

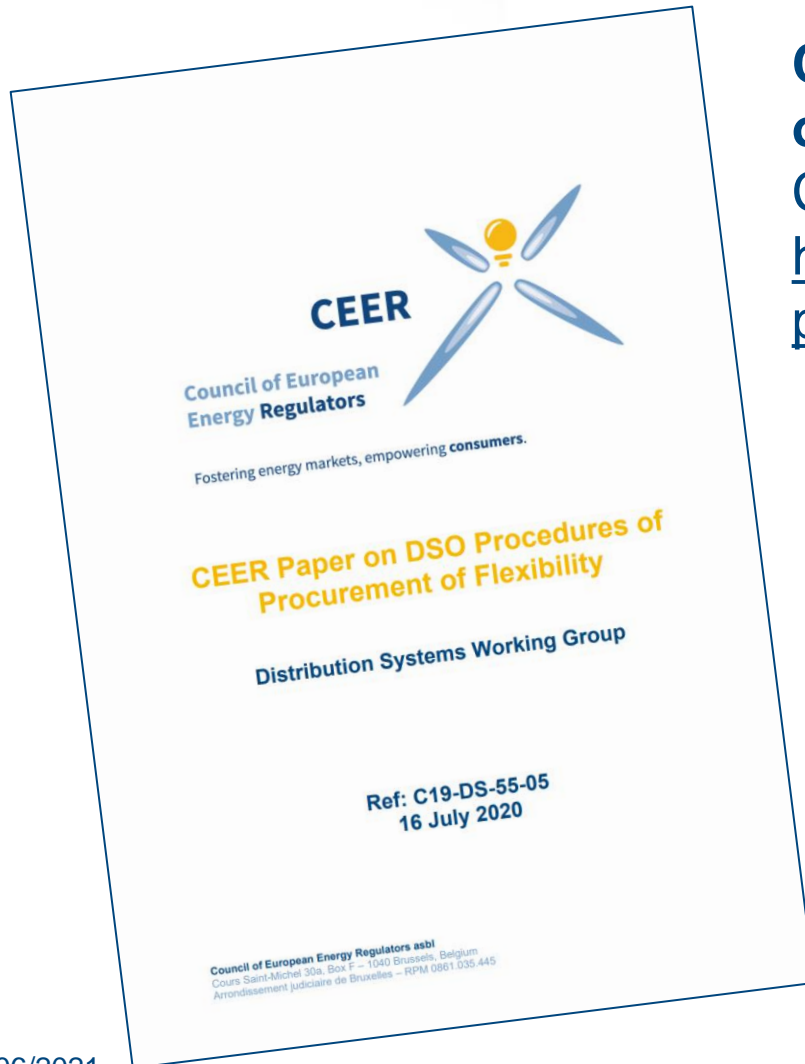


DSO Procedures of Procurement of Flexibility

Ref: C19-DS-55-05, 16 July 2020

**Presenters: Jørgen Tjersland & Stefan Vögel
RBM WS Int. Workshop on Dynamic Regulation
Friday 25 June 2021**

After a series of papers including a public consultation...



CEER Paper on DSO Procedures of Procurement of Flexibility, CEER, July 2020

<https://www.ceer.eu/flexibility-procurement> ... was published

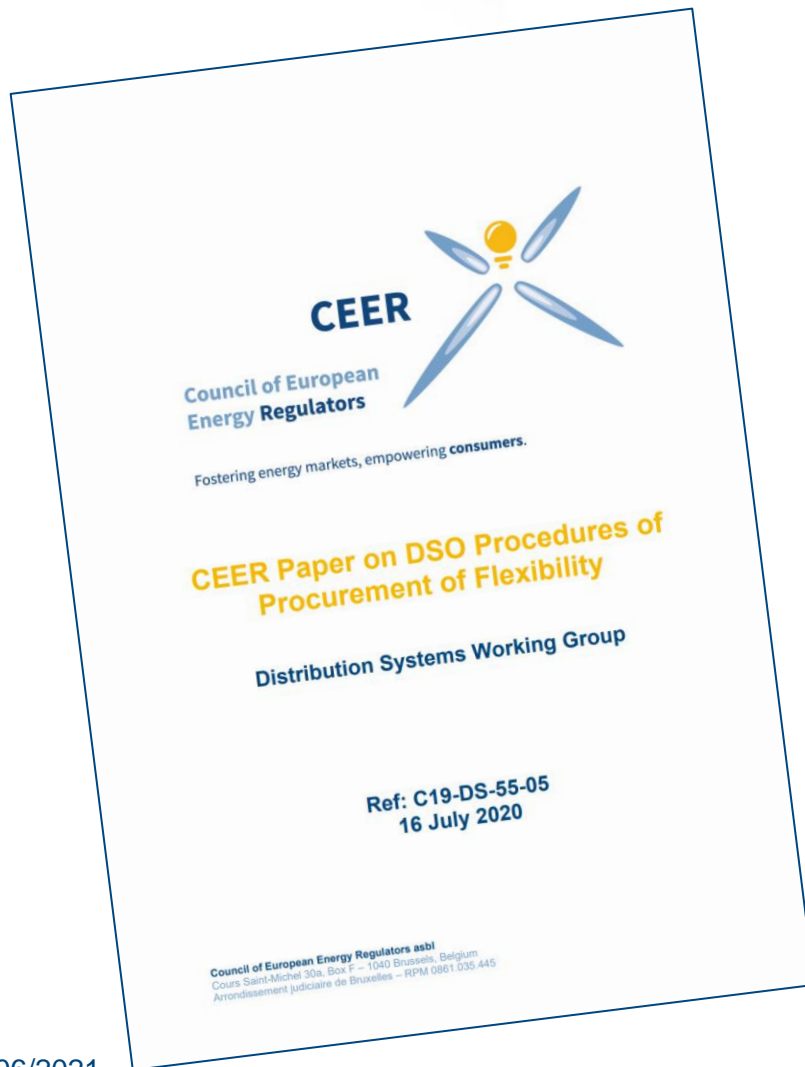
Related documents

- CEER Conclusions Paper on Flexibility Use at Distribution Level, Ref: C18-DS-42-04, 17 July 2018
- CEER Position Paper on Principles for valuation of flexibility, Ref. C16-FTF-09-03, 12 July 2016

...



Overall content



European legal basis

DSO

- ▶ Flexibility needs
- ▶ Access to flexibility
- ▶ Principles and preconditions of market-based procurement
- ▶ Components and methods within the market-based approach and procedure



Overview of structure and content

- **EXECUTIVE SUMMARY**
- **INTRODUCTION**
- **EUROPEAN LEGAL BASIS**
 - ▶ Flexibility procurement, Art. 32 (1), (2)
 - ▶ Network Development Plans, Art. 32 (3), (4), (5)
 - ▶ Competition law and REMIT
- **DSO FLEXIBILITY NEEDS**
 - ▶ Definitions
 - ▶ Grid operation with own assets vs. procuring flexibility
- **DSO ACCESS TO FLEXIBILITY**
 - ▶ Different ways of accessing flexibility
 - ▶ Rules-based Approach
 - ▶ Connection agreements
 - ▶ Network tariffs
 - ▶ Market-based procurement
 - ▶ Interaction between the market-based approach and other categories
- **DSO PRINCIPLES AND PRECONDITIONS TO PROCURE FLEXIBILITY**
 - ▶ Incentives
 - ▶ Neutrality and unbundling
 - ▶ Technical prerequisites and operational principles
 - ▶ Framework for market-based procurement
- **DSO FLEXIBILITY PROCUREMENT COMPONENTS AND METHODS**
 - ▶ Product design
 - ▶ Controllability
 - ▶ Imbalance settlement
 - ▶ Procurement procedure
 - ▶ Market model design and coordination mechanisms
 - ▶ Administrative measures
- **CONCLUSIONS AND OUTLOOK**



Art. 32 of the Directive (2019/944)

- **Paragraph 1**

- ▶ aims to improve efficiencies in the operation and development of the distribution system by providing incentives for DSOs to procure flexibility services
- ▶ sets out what sort of actors can provide flexibility services
- ▶ the procurement procedures must be established in a transparent, non-discriminatory and market-based manner
- ▶ exemption if the regulatory authority has established that economically efficient, would lead to severe market distortion or higher congestion

- **Paragraph 2**

- ▶ focuses on the operational design of the procurement process
- ▶ the involved parties shall establish the specifications for the flexibility services procured and standardise market products for such services
- ▶ specifications are subject to the approval by the regulatory authority or can be established by the regulatory authority itself



4 categories to access flexibility

Relevant national Framework (NRA, partly MS)

DSO grid problem

DSO's access to flexibility

Grid
rein-
force-
ment

Rules based
Approach

Connection
Agreements

Network
Tariffs

**Market-
based
Procure-
ment**

Figure 1: Options of DSO access to flexibility with an emphasis on market-based procurement

According to Article 32 (non-market-based approaches are not comprised). NRA involvement in other categories than market based is not plotted in the figure, e.g. in designing network tariffs or setting conditions for non-firm connection agreements.



NRA assessment guides the way

- Careful design and regulatory assessment of the effectiveness of the different categories are critical
 - ▶ Various approaches to flexibility mechanisms that could reach a cost-efficient outcome
 - ▶ Other forms of flexibility use in the distribution grid should be taken into account and could be more beneficial in certain situations
- No first-best option
Better the conditions for competition (on equal terms) by removing distortions step by step and effectively improving DSO procedures of procurement of flexibility. Explore through testing / demos
- Description of preconditions, principles and potential methods of procedures of procurement of flexibility in the market-based approach (upcoming slides)

Necessary preconditions

- Equal incentives
- Neutrality and unbundling
- Technical and operational
- Framework for procurement



Necessary preconditions

- **Equal incentives**
 - ▶ Appropriate CAPEX/OPEX consideration
 - ▶ Provide the basis for the DSOs to choose the most cost-efficient solution in consumers interest, including market-based
- Neutrality and unbundling
- Technical and operational
- Framework for procurement



Necessary preconditions

- Equal incentives
- **Neutrality and unbundling**
 - ▶ DSOs must act as neutral market facilitators
 - ▶ Ensure a level playing field amongst different technologies and solutions when procuring flexible resources
- Technical and operational
- Framework for procurement



Necessary preconditions

- Equal incentives
- Neutrality and unbundling
- **Technical and operational**

Technical prerequisites		Operational principles	
Observability	DSO knows where the problems are, including actual state and forecasts of the network	System operation	Planning tools, integration in control centre operation, coordination SOs, etc.
Controllability	Activation and confirmation / verification of procured flexibility	Data exchange	Harmonised / standardised / interoperable: API, CIM etc.

- Framework for procurement



Framework / guidelines for procurement

- At least consist of descriptions regarding
 - ▶ Product design
 - ▶ Technical rules
 - ▶ A method to cope with imbalances caused by activations
 - ▶ Procurement procedure
 - ▶ Market model design
 - ▶ Coordination schemes between system operators
- Give room for development and regulation of essential parts of the beforementioned topics to fit to the national frame and situation.
- All NRAs have an important task in the assessment of the whole framework and especially for the procurement procedure which has to be transparent, non-discriminatory and market-based, e.g. through making the terms and conditions of the DSO as clear as possible for stakeholders.



Framework / guidelines for procurement

At least consist of descriptions regarding

- ▶ **Product design**

- Characteristics/parameters – degree of freedom?
 - Granularity of locational information
 - Baselines

- ▶ Technical rules

- ▶ Imbalance settlement

- ▶ Procurement procedure

- ▶ Market model design

- ▶ Coordination schemes between system operators



Framework / guidelines for procurement

At least consist of descriptions regarding

- ▶ Product design
- ▶ **Technical rules**
 - Controllability; through intermediaries or directly
 - Prequalification
 - Verification
- ▶ Imbalance settlement
- ▶ Procurement procedure
- ▶ Market model design
- ▶ Coordination schemes between system operators



Framework / guidelines for procurement

At least consist of descriptions regarding

- ▶ Product design
- ▶ Technical rules
- ▶ **Imbalance settlement**
 - Clear financial responsibilities
 - Ensure stability of system frequency
- ▶ Procurement procedure
- ▶ Market model design
- ▶ Coordination schemes between system operators



Procurement procedure

Propose a non-exhaustive list of elements to act as a guideline:

- 1. Flexibility demand:** DSOs must signal and publish their need
- 2. Request for tenders:** should be as broad as possible
- 3. Product requirements:** must be properly defined and preferably based on standards
- 4. Optional:** ex-ante assessment performed by the NRA (of elements 1., 2. and 3.)
- 5. Optional:** ex-post review performed by the NRA on the tendering outcome and the DSO decision (fitted to national implementation; random tests may be sufficient).



Framework / guidelines for procurement

At least consist of descriptions regarding

- ▶ Product design
- ▶ Technical rules
- ▶ Imbalance settlement
- ▶ Procurement procedure

- ▶ **Market model design**
 - Market setup - Combined or separate?
 - Time frame markets
 - Role of the marketplace operator
 - Coordination mechanisms: schemes between system operators



Administrative measures

- Exemptions if not economically efficient, would lead to severe distortion or higher congestion:
 - ▶ If some or substantial parts of the preconditions and methods discussed are not fulfilled, it may be assessed as preferable to introduce administrative measures
 - ▶ Inc-dec game
- Accessibility
- Availability
- Price



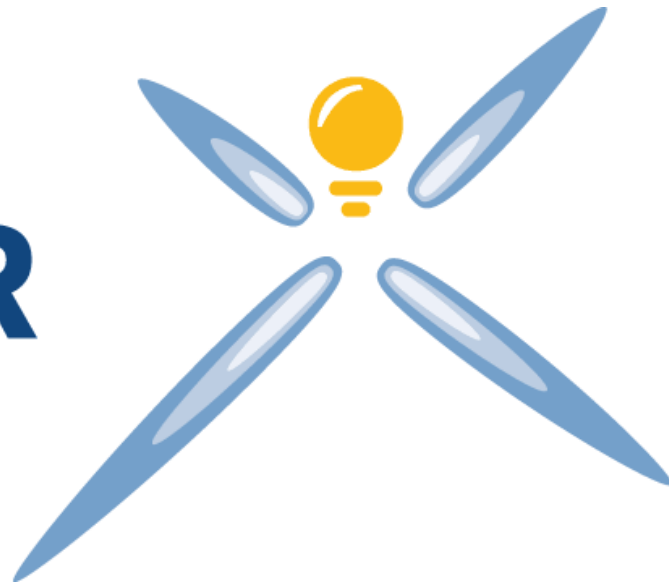
Discussion



Thank you for your attention!

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