at national level the needs and vision of all DSOs (zoom out from DNDP)
- Supplements DNDP, but does not overrule DNDP processes
- Feasible in each country for all DSOs, considering their diversity (size, context, voltage level, planning methods...) and availability of data

Flexibility Needs Assessment methodology (FNA) brings a New Approach

'Provides a DSO perspective, complementing the broader system-level assessment.'

NETWORK NEEDS - LOCATIONAL
will **EVENTUALLY** arise **SOMEWHERE**
and **must be fulfilled WHERE and WHEN they occur**

Flexibility network needs enable DSOs to prevent or solve **congestion or voltage issues** in the most efficient and effective manner, in addition to or in combination with other available means i.e. grid reinforcement.

SYSTEM NEEDS - CROSS BORDER
can be fulfilled **ANYWHERE** "copper plate"

System needs shall consider DSO inputs to the extent DSO inputs and / or needs might significantly affect system needs.

The Flexibility Needs Assessment (FNA) Methodology addresses both Network Needs and System Needs, complementing existing studies and supporting policy makers in the definition of targets for flex resources

'DSOs and TSOs consider this **Flexibility Needs Assessment methodology** as a valuable and necessary opportunity to highlight the **importance of flexibility** for the energy transition, both at distribution and transmission level':

- Provides insight to policy makers and stakeholders to make flexible resources available in the future when forecasted flexibility needs will arise, ensuring **technological neutrality** and **cost efficiency**
- Provides a high level analysis of the policies as drivers for flexibility needs
- Introduces a **complementary perspective** for DSOs and TSOs to address and contribute to issues regarding the whole electricity system
- For DSOs, synthesizes at national level the needs and vision of all different operators (zoom out from DNDP). The methodology is feasible in each country for all DSOs, considering their diversity (size, context, voltage level, planning methods…) and availability of data
- Supplements DNDP and adequacy studies (ERAA/NRAA), without overruling associated processes and ensuring **consistency** and **complementarity**

Flexibility Needs Assessment methodology (FNA) brings a New Approach
'Provides a joint DSO-TSO perspective, complementing system and network views.'

NETWORK NEEDS - LOCATIONAL
will **EVENTUALLY** arise **SOMEWHERE**
and **must be fulfilled WHERE and WHEN they occur**

SYSTEM NEEDS - CROSS BORDER
can be fulfilled **ANYWHERE** "copper plate"

Overview of FNA Methodology

- **Article 1**. Subject matter and scope
- **Article 2**. Definitions
- **Article 3**. Roles and responsibilities
- **Article 4**. National implementation
- **Article 5**. Confidentiality obligations
- **Article 6**. Data and analyse
- **Article 7**. Needs covered

Governance, Scope & Data

- **Article 8**. System needs
- **Article 9**. System needs – RES integration
- **Article 10**. System needs – Ramping Needs
- **Article 11**. System needs – Short-term flexibility needs

System Needs

Article 12. Principles to a DSO network flexibility n
Article 13. DSO network flexibility needs
Article 14. TSO network flexibility needs
Article 15. Unavailability of flexible resources due to grid prequalification and temporary limits
Article 16. Fine-tuning system needs with network needs

Network Needs & finetuning

General Provisions

- **Article 17**. Guiding criteria
- **Article 18**. Derogations
- **Article 19**. Amendments of the methodology
- **Article 20**. Language
- **Article 21**. Market Barriers and contribution of digitalisation

ANNEXES

Annex I - Examples of Table 1 to report DSO flexibility network needs
Annex II - Input data to FNA process - Type and format
Annex III - Possible topics for market barriers assessment

Main Scope & Definitions

"The methodology covers DSO Flexibility Network Needs, TSO network needs and System needs"

NETWORK FLEXIBILITY NEEDS

- Definition: flexibility needed to **adjust for grid availability**, by means of preventing or solving congestion or voltage issues
- Assessed by DSO and TSO in their grids

SYSTEM FLEXIBILITY NEEDS

- Definition: flexibility needed by electricity system **to adjust to variability of generation and consumption**: RES integration needs, ramping needs, short-term flexibility needs
- Assessed by TSO, but associated to the whole electricity system

Other New Terms	Definition
RES Integration Needs	"quantity of flexibility required to achieve annual RES integration targets or maximum acceptable level RES curtailment for the Member State"
Ramping Needs	"needs associated with variations of the residual load assuming perfect forecast conditions"
Short-term Flexibility Needs	"needs associated with unexpected variations of the residual load or forced outage of assets during the intra-day or balancing timeframe"
'upward (resp. downward) network flexibility needs'	"means needs whose solution requires increasing (resp. decreasing) injection on the network or decreasing (resp. increasing) demand from the network"

Hubert Dupin

Roles and responsibilities & National Implementation

Roles and responsibilities, delegation and national implementation

Synthesis of final articles

Ensure a cohesive and efficient implementation of the methodology, in particular through a coordinating role of ENTSO-E and DSO Entity

- ➔ ENTSO-E and DSO Entity guidance on how TSOs and DSOs shall interpret and apply the FNA methodology
- ➔ EU DSO Entity guidance of DSOs based on lessons learnt on the methods for the calculation of the flexibility needs

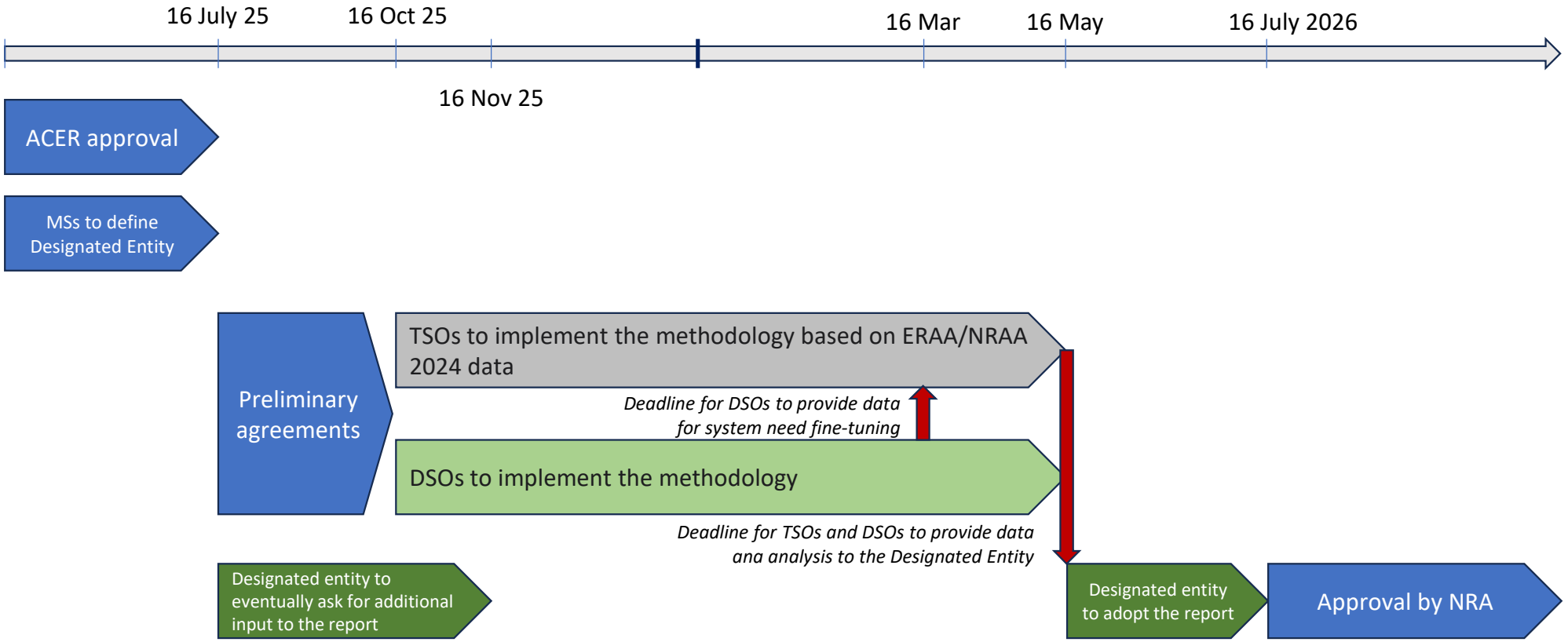
Specify the role and tasks of the NRA, or another authority or entity designated with adopting the FNA report, in the FNA methodology

- /!\ Mandate of this methodology restricted to
  - 1) the type and format of data which TSOs and DSOs shall provide
  - 2) outline the methodology for analysis by TSOs and DSO
  - 3) Tasks of EU-DSO Entity and ENTSO-E
- ➔ Refined provisions on coordination between TSOs, DSOs and the designated authority or entity at the national level
- ➔ No ruling on the tasks of the national entity or authority, the NRA, or Member States.

Ensure overall responsibility
Consider assignment by MS rather than DSO delegation

- ➔ A whole new article on the national implementation : who does what when
- ➔ DSO delegation intrinsically linked to the methods available to provide data
- ➔ Provisions on confidentiality improved

Art. 3-4 – Roles & Responsibilities and National implementation



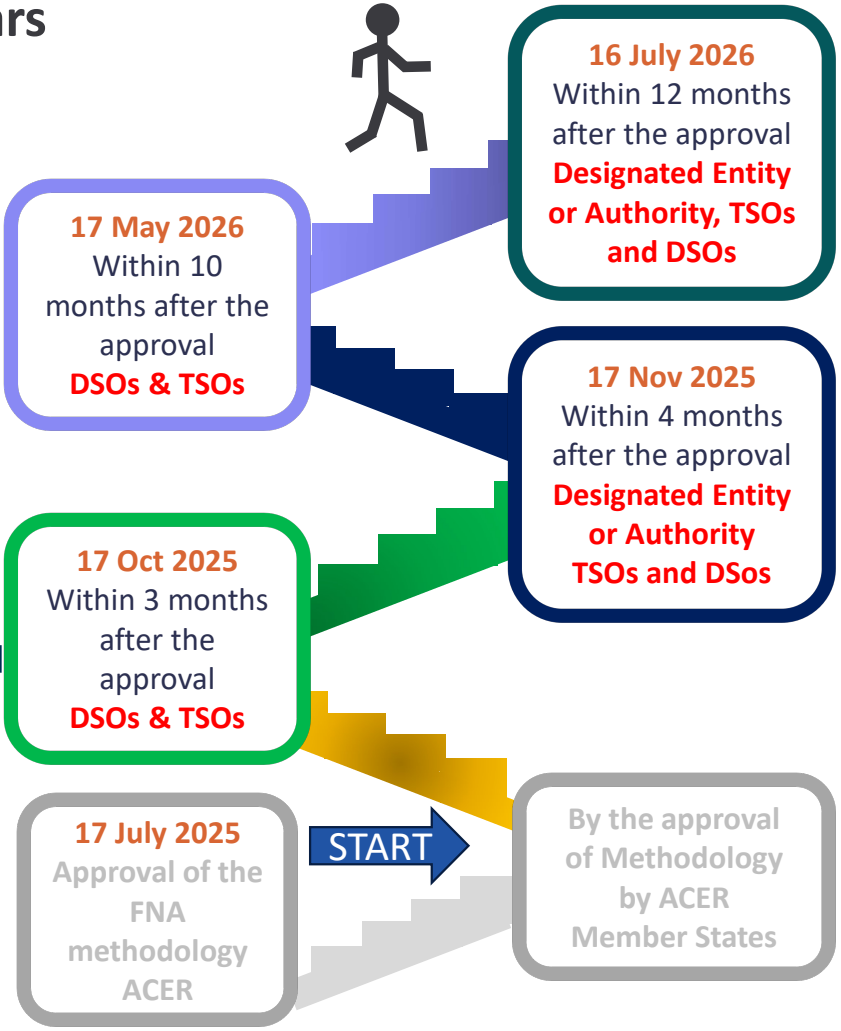
- Timing for exchanges between TSOs and DSOs can be agreed at national level
- Deadline for Designated entity to ask for additional input and analysis (duly justified) set at the begin of the process to allow implementation
- Designated Entity/NRA not supposed to run analysis, but only responsible for drafting up the report and include assessment of market barriers and contribution of digitalization

Art. 3-4 – Roles & Responsibilities and National implementation

Process rerun every two years with the same timeframe

Send data and analyses to the Designated Entity or Authority.

- **Roles, responsibilities and timeline ➔ may involve delegation for DSOs**
- **Justification of the use of material in addition to DNDP**
- **Common target years to provide data and analyses**, in addition to the target years;
- **Temporal, spatial and voltage granularity of DSOs data**;
- **Additional type of data and analyses**, if any, beyond the minimum requirements of the methodology
- **Timeframe for the approval of the FNA report**



Member State **defines the Designated Entity or Authority** responsible for the adoption of the report.

Designated Entity or Authority **consolidates and adopts the National FNA report**.

DSOs/TSOs who provided data / analysis coordinate with the designated entity to **ensure clarity and correct representation of the provided data and analyses** in the report

Designated Entity or Authority can **request additional information** beyond data and analysis required from TSOs and DSOs with this methodology.

Request shall be **justified and proportionate, and agreed by TSOs and DSOs** (to the extent they are concerned)

ART 03- 04

National implementation

Synthesis of final article

Request for more time for national entity/authority

Insert a public consultation

- TSOs and DSOs need sufficient to define at national level
  - the organisation to process and deliver (can be > 100 DSOs in a country)
  - The common target years
  - the temporal, spatial and voltage granularity of DSOs data,
  - then to perform analysis and provide data
- Providing such data requires to adjust/create methods

Schedule too fast for TSOs/DSOs to provide new data (beyond existing methology)

Request to have different schedule for TSO vs DSOs

Timeline to be coordinated at national level between TSOs/DSOs, National Entity/Authority and NRA

Upper boundary set at 10 months for TSOs & DSOs to provide data and analysis

No timeframe set in EMDR for NRA to send data to ACER

Public consultation not foreseen

Overview of data inputs & needs covered

Synthesis of comments

Consistency: Align on target year, ensure consistency of scenarios, use latest approved data

- Consistency is now embedded as an essential part of the methodology, to a large extent « by design »
  - FNA is based on DNDP, ERAA or NRAA that in turn use scenario consistent with the National Energy & Climate plan (NEPCs)
  - TSOs and DSOs align on target years, where the minimum corresponds to the policy year considered in NECPs
  - DSOs shall only use latest final published DNDP while TSOs the latest published ERAA or NRAA

Availability of DSO data: Clarifying interpolation / extrapolation (DSOs); use finer DSO data (hourly data), and extend the outlook beyond 10 years

- DSO data builds on DNDP to get a solid framework and basis for scenario, data, and flexibility assessment
  - DNDP requirement is to develop data for the next for the next five-to-ten year. Extending network flexibility needs beyond DNDP would be without any solid basis, and would jeopardize the relevance of data and of any conclusion
- DNDP does not use hourly data since DSO don't use economic dispatch model. However, new provisions on "Fine-tuning" has been defined in order to transform "time block data" into "hourly data"

Make data available

- DSO data is public: DNDP and market information is a core already published input data, while Table 2 will be also public
- ERAA data is public. NRAA must be consistent with ERAA data to be used. The output of the methodology will be part of the FNA report

Coordination with gas and hydrogen operators

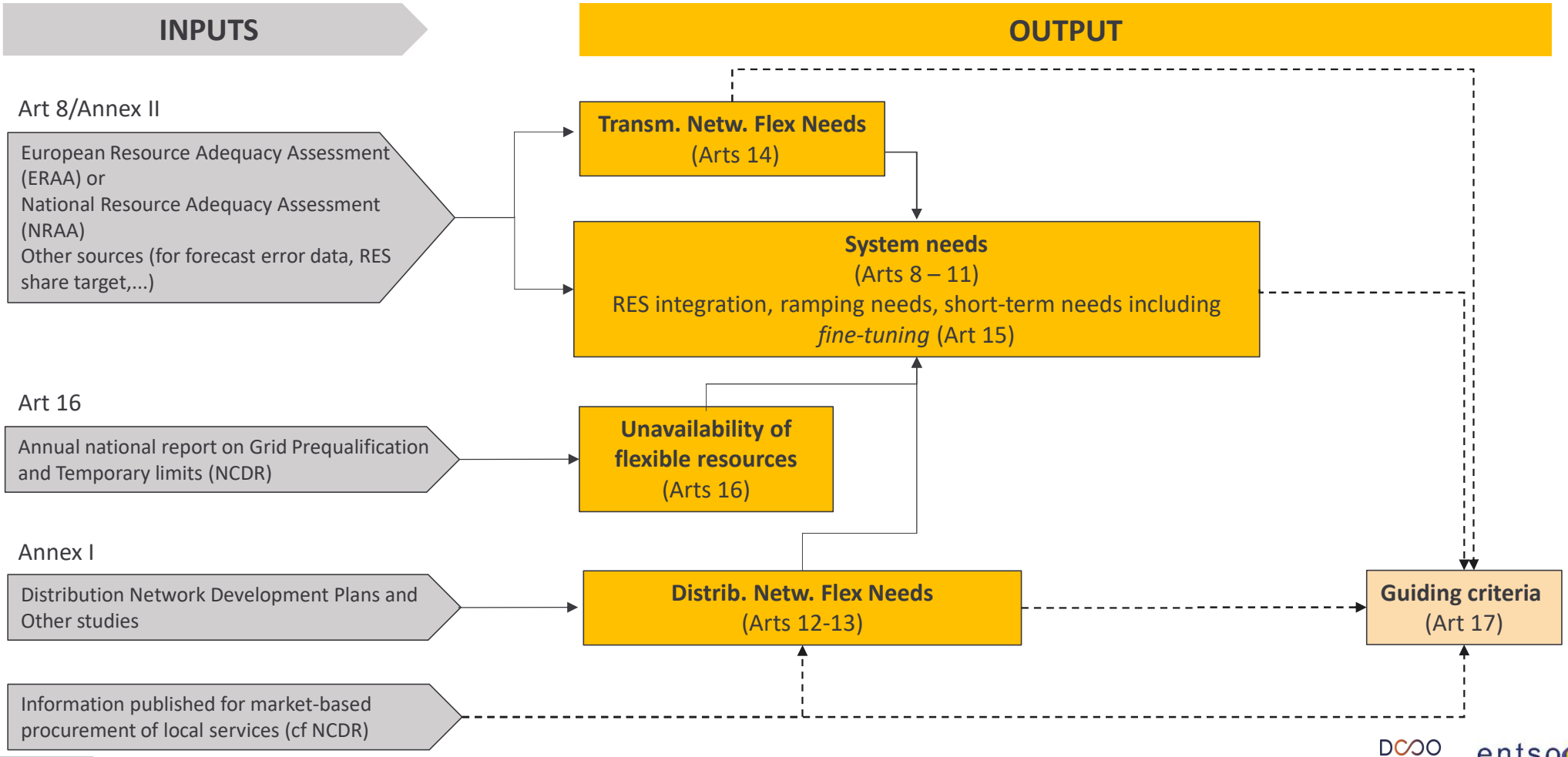
- As stakeholders, Gas and hydrogen operators are already involved in the underlying scenario building and process of ERAA/NRAA and DNDP

Mario Sisinni

Data & Analysis

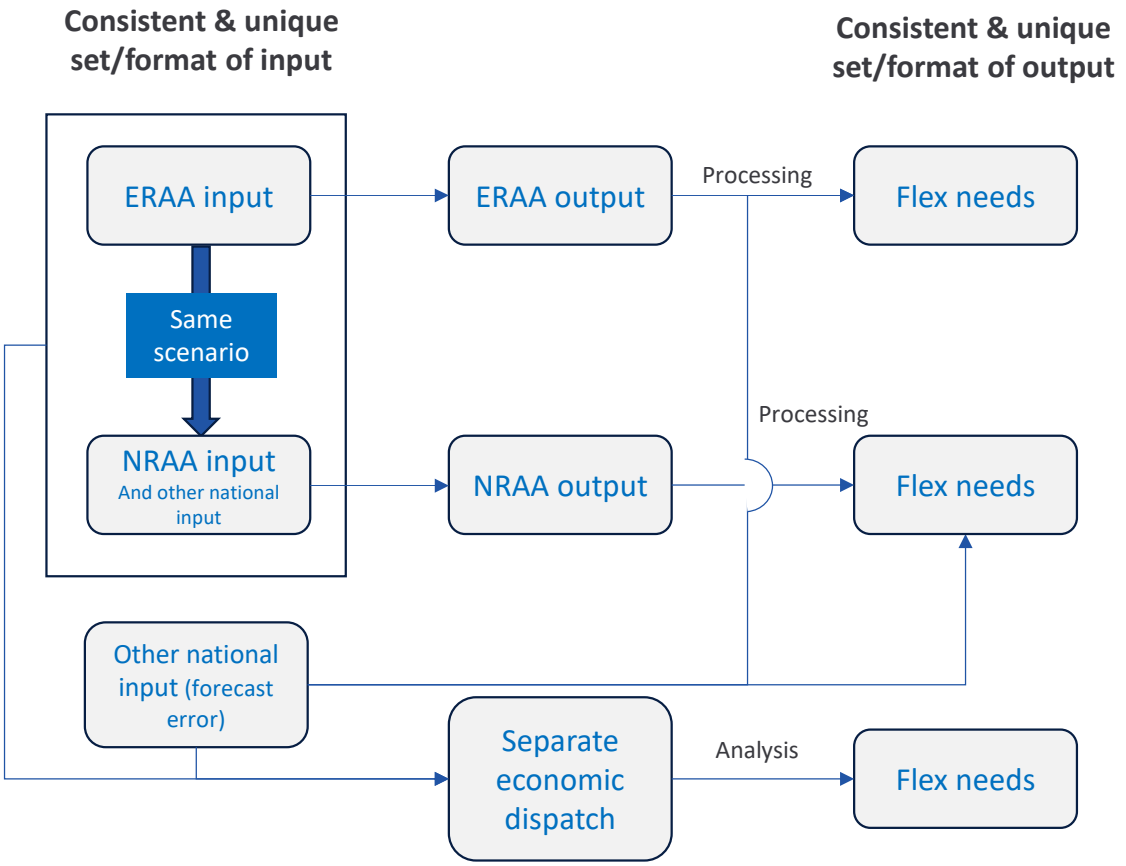
Overview of data inputs & needs covered

Final approach



Note: Number of articles correspond to the submitted document, but might slightly change in the final release

Overview of data inputs & needs covered – ERAA -> FNA



- TSOs can choose among the use of ERAA or FNAA outputs to be processed to quantify flexibility needs or can rely on separate economic dispatch simulation using ERAA/FNAA input
- The approach chosen by each TSO does not impact consistency of results and establishment of a European view.

Mario Sisinni

System Flexibility Needs

Overview of System Needs

System needs indicators

RES integration needs (Art 9)

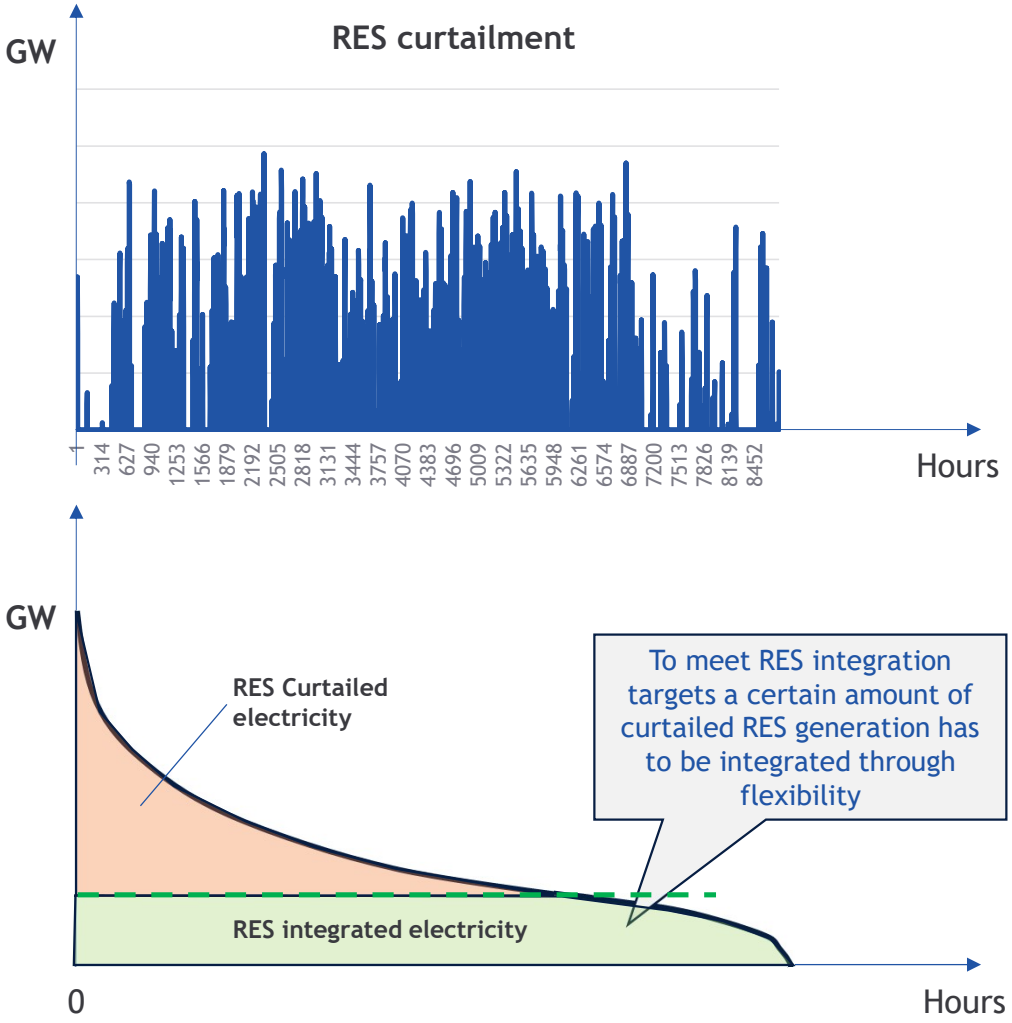
- Study downward flexibility needs based on behavior of the ERAA/NRAA RES generation curtailment and residual load indicators
- Characterize flexibility needs into different timeframes (daily, weekly, seasonal)
- Quantify additional capacity of technology-neutral flexible resources to cover RES integration needs (i.e. RES integration targets)

Ramping needs (Art 10)

- Quantify flexibility shortages associated to the management of up- and downward residual load ramps over a period of 60 minutes or lower based on the margins of dispatched units (ERAA / NRAA) considering their technical constraints (e.g. ramping constraints)

Short-term flexibility needs (Art 11)

- Quantify flexibility shortages associated to the management of up- and downward residual load / generation prediction errors based on the margins on dispatched units (ERAA / NRAA)



ART 08-11

Overview of System Needs

System needs indicators

RES integration needs (Art 9)

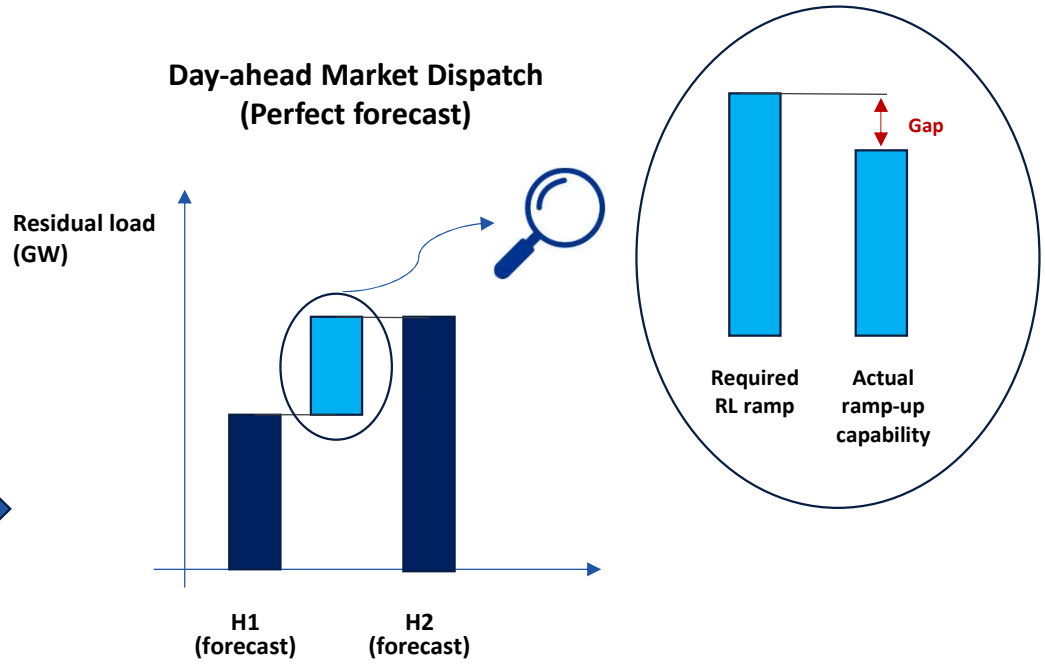
- Study downward flexibility needs based on behavior of the ERAA/NRAA RES generation curtailment and residual load indicators
- Characterize flexibility needs into different timeframes (daily, weekly, seasonal)
- Quantify additional capacity of technology-neutral flexible resources to cover RES integration needs (i.e. RES integration targets)

Ramping needs (Art 10)

- Quantify flexibility shortages associated to the management of up- and downward residual load ramps over a period of 60 minutes or lower based on the margins of dispatched units (ERAA / NRAA) considering their technical constraints (e.g. ramping constraints)

Short-term flexibility needs (Art 11)

- Quantify flexibility shortages associated to the management of up- and downward residual load / generation prediction errors based on the margins on dispatched units (ERAA / NRAA)



Overview of System Needs

System needs indicators

RES integration needs (Art 9)

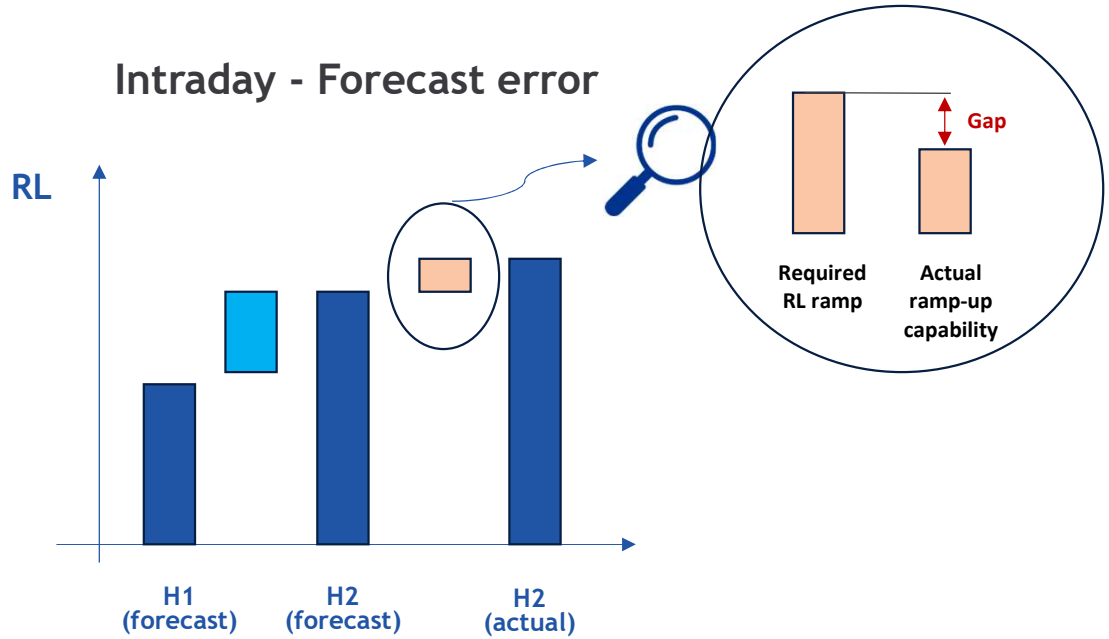
- Study downward flexibility needs based on behavior of the ERAA/NRAA RES generation curtailment and residual load indicators
- Characterize flexibility needs into different timeframes (daily, weekly, seasonal)
- Quantify additional capacity of technology-neutral flexible resources to cover RES integration needs (i.e. RES integration targets)

Ramping needs (Art 10)

- Quantify flexibility shortages associated to the management of up- and downward residual load ramps over a period of 60 minutes or lower based on the margins of dispatched units (ERAA / NRAA) considering their technical constraints (e.g. ramping constraints)

Short-term flexibility needs (Art 11)

- Quantify flexibility shortages associated to the management of up- and downward residual load / generation prediction errors based on the margins on dispatched units (ERAA / NRAA)



Overview of Transmission network needs

Network needs indicators

Downward transmission network needs (Art 14)

- Correspond to generation curtailment due to transmission network constraints, which are not accounted in copper plate view

Optionally assessed by TSOs and then used to fine-tune RES integration system needs (Art 15)

Upward transmission network needs (Art 14)

- Correspond to energy not delivered due to transmission network constraints, which are not accounted in copper plate view

Optionally assessed by TSOs to address conditions that are not observed from a system perspective

Hubert Dupin

DSO Flexibility Needs

Distribution Network Flexibility Needs

DNDP delivers an outlook for Local Flexibility for DSO's, to be used as main input to the Methodology, supplemented by other sources

DSOS with DNDP

Scenarios | **Planning Methods**

DNDP is a sound basis for DSO flexibility needs, consulted with all stakeholders, and NRA

DNDP shall provide data about flexibility needs (Art 32 ED)

DNDP provides a solid framework and is basis for the methodology
If DNDP is insufficient or unavailable, other methods can be used and must match DNDP

Other Data sources such as market information for procurement of local services & supplementary methods / studies (If and as needed)

Scenario and assumptions

- Consistency with National Energy Climate Plan, set the same targets for TSO and DSO at national level (2030)
- Scenario and assumptions used to identify network development projects and local services needs
- Coordination between concerned DSOs and TSOs
- encompass existing and future demand, generation, storage capacities, consider national energy and climate plans,

Network planning methods

- Characteristics at national and DSO level, including a distinction between voltage level and/or region
- Is coordinated with the planning methodology and the scenario building process of the national TSOs for the TYNDP
- Considers available grid capacity for connection of new system users
- Considers local services

Information on future evolution of the grid

- Information on planned and ongoing investments for the next five to ten years
- Description how local services are considered

DSOs shall deliver 5 types of data and analysis

The DSO network's flexibility needs "Table 2" → What we need	• To prevent or solve congestion or voltage issue through active power
Reasoning for the DSO Network flexibility needs → Why we need it	• including the potential effects of existing or planned frameworks and incentives to connect additional assets • If available, information on the expected contractual means to access flexibility
Traceability → How the data is computed	• Source of Data • Methods • Scenarios
Contribution to fine-tune system needs (adequacy assessments assessed by TSOs	• DSO network needs (to the extent they do not overlap system needs of TSO network needs) - TSO to assess based on "Table 2" data • Maximum hourly volumes of flexible resources that could be limited under the national implementation of grid prequalification and temporary limits processes
Guiding criteria for distribution network flexibility needs being solved by local services → Which resources can cover our needs	• How to assess the capability of the different sources of flexibility to cover the flexibility needs

ART 13, 15, 16, 17

Illustrative example (not real data) of Table 2

Yearly value – minimum data set

Direction	Target Year	Time block	Spatial granularity	Voltage level of congestion issue	Type of value	Flexibility network needs
Downwards needs flexibility	2030	Entire year	***Bidding zone*** *= Region 1 + Region 2*	High Voltage 132kV network	Total energy over the year	4 500 MWh
					Summ. Maximum power	110 MW
				Medium Voltage 20kV network	Total energy over the year	2 000 MWh
					Summ. Maximum power	45 MW
Upwards needs flexibility		Entire year	**Bidding zone** *Region 1 + Region 2*	High Voltage 132kV network	No need	
		Oct-March Mon-Sun 00:00-23:59		Medium Voltage 20kV network	Total energy over the year	60 MWh
					Summ. Maximum power	5 MW

Illustrative example (not real data) of Table 2

By region and time block

Direction	Target Year	Time block	Spatial granularity	Voltage level of congestion issue	Type of value	Flexibility network needs	Reasoning to define the time block
Downwards needs flexibility	2030	Jan-Dec Mon-Sun 00:00 - 23:59	*Region 1*	HV - 132kV network	Total energy over the entire time block	3 000 MWh	RES generation in region 1 is 90% wind, 10 % PV
					Summ. Max power	50 MW	
				MV- 20kV network	Total energy over the entire time block	1 500 MWh	
					Summ. Max power	20 MW	
Downwards needs flexibility		Apr-Oct Mon-Sun 12:00-16:59	*Region 2*	HV- 132kV network	Total energy over the entire time block	1 500 MWh	RES generation in region 2 is 95 % PV
					Summ. Max power	60 MW	
				MV- 20kV network	Total energy over the entire time block	500 MWh	
					Summ. Max power	25 MW	
Upwards needs flexibility		Any time		HV -132kV network	No Need		
		Oct-March Mon-Fri 19:00-07:59 and Sat-Sun 00:00-23:59	***Bidding zone*** *Region 1 + Region 2*	MV- 20kV network	Total energy over the entire time block	10 MWh	Off hours in winter
					Summ. Maxi power	3 MW	
		Oct-March Mon-Fri 08:00-18:59			Total energy over the entire time block	50 MWh	Working hours in winter
					Summ. Max power	5 MW	

Annex I

Illustrative example (not real data) of Table 2

Representative day (only used for fine tuning system needs)

Direction	Target Year	Time block	Spatial granularity	Voltage level of congestion issue	Type of value	Flexibility network needs	Reasoning to define the representative day
Downwards needs flexibility	2030	Jan-Dec Mon-Sun 00:00 - 23:59	*Region 1*	High Voltage 132kV network	Total energy during the representative day	70 MWh	Typical windy day 90% wind, 10 % PV
					Summ. Max power	40 MW	
				Medium Voltage 20kV network	Total energy during the representative day	30 MWh	
					Summ. Max power	15 MW	
Downwards needs flexibility	2030	Apr-Oct Mon-Sun 09:00-18:59	*Region 2*	High Voltage 132kV network	Total energy during the representative day	30 MWh	Typical sunny day in a region 95 % PV
					Summ. Max power	50 MW	
				Medium Voltage 20kV network	Total energy during the representative day	10 MWh	
					Summ. Max power	20 MW	
Upwards needs flexibility	2030	Any time		High Voltage 132kV network	No need		
		Oct-March Mon-Sun 0:00-23:59	Bidding zone Region 1 + Region 2	Medium Voltage 20kV network	Total energy during the representative day	10 MWh	2 hr local duration if/where needed
					Summ. Max power	5 MW	

A representative day is

- a repetitive situation within a time block;
- a particular situation, relevant for network development or operations, such as extreme situations

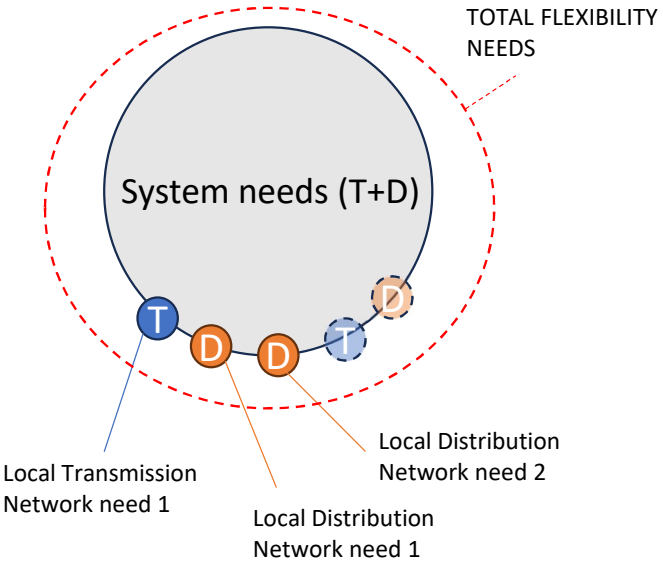
Annex I

Mario Sisinni

14:40-14:50

Finetuning & Guiding Criteria

Fine-tuning of system needs with DSO & TSO network needs + unavailability of resources



- Total flexibility needs of the power system include both **system needs** and local **network needs**.
- The quantification of system needs is carried out at bidding zone level, considering copper plate conditions. As such it does include system needs occurring both at transmission and distribution level, although not specifically localizing them. These can be covered through resources located anywhere.
- Transmission and Distribution Network needs occurs locally and can be solved only through local resources.

-> Simply summing up system and network needs is not a correct operation, for it could result in double-counting

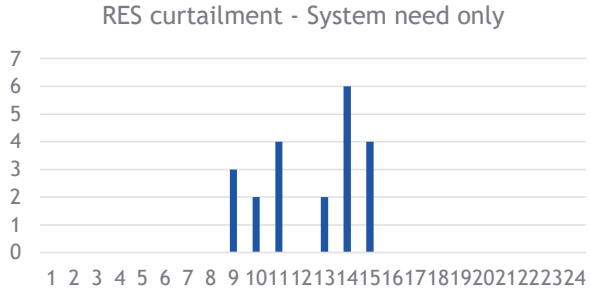
- The approach considered in the methodology provides for fine-tuning of system needs by reflecting network needs on system needs. This is applied to the RES integration need.
- All system needs are also fine-tuned considering the unavailability of flexible resources due to pre-qualification & temporary limits.

ART 15 and 16

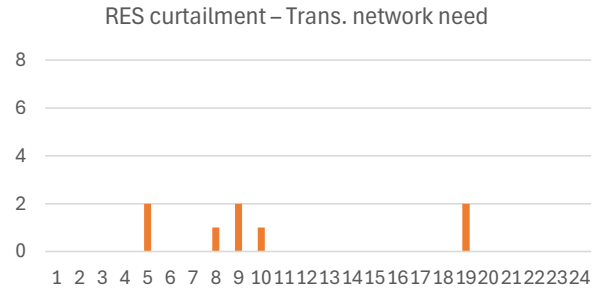
Fine-tuning of RES integration need (Art 9)

Analysis carried out at BZ level

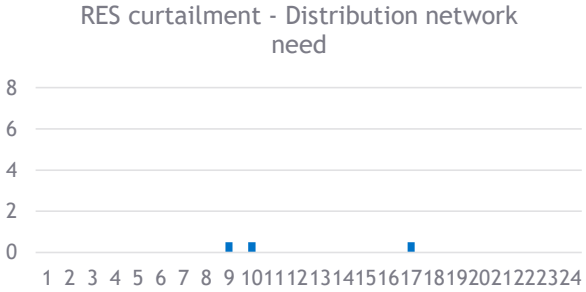
Final Approach



Time series used for assessment of RES integration needs, without finetuning pursuant to Art 9 of the methodology

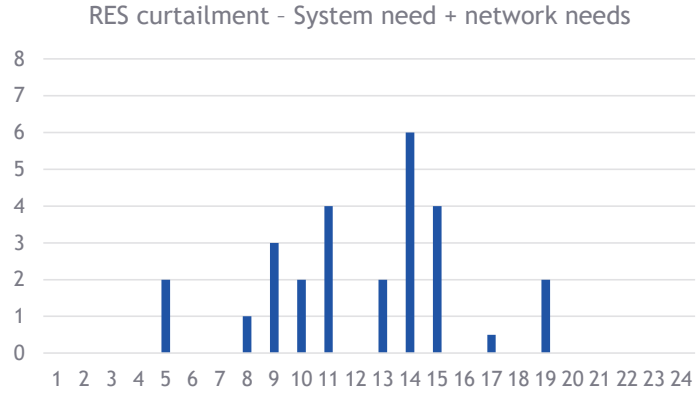


Time-series derived from transmission network simulation, pursuant to Art 14 of the methodology



Data provided by DSOs and converted into hourly time-series by TSOs, pursuant to Art 15 of the methodology (see next slide)

Both sets of RES curtailment time series have to used to quantify RES integration flexibility needs.
Fine-tuning is only done when conditions of Art 15. applies



Time-series used for assessment of fine-tuned RES integration needs, pursuant to Art 9 of the methodology

For each hour we take the **max** RES curtailment among system need only, transmission network need and distribution network need

Guiding criteria for DSO

Final approach

What is the purpose of Guiding Criteria?

To assess the capability of different flexibility resources to cover the flexibility needs

Why do we need?

To provide information to have enough resources to cover our needs

Main source of data:

Market information published for the procurement of local services (cf NCDR), which provides the finest possible locational granularity and technical specifications

DSO network needs can appear or increase rapidly at any given location. For DSOs, capability to access needed resources in a timely manner at each needed location is critical and permanent.

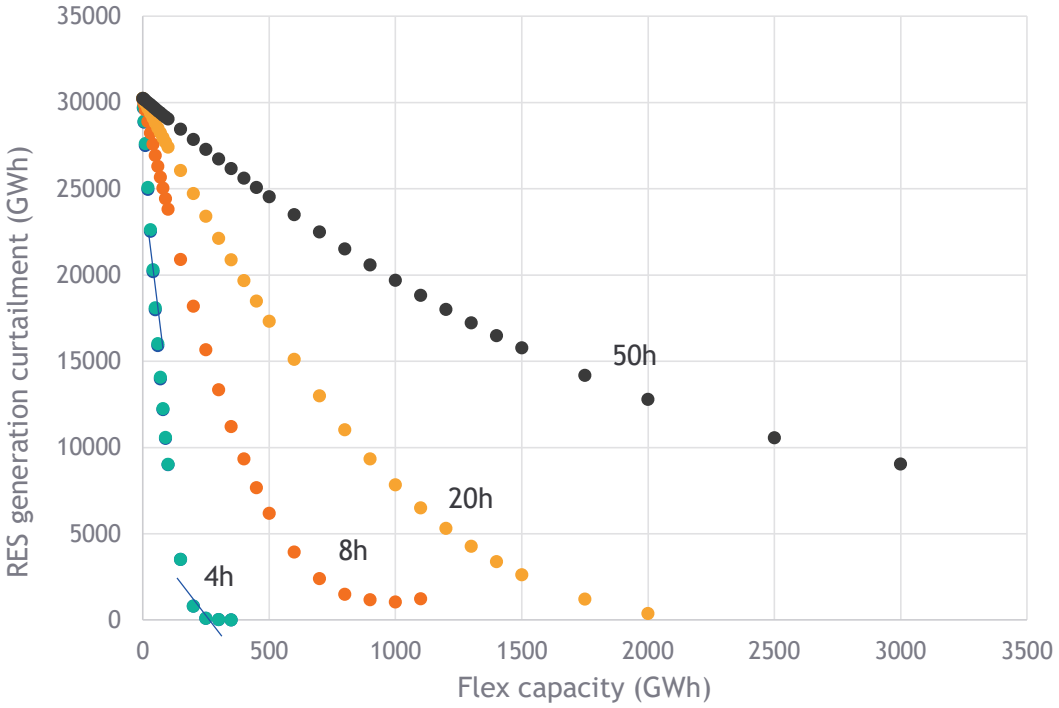
Advocacy for this overarching principle will be done out of this method.

Guiding criteria include the following technical indicators:

a. the **location** of the flexibility need;
b. the **direction of activation** (upwards or downwards);
c. the **timeframe** in which the resource shall be available to solve the flexibility need;
d. the **local maximum power** required during the activation;
e. if available, data related to the forecasted use, such as:
    i. the **duration of a continuous need**;
    ii. the **cumulated duration** of discontinuous need per time block;
    iii. a measure of the **frequency of activation** (level of recurrence or sporadicity);
    iv. a **cumulated energy** per time block;
f. the applicable **economic criteria**;
g. other available relevant criteria.

Guiding criteria for TSOs

Final Approach



The proposed approach aims at providing additional information to the policymaker, derived from the implementation of Art. 9-10-11, 15 of the methodology, such as:

- **Sub-indicators** clarifying technical requirements associated to the needs related to frequency, volumes, duration, etc.
- Contribution of the various types of additional flex capacity to reducing needs (e.g. to reducing RES curtailment in the image on the left)
- Approaches to take into account also **cost information** (CAPEX and OPEX of technologies), to be possibly implemented beyond the FNA scope

Market Barriers and contribution of digitalisation

Pursuant to Article 19e of the Electricity Regulation:

*'....**NRAs or the designated authority or entity is responsible** for analysing market barriers and the contribution of digitalisation to be included in the FNA report,'*
*'...and may rely on information provided in **Annex III** by relevant national entities;*
if an authority or entity other than the NRA is designated to prepare the FNA report, it may request and coordinate contributions from other relevant entities, including the NRA, to carry out this assessment.'

Annex III: Possible topics for market barriers assessment (Only for recommendation)

Requirements to provide balancing services

- Pre-qualification of reserve providing groups
- Design of balancing products and market architecture

Market access to new entrants and small actors

- Participation in different timeframes and product markets, possibly split by technology, or by aggregation model
- Network charges for active customers

Requirements to provide congestion management

Administrative and infrastructure barriers

Incentives to provide flexibility

- Smart meters and submeters roll-out
- Availability of Time-of-Use network tariffs
- Availability of time-differentiated retail electricity contracts and dynamic electricity price contracts
- Consumer awareness and engagement

ART 21 & Annex III

Conclusion

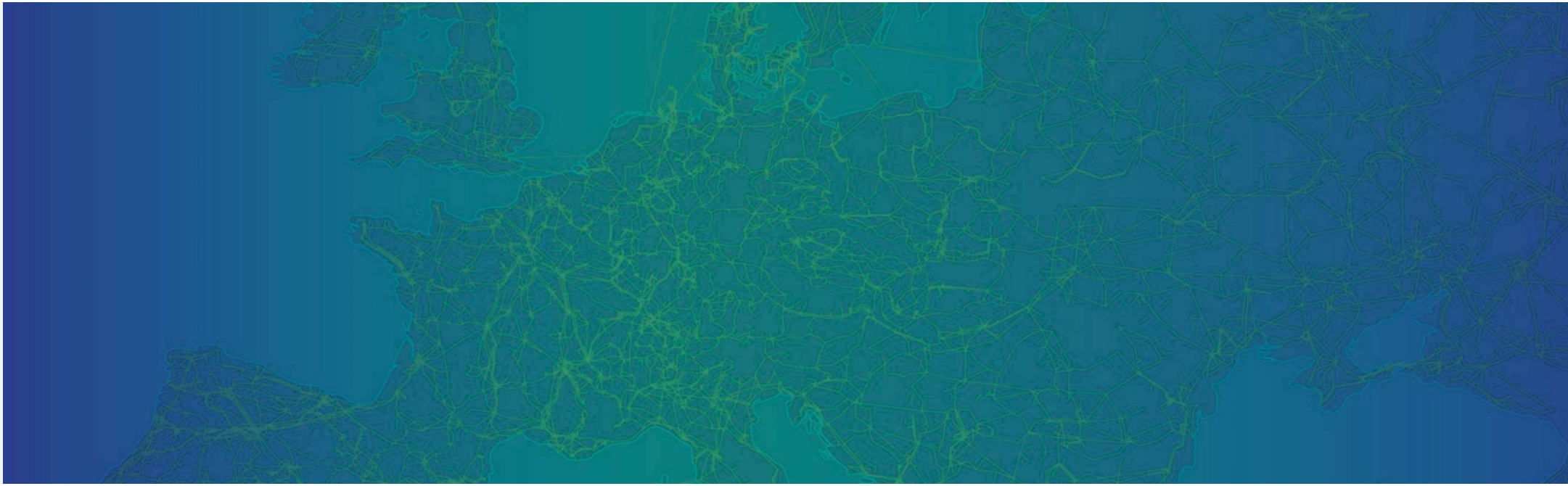
- The proposal was submitted to ACER on 16 April.

For questions and/or more information, please contact:

- Shilpa Bindu, (sbindu@entsoe.eu) TSO-DSO Specialist, ENTSO-E.
- Mehtap Alper, (mehtap.alper@eudsoentity.eu), Senior Coordinator, DSO Entity.

Q&A session

Please use the Q&A area in Teams to ask your questions.



DSOs FOR EUROPE

Reliable Sustainable Connected