Study on efficient price formation and easy market entry and participation for new players and smaller actors in electricity markets
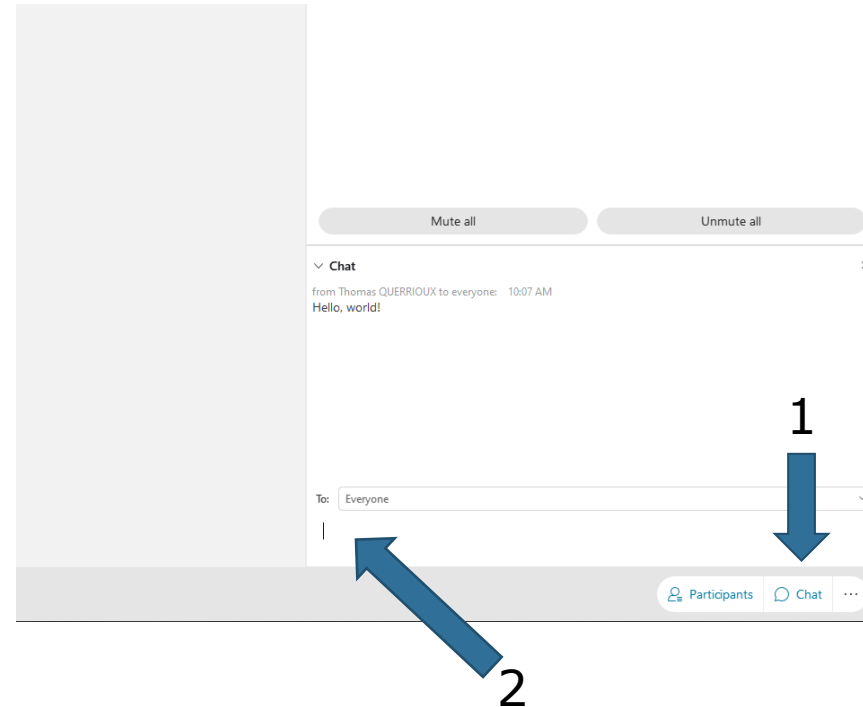
Domen Kodric, Rafael Muruais Garcia, Cristina Vazquez Hernandez, Thomas Querrioux
ACER Electricity Department – Market Monitoring

Online Kick-Off meeting with stakeholders
Webex - 30 September 2020

*****Disclaimer*****

The opinions expressed in this presentation are those of the author and do not necessarily represent the official views of the Agency for the Cooperation of Energy Regulators unless explicitly stated otherwise. The presentation is intended to help interested parties understand the Agency's functions and facilitate the accomplishment of the Agency's mission.

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- By default, **only presenters speak** (one at a time)

- To raise questions, please use the **chat functionality**

- Please raise **short and targeted questions**.

- Time for questions/comments will be **at the end** of each presentation, with **identified dedicated breaks** during the second presentation

- Questions will be **read out for all before answering**

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3

● Introduction of the study (ACER)

● Project presentation (DNV GL)

● Conclusion and next steps (ACER)

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ACER annual market monitoring Report

Clean Energy for all Europeans Package

New areas of monitoring:

- Efficient price formation
- Barriers to new market entrants/smaller actors

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5

Assist EU and national policy makers to better identify and remove pending market barriers:

➢ Improve market signals thus progressing towards lower electricity prices

➢ Facilitate market entry and participation of flexibility resources thus improving the security of electricity supply in the longer term

Monitor progress in EU energy markets' design.

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6

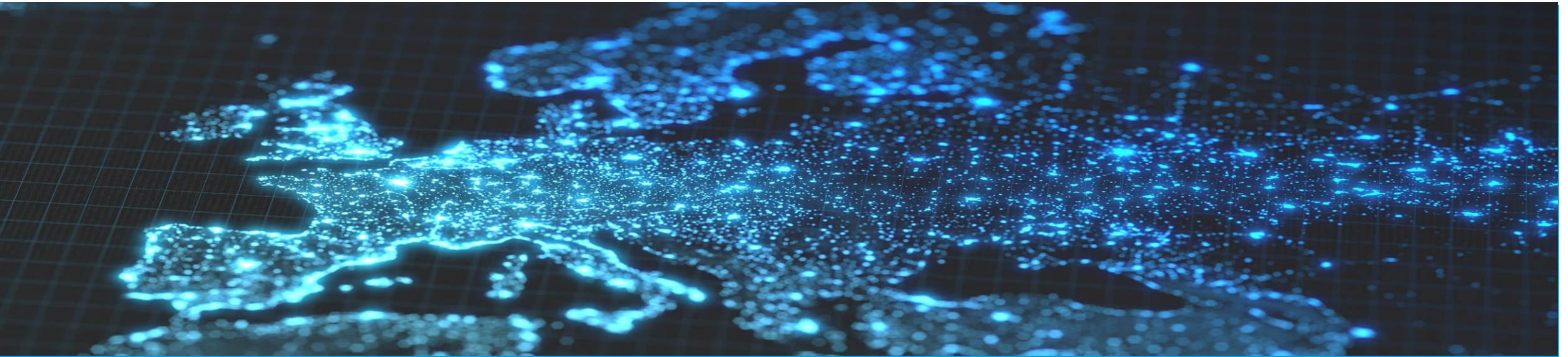Your support is essential to achieve a robust methodology

In this meeting you can help us to :
- Identify and categorise barriers
- Identify some indicators to measure the barriers

Throughout the process (public consultation, workshops), you feedback will help us combine indicators and identify pitfalls.

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7

- Introduction of the study (ACER)

- Project presentation (DNV GL)

- Conclusion and next steps (ACER)

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EU MS Performance Benchmarking

Study on a methodology for evaluating the performance of the EU Member States in terms of efficient price formation and easy market entry and participation for new players and small actors in electricity wholesale markets

Workshop with stakeholders – 30 September 2020

30 September 2020

ACER
Agency for the Cooperation
of Energy Regulators

SAFER, SMARTER, GREENER

Agenda

01	Scope and objectives	»	▪ Introductions and expectations
02	Methodological approach	»	▪ Description of project tasks and methods
03	Workplan	»	▪ Time schedule for deliverables and interactions
04	Engagement for a successful outcome	»	▪ Your needs for interaction and engagement
05	What we need from you	»	▪ Our needs for interaction and engagement

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Scope and Objectives

Perform a study to propose a methodology to assess:

1) barriers to efficient electricity price formation,

2) barriers to new entrants and small actors,

in the electricity markets of individual Member States, in order to enable the Agency to further build its electricity wholesale market monitoring tasks as per Article 15 of Regulation (EU) 2019/942.

CI 1

Specific objectives of the study are to:

▪ Identify, select and define key qualitative and quantitative indicators to measure (1) and (2)

▪ Identify the data sources and propose a data collection process to calculate the selected indicators

▪ Provide a methodology to combine the selected indicators and create two Composite Indicators for (1) and (2)

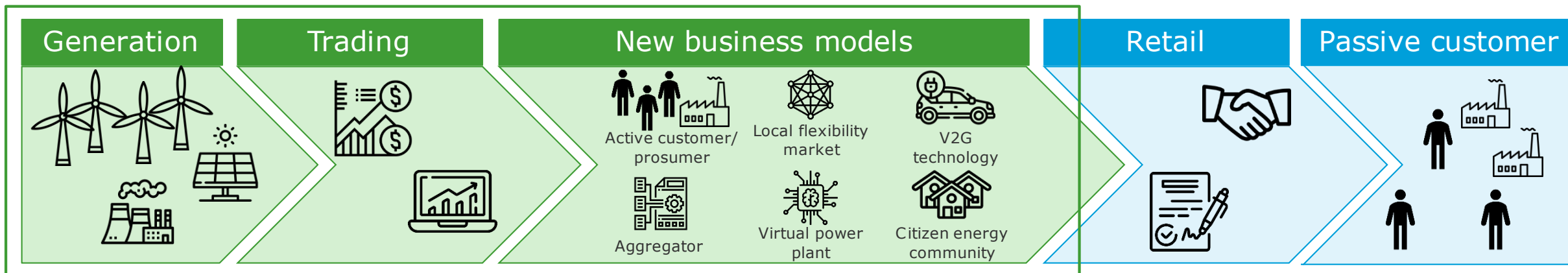▪ With a view to evaluate the performance of the Member States.

CI 2

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Wholesale market covers generation, trading, and new business models

New business models accessing wholesale markets are developing. These new business models leverage new (local) markets, emerging technologies, IT solutions and infrastructures, active consumers and new market players, often introduced through sector coupling.

Generation | Trading | New business models | Retail | Passive customer

Active customer/prosumer — Local flexibility market — V2G technology

Aggregator — Virtual power plant — Citizen energy community

Typical wholesale electricity markets & products

adequacy	wholesale	Balancing	congestion management	constraint management	behind the meter
capacity market	day-ahead	FCR	TSO congestion management	Black start capacity	grid fee optimization
strategic reserves	intraday	aFRR	DSO congestion management	Reactive Power	
		mFRR			

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Methodological Approach – Project Tasks

| 1) Identify barriers and potential indicators | 2) Select indicators and design data collection process | 3) Design CIs and CI calculation tool | 4) Conduct pilot study for 4MSs | Presentation and workshop of the final report |

1) Identify barriers and potential indicators
- Desktop research
- **Public consultation**
- **Stakeholder workshop and interviews**
- NRA workshop and feedback

2) Select indicators and design data collection process
- Selection of indicators
- Definition of a process for indicators and underlying data
- Design a data collection process
- ⑩ Presentation and workshop Report Task 1 and Task 2

3) Design CIs and CI calculation tool
- Develop method to normalise indicators
- Develop method for weighting and combining indicators
- Assessment of robustness of composite indicators
- Development of Microsoft Excel based CI tool

4) Conduct pilot study for 4MSs
- Test the CI tool for at least 4MSs
- Collection of current data
- Presentation of CI indicators and comparison of at least 3 presentation options

Presentation and workshop of the final report
- ⑩ Submit Final Report
- ⑩ **Stakeholder presentation and workshop Final Report**

Process steps and deliverables for Task 1 and Task 2

Description and categorization of existing and potential barriers

Creation of a list of potential quantitative and qualitative indicators

Enhancing and refining list of indicators based on feedback from stakeholders and NRAs

Identification of the most relevant indicators through scoring

Finalisation of indicator selection and suggestions for data sources (e.g. including NRAs and stakeholders)

- Key insights in initial report of Task 1 and 2

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Task 1 - Identify barriers, potential indicators and data collection issues

A

DESKTOP RESEARCH
Creating a long list of barriers and indicators

- Public existing reports
- DNV GL expertise and experience

B

PUBLIC CONSULTATION
Using ACER's website

- Public consultation document
- Public consultation questionnaire

C

STAKEHOLDER WORKSHOP AND INTERVIEWS
Workshop and web-based interviews

- Representative list of selected stakeholders
- Stakeholder interview questionnaire

D

NRA FEEDBACK
Web-conference with NRAs

- Web-conferences
- Written feedback

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Task 2 - Select the most suitable indicators, as defined under Task 1, and design the underlying data collection process

02

A

SELECTION OF MOST SUITABLE INDICATORS

Evaluate suitable indicators on a scale

- Proposal to use 5 grade scale
- Indicators with the highest scores to be selected
- Highlight alternatives and future indicators if data is accessible

B

DEFINITION OF A PROCESS FOR INDICATORS AND UNDERLYING DATA

To safeguard quality of indicators and data

- Computation of indicator using data of quantitative indicator or scores of qualitative indicator
- Sources and units of indicator data
- Correlations and missing information (proxies)

C

DESIGN OF A DATA COLLECTION PROCESS

Excel based questionnaire for indicator data

- Excel based questionnaire for ACER
- Processing of questionnaire responses
- Clarification process for unclear answers

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Selection of most suitable indicators

Composite Indicator

| Regulatory & Market Design | Network Operation & Access | Market Structure & Performance | **Barrier** |

Ind 1, Ind 2, Ind 3, Ind 4 | Ind 1, Ind 2, Ind 3 | Ind 1 — **Indicator for barrier**

Indicator score for barrier (green: Relevance, Data quality, Criteria 3, Criteria 4, …)

Market Structure column: Ind 1, Ind 2, Ind 3, Ind 4, Ind 5

Indicators with highest scores to be selected

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Task 3 - Design CIs and CI calculation tool

A DEVELOP METHOD TO NORMALISE INDICATORS ≫

B DEVELOP METHOD FOR WEIGHTING AND COMBINING INDICATORS ≫

C ASSESSMENT OF ROBUSTNESS OF COMPOSITE INDICATORS ≫

D DEVELOPMENT OF MICROSOFT EXCEL BASED CI TOOL ≫

With the goal to:

- form a suitable composite indicator (CI)
- enable evaluation of performance of EU Member States
- develop an Excel based CI tool

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Task 4 – Conduct pilot study for 4 Member States

A   TEST THE CI CALCULATION TOOL

- At least 4 Member States, approved by ACER
- Fill out data and calculate Cis
- Present outcomes and insights to ACER

B   COLLECT CURRENT DATA FOR RESPECTIVE MEMBER STATES

- Fit for purpose for availability of current data (or historical data if current data is not available)
- Usage of at least 5 years of data for trend analysis

C   PRESENT THE CI INDICATORS AND COMPARE OUTCOMES USING AT LEAST 3 PRESENTATION OPTIONS

- Usage of different graphs and tables to present outcomes
- Inclusion of explanations for users to use CI tool

With the goal to determine "fit for purpose" of the CI calculation tool and underlying methodologies to process data and calculate respective Cis to regularly perform an evaluation of the performance of the EU Member States

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Workplan and interactions
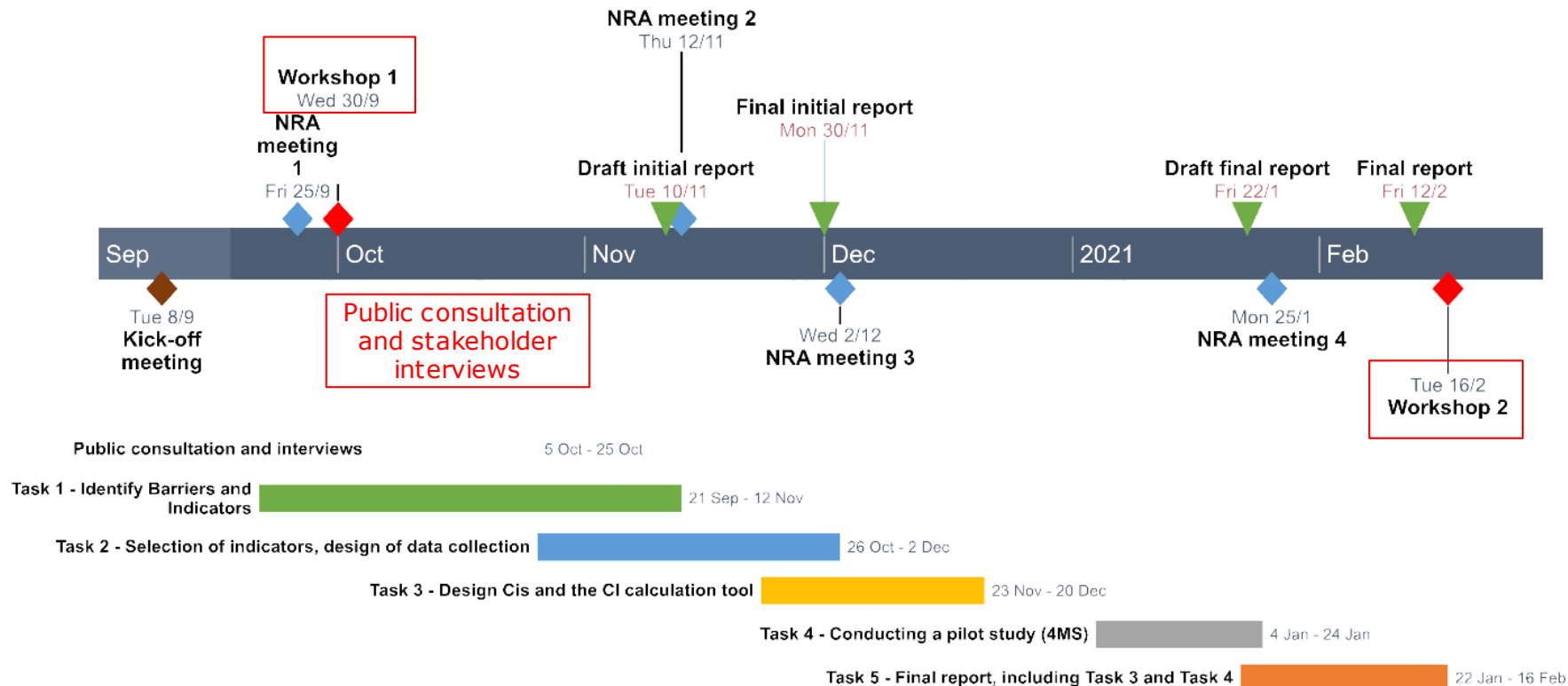
Stakeholder interactions:
- Workshop with stakeholders on 30 September
- Public consultation and stakeholder interviews from 5 to 25 October
- Final workshop with stakeholders on 16 February 2021

Agenda

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Engagement for a successful outcome

- Please kindly express your needs for interaction and engagement during the course of the project:

  – do you find the proposed level of interaction (meetings, interviews, public consultation) satisfactory?

Please respond in the **polling system**

Make suggestions in the **chat box**

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A few questions for you with our polling system

1. What is the level of transparency regarding information about cross-zonal network capacity in your country?
   - Low/medium/high
2. Are there access limitations to any of the relevant markets in your country (exclusive access, mandatory participation, large minimum bid size, etc.)?
   - Yes, significant/Yes, some/None significant
3. Are you aware of tendencies to monopolistic behaviour in some (sub-)markets in your country?
   - Yes, significant/Yes, some/None significant
4. Which explanation is closest to your understanding of the term "efficient price formation"?
   a. Prices formed on liquid – ideally cross-border coupled – markets
   b. A mechanism, which ensures that price is determined by supply/demand, and that it is cost reflective
   c. Prices that reflect market fundamentals, including the real time value of energy, on which market participants can rely when agreeing on longer-term hedging products
   d. Prices that lead to an efficient use of resources
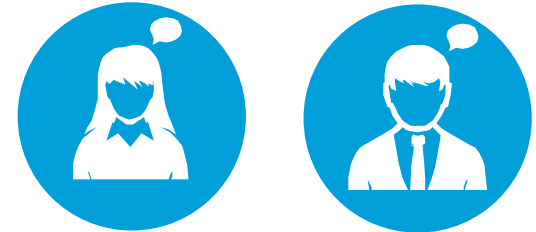
Please respond in the **polling system**

Categorization of barriers for efficient price formation and new entrants

Barriers related to policies,
regulation and laws at national and
EU-level
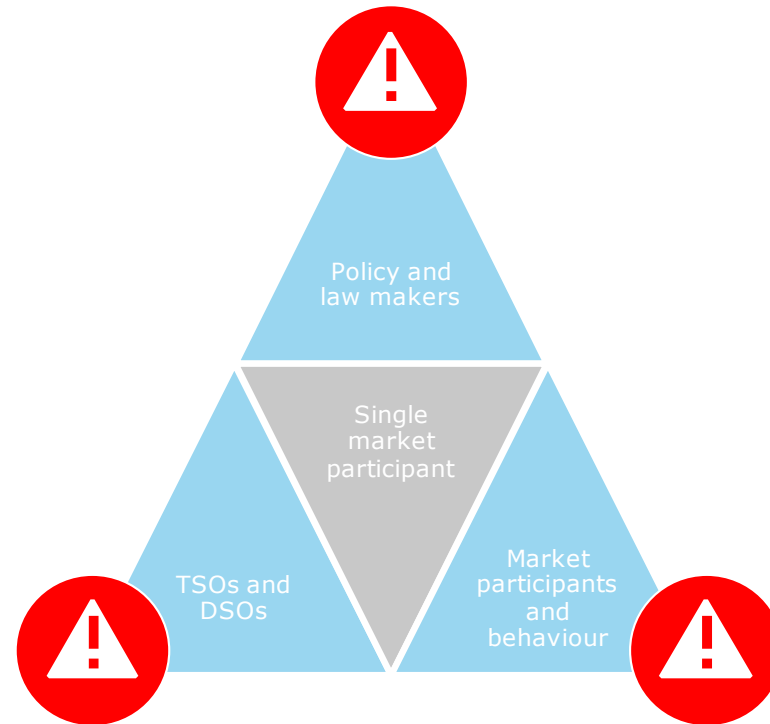
Barriers related to infrastructure,
operation and access to the
transmission and distribution
network as well as provision of
network services

Barriers related to market participants,
e.g. maturity of markets, market
concentration, number of incumbent
generators, small markets, etc.

Policy and law makers

Single market participant

TSOs and DSOs

Market participants and behaviour

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Identifying (relevant) barriers and (good) indicators

	Regulatory & market design	Network operation, access and services	Market structure and performance
Comment on category	These are barriers related to national and EU-level laws and regulation	These are barriers related to infrastructure, operation and access to the transmission and distribution network as well as provision of network services	These are all related to market participants, e.g. maturity of markets, market concentration, number of incumbent generators, small markets, etc.
I) Efficient price formation	Barriers Indicators … … …	Barriers Indicators … … …	Barriers Indicators … … …
II) New entrants and small actors	… … … …	… … … …	… … … …

- Objective of categorization of barriers …
  - Making sure we cover all important areas, issues and topics
- Ultimately, we will look for indicators
  - Understanding the barriers is a help to identify relevant, important indicators
- For a start, we will need a very long list, regardless if data are available or not

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Examples of barriers and indicators

	Regulatory & market design	Network operation, access and services	Market structure and performance
Comment on category	These are barriers related to national and EU-level laws and regulation	These are barriers related to infrastructure, operation and access to the transmission and distribution network as well as provision of network services	These are all related to market participants, e.g. maturity of markets, market concentration, number of incumbent generators, small markets, etc.
I) Efficient price formation	Price caps, bidding limits, price regulation		
	Poorly designed network tariffs		
	Design of balancing and settlement		
	...		

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Examples for Efficient Price Formation

	Regulatory & market design	Network operation, access and services	Market structure and performance
I) Efficient price formation	Price caps, bidding limits, price regulation	Lack of or wrong locational price signals	Limited use of dynamic prices in retail/end user contracts
	Yes/No [multiple?]	Redispatch volume Redispatch costs	Market share on dynamic tariff
	Poorly designed network tariffs	Restrictions on cross zonal trade	Monopolistic behaviour
	?	(metric from MMR on cross-zonal utilisation?)	HHI, PSI
	Design of balancing and settlement	Design of balancing and settlement	Not for profit market participants
	Rewarding passive balancing (imbalance opposite the system direction) Y/N	Correlation of prices for all wholesale products	Market share of coops?
	Entry/exit barriers for companies or assets	Overly conservative assumptions	NEMO markets/products
	Yes/No [multiple?]	?	Liquidity metrics
	Existence of capacity mechanisms	Cross-border intraday implementation	
	Yes/No	Yes/No or type of impl.	…
	Impact of capacity mechanisms		
	?	…	…
	Mandatory participation in (sub-)markets	…	…
	Yes/No	…	…

→ Barrier

→ Indicator

Please respond in the **chat box**

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Examples for New Entrants and Small Actors

	Regulatory & market design	Network operation, access and services	Market structure and performance	
II) New entrants and small actors	National strategy & implementation plan?	Technical or market requirements	NEMO markets/products	
	Yes/No	?	Liquidity metrics	
	Legal framework for roles etc.	Discriminatory network access/charges	Years of experience with flex	
	Yes/No	?	# years	
	Complex routines/procedures	Transparency, availibility of relevant information	Years of experience with markets instead of regulation	
	?	?	# years	
	Licensing and tax arr. for non-domestic actors	Grid code requirements for distributed assets	DER and/or demand side participation	
	?		Volume or years	
	Insufficient compliance with grid codes etc.	Grid tariff design disencouraging for participation in flex markets?		
	Degree of implementation	Yes/No or type of tariff		
	Non-wire incentives for DSOs			
	Type of DSO revenue regulation			
	Market-based constraint manangement OK?			
	Yes/No			
	Obligations for DSOs to connect		…	
	Yes/No		…	

➡ Barrier

➡ Indicator

Please respond in the **chat box**

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Structure of the stakeholder interviews and the public consultation

Detailed questions (L/M/H) on efficient price formation

- On regulatory barriers
- On TSOs and DSOs network barriers
- On market structure and performance barriers

Detailed questions (L/M/H) on new entrants and small actors

- On regulatory barriers
- On TSOs and DSOs network barriers
- On market structure and performance barriers

Specific questions about potential indicators for efficient price formation or for new entrants and small actors

Open questions of the public consultation

- What are, in your view, the three most important barriers for efficient price formation in the wholesale electricity market, in your country and in the EU?
    - What are the most relevant indicators to monitor when assessing such barriers?
- What are, in your view, the three most important barriers for market entry and participation for small actors and new market players in the electricity market, in your country and in the EU?
    - What are the most relevant indicators to monitor when assessing such barriers?
- Please explain briefly what you understand by the term "efficient price formation"?

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Selected Candidates for Interviews

Overview of stakeholder categories selected:

- Associations:
  - the European electricity industry
  - European electricity traders
  - decentralized energy solutions, including storage
  - Transmission and distribution network operators
- Electricity suppliers:
  - Major utilities (and active in decentralized energy)
  - Aggregators
- End-users:
  - Energy cooperatives
  - Industrials
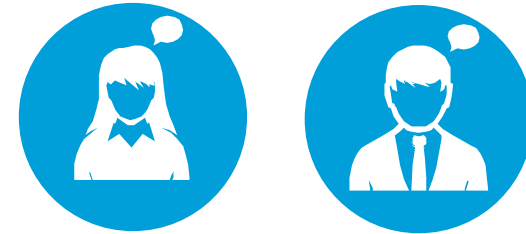
Do you find the proposed stakeholder categories for interviews satisfactory ?

Please respond in the **polling system**

Make suggestions in the **chat box**

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Additional questions we have for you

- On wholesale electricity price formation

  – How do you interpret efficiency in the wholesale electricity market?

  – Of all wholesale prices, which are the most important to monitor/analyse?

  – What are the most important barriers for efficient prices? Today? In the future?

- On barriers to new entrants and to small market participants

  – What measures could be taken to reduce barriers to entry?

  – Do you find EU regulations a barrier to entry or an enabler for new entrants? Why/why not?

  – What are the key challenges for new entrants in the electricity markets?

  – What makes it hard to be a relatively small market participant?

Questions for open Q&A and / or via **chat box**

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30 September 2020

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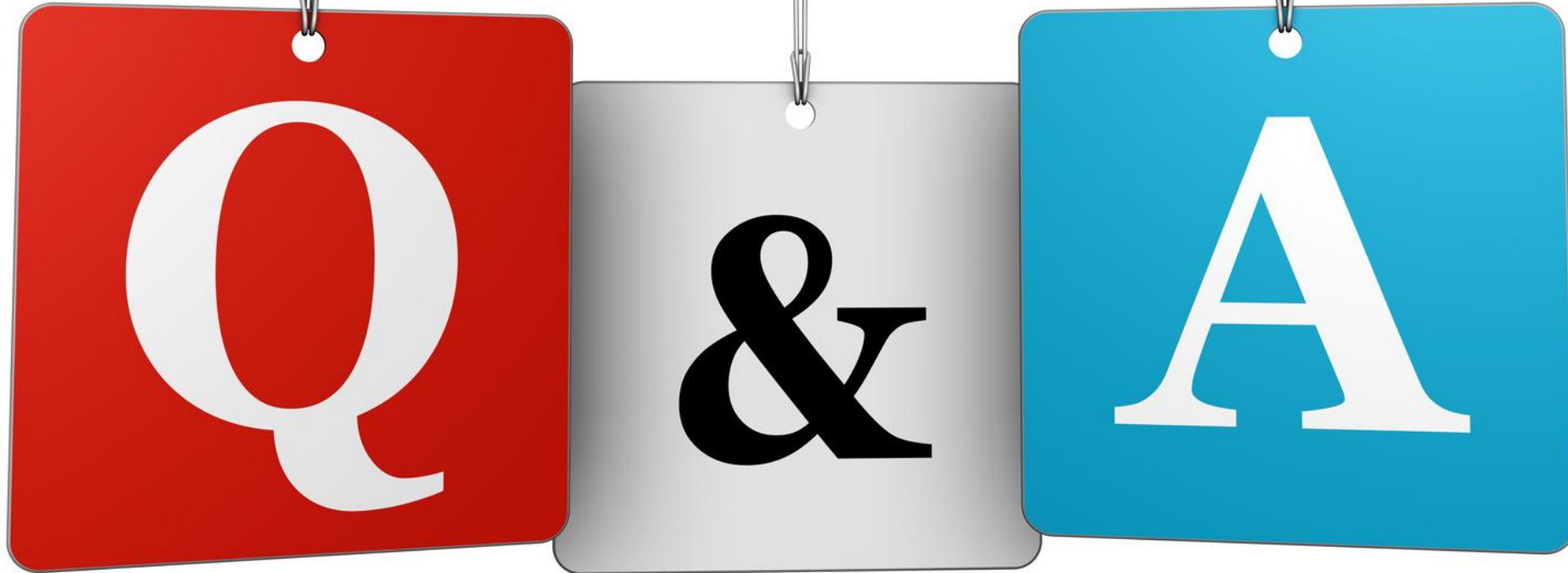
EU MS Performance Benchmarking

Study on a methodology for ranking the performance of the EU Member States in terms of efficient price formation and easy market entry for new players and small actors in electricity wholesale markets

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● Introduction of the study (ACER)

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ewpmm@acer.europa.eu

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Thank you for your attention!

Next step:
Public Consultation 5 – 25 October

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