

# Agenda

**Keynote address** by Kadri Simson, European Commission

## **Session One: Impact of the Covid-19 Pandemic on the Energy Sector**

**Presentations** by Jean-Laurent Lastelle, CEER & Mechthild Wörsdörfer, International Energy Agency

### **Panel discussion**

Jiří Jaromír Klemeš, Brno University of Technology  
Matthew Vickers, Ombudsman Services & NEON  
Marie-Pierre Fauconnier, Sibelga  
Moderator: Jean-Laurent Lastelle, CEER

## **Session Two: Sector coupling and the energy transition**

**Presentations** by Pedro Verdelho & Christine Materazzi-Wagner, CEER

### **Panel discussion**

Miklos Gaspar, European Commission  
Uroš Salobir, ELES  
Jorgo Chatzimarkakis, Hydrogen Europe  
Moderator: Wolfgang Urbantschitsch, CEER

**Closing remarks & preview new CEER Strategy for 2022-2025** by Annegret Groebel, CEER President

# CEER Annual Conference 2021

CEER White Papers on Long-term storage, Regulatory Treatment of Power-to-Gas and When and how to regulate hydrogen networks?

Pedro Verdelho, GWG Chair

Christine Materazzi-Wagner, EWG Chair



#CAC2021

## How we started:

- 1, 2, 3 Packages
- Liberalisation
- Unbundling
- Internal energy market
- New EU entities & NCs



## Where we are going:

- New actors
- Energy system integration
- Carbon-neutral society
- Hydrogen
- Energy efficiency

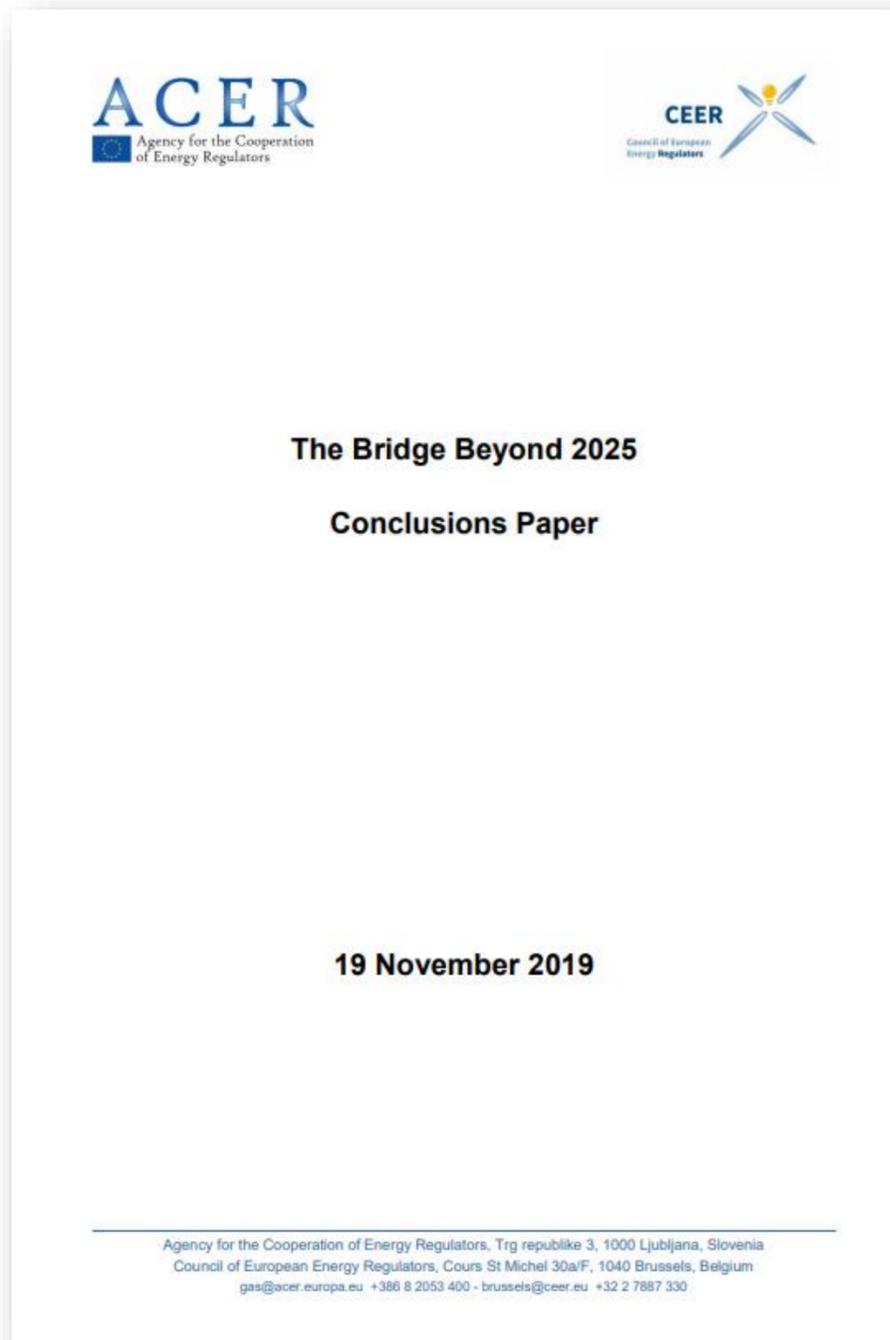


## Where we stand:

- Clean Energy Package
- Decentralisation
- Prosumers
- Energy efficiency



## The Bridge Beyond 2025



- Access and market monitoring
- Governance of infrastructure and oversight of existing and new entities
- Dynamic regulation for new activities and technologies
- Transmission tariffs and cross-border capacity allocation

### Further reflections:

White Paper on Hydrogen

White Paper on Power-to-Gas

White Paper on Long-term storage

You can find the papers [here](#).

#CAC2021

# Views on how to regulate hydrogen networks



1. Consider a **gradual approach to the regulation of H2 networks** in line with market infrastructure development



2. **Apply a dynamic regulatory approach** based on periodic market monitoring



3. **Clarify the regulatory principles** from the outset



4. **Foresee temporary regulatory exemptions** for existing and new H2 infrastructure development as B2B networks



5. **Value the benefits of repurposing of gas assets** for H2 transport



6. **Apply cost-reflectivity** to avoid cross-subsidisation between the gas and H2 network users

**ACER**   
European Union Agency for the Cooperation  
of Energy Regulators



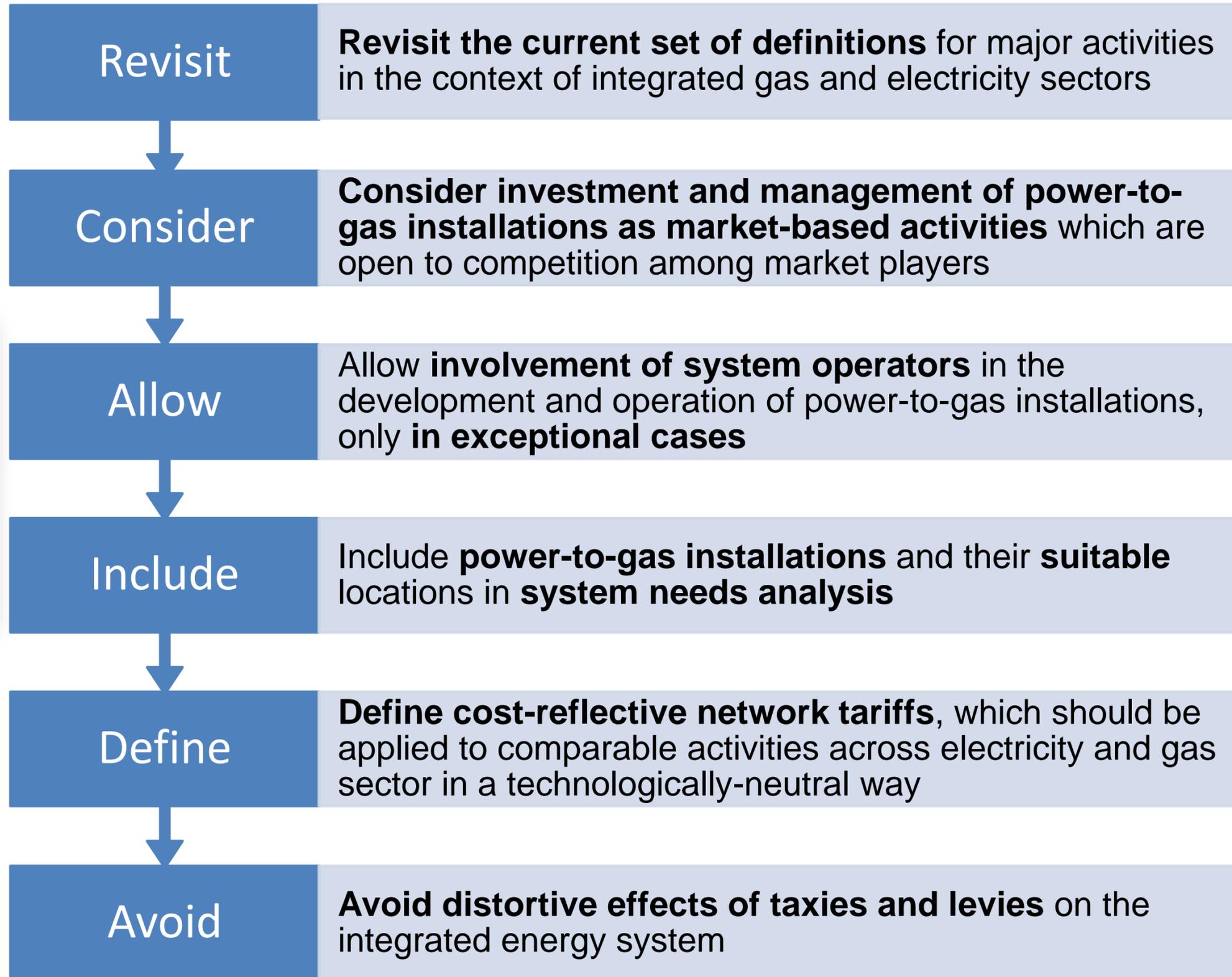
## *When and How to Regulate Hydrogen Networks?*

“European Green Deal” Regulatory White Paper series (paper #1)

relevant to the European Commission’s Hydrogen and Energy System Integration Strategies

9 February 2021

# Views on how to regulate Power-to-Gas



**ACER**   
European Union Agency for the Cooperation  
of Energy Regulators

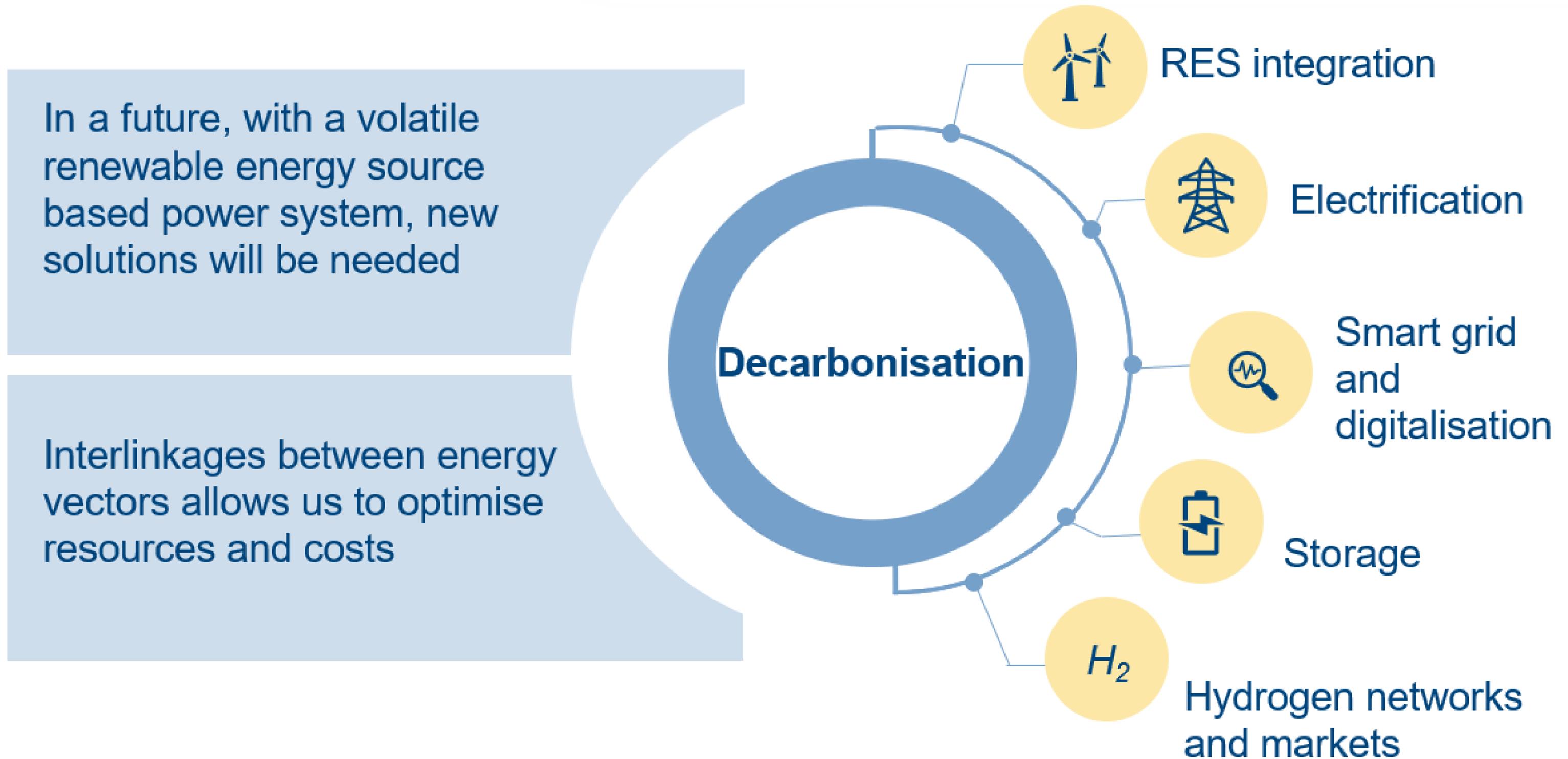
**CEER**   
Council of European  
Energy Regulators

**Regulatory Treatment of Power-to-Gas**

“European Green Deal” Regulatory White Paper series (paper #2)  
relevant to the European Commission’s Hydrogen and Energy System Integration  
Strategies

11 February 2021

# Energy System Integration has several dimensions

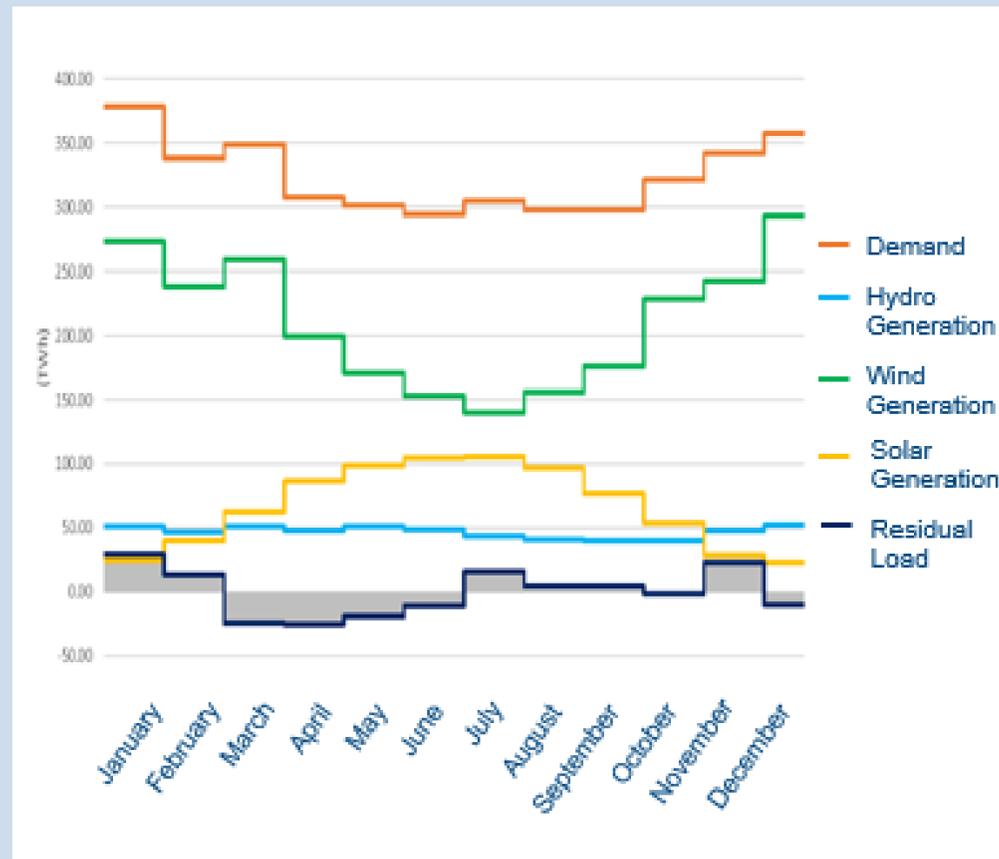


# Why may Long-Term Storage be relevant?

## Seasonal adequacy solutions

- Interconnections
- Excess RES
- Market-based curtailment
- Flexible demand
- Long-term storage (hydro and gas)

## 100% RES 2040 scenario



## Storage analysis

Average annual gas storage need

741  
TWh

Gas storage currently installed

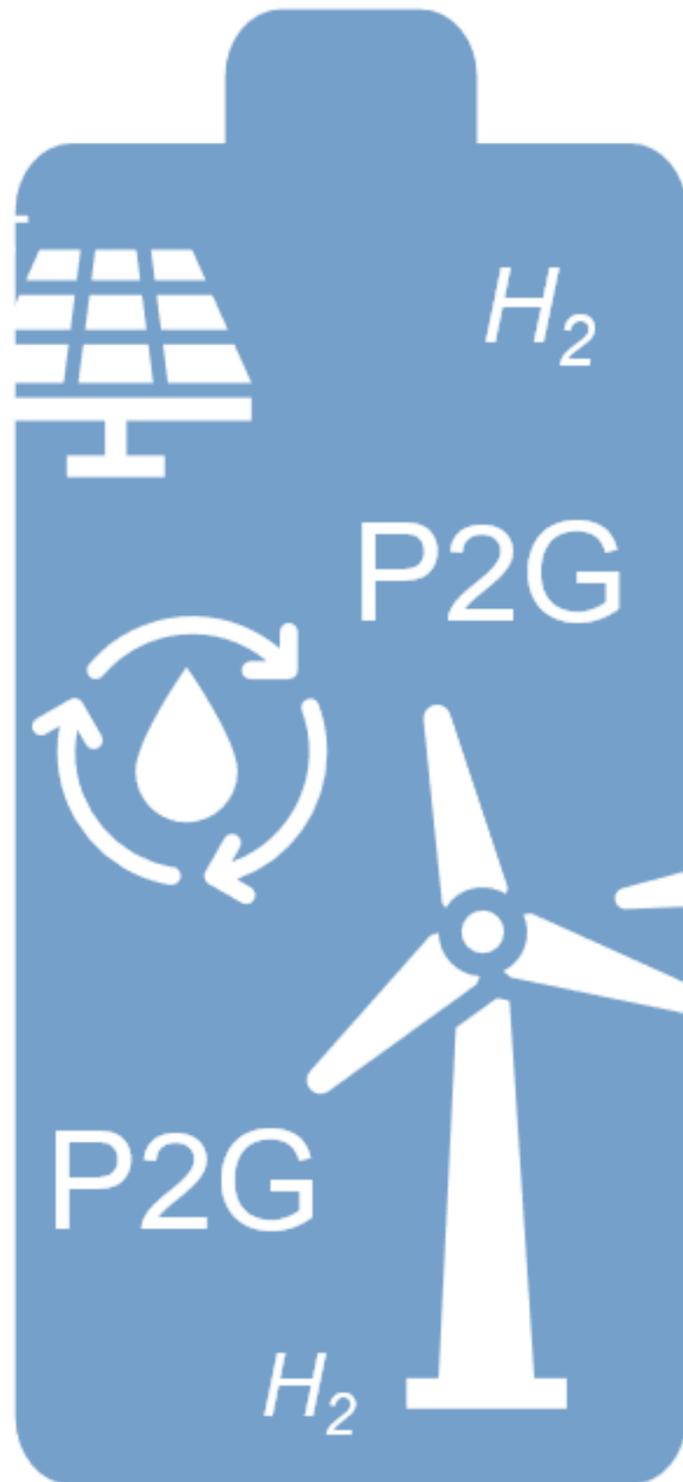
1020  
TWh

14 / 54  
TWh

Pumped hydro storage currently installed / technological potential

Annual storage need  
100% RES

75 - 94 TWh



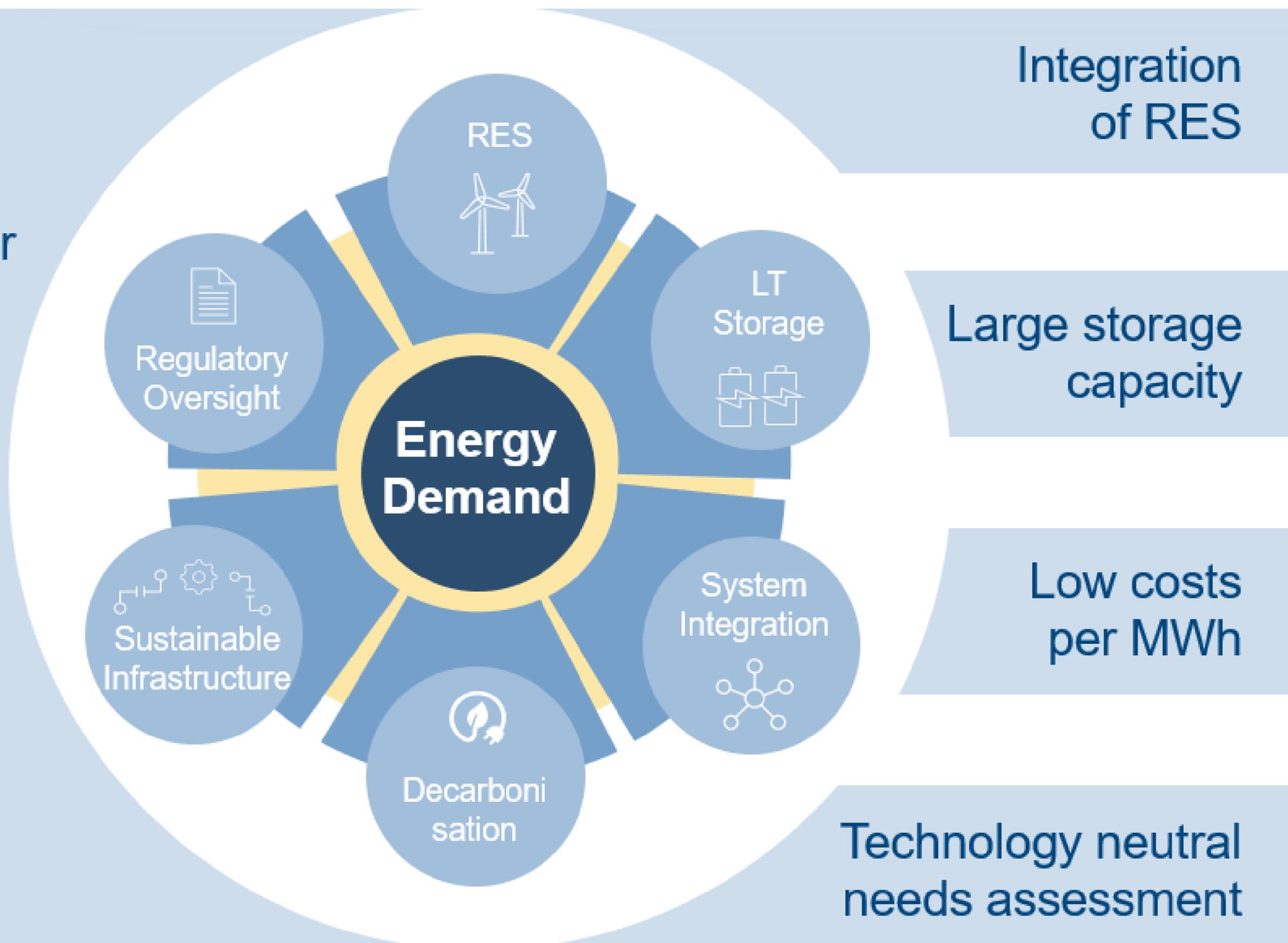
- Today the only mature technologies are pumped hydro storage and gas storage
- Limited amount of pumped hydropower potential
- Current gas storage capacity widely exceeds the potential electricity side demand for storage until 2040
- No significant additional demand for long-term electricity storage until 2040
- The ratio between installed PV and wind power capacities has a significant impact

# Cornerstones needed for Long-Term Storage



Level playing field between long-term storage and other seasonal adequacy approaches

Storage and sector coupling technologies should be integrated in a detailed way in planning models



## **Session Two: Sector coupling and the energy transition**

**Miklos Gaspar, DG ENER, EC**

**Uroš Salobir, Director of the Strategic Innovation  
Department ELES**

**Jorgo Chatzimarkakis, Secretary General Hydrogen Europe**

**Moderator Wolfgang Urbantschitsch, CEER Vice President**

# TSO innovation for a climate-neutral European energy system

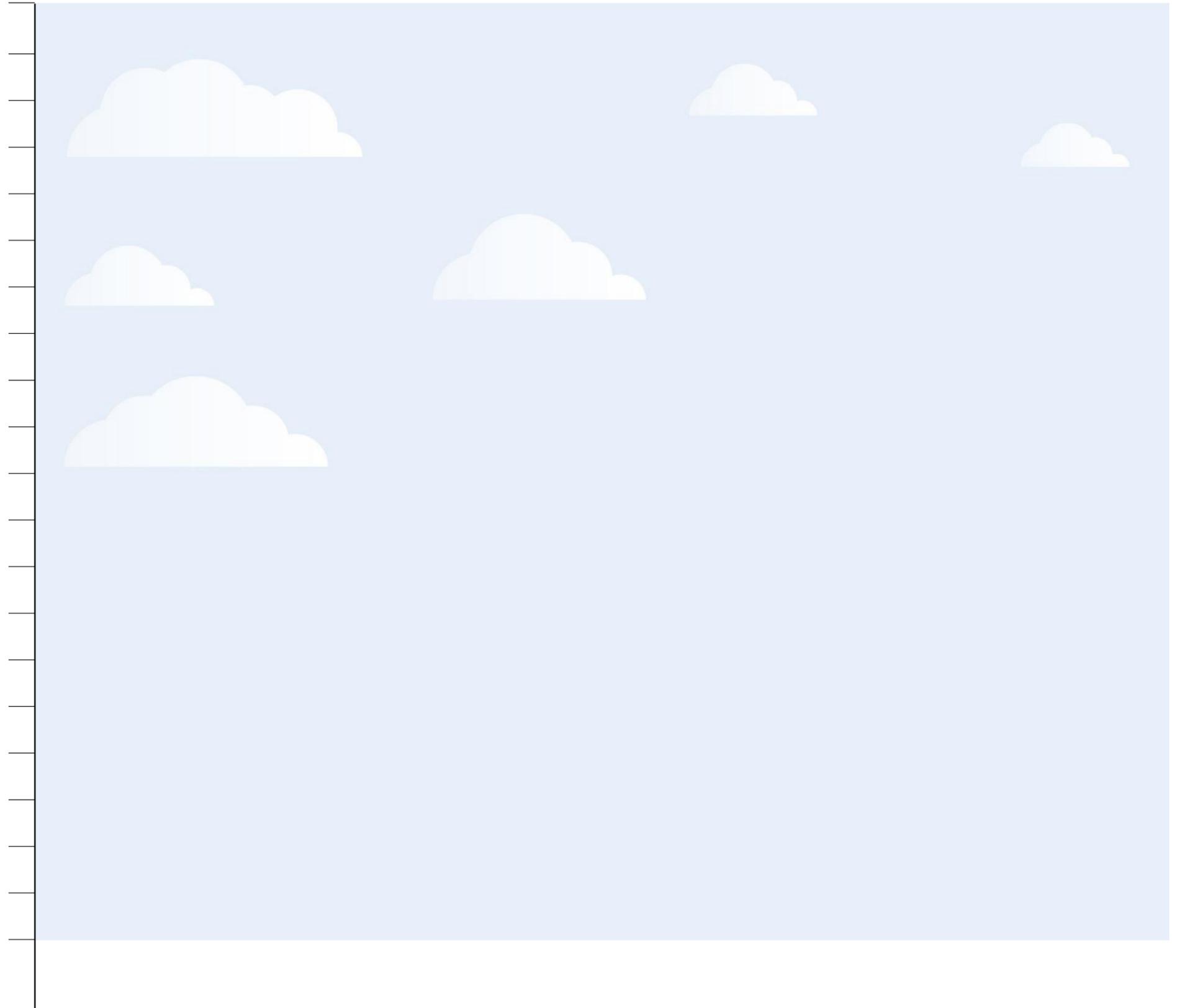
**Uroš Salobir,**

Director of the Strategic Innovation Department

ELES

**Sector coupling** will be the key to keeping energy prices low in the long-run

*Network charges in EUR/kWh*

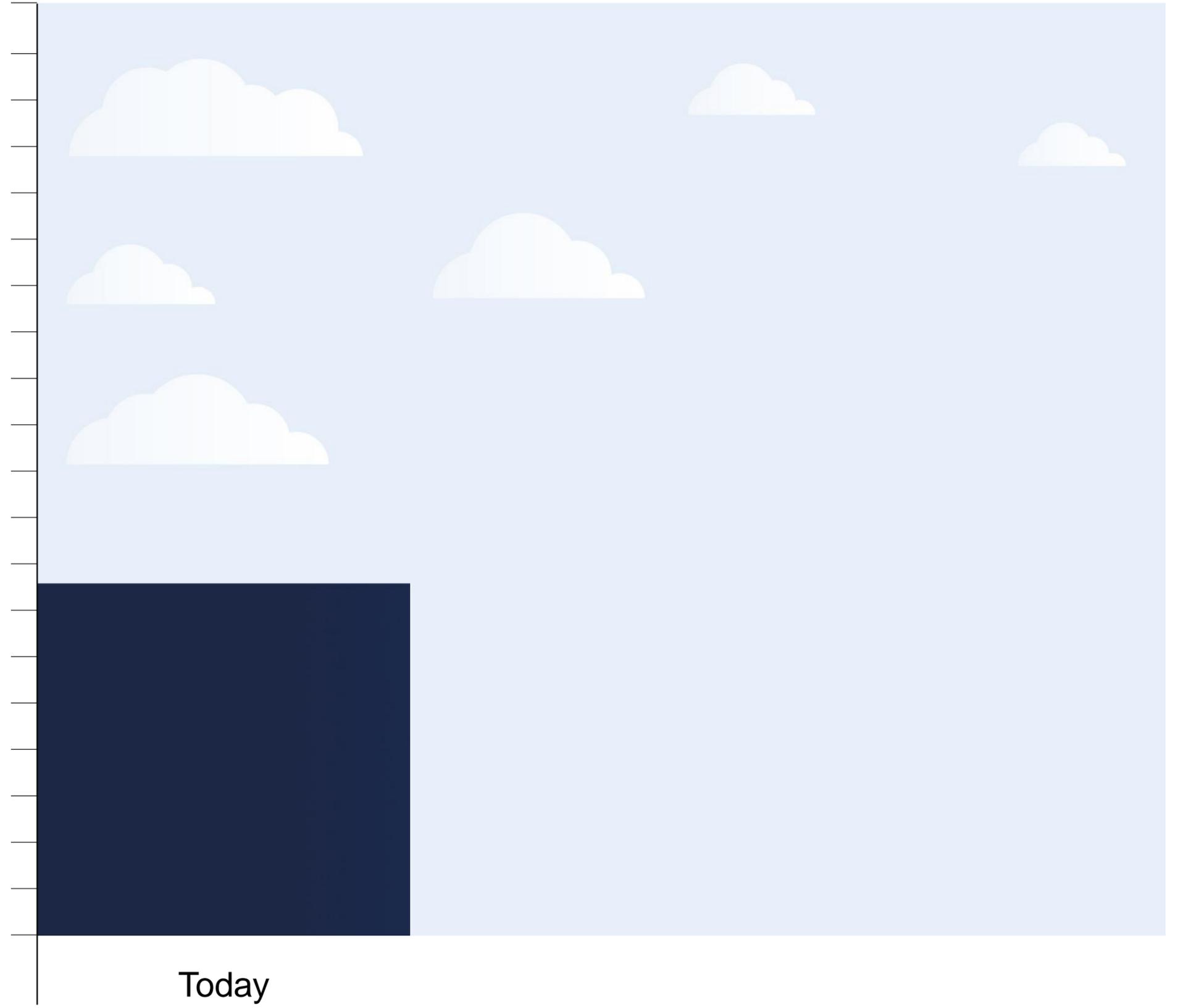


**Sector coupling** will be the key to keeping energy prices low in the long-run

*Network charges in EUR/kWh*

**~0.15**

Today



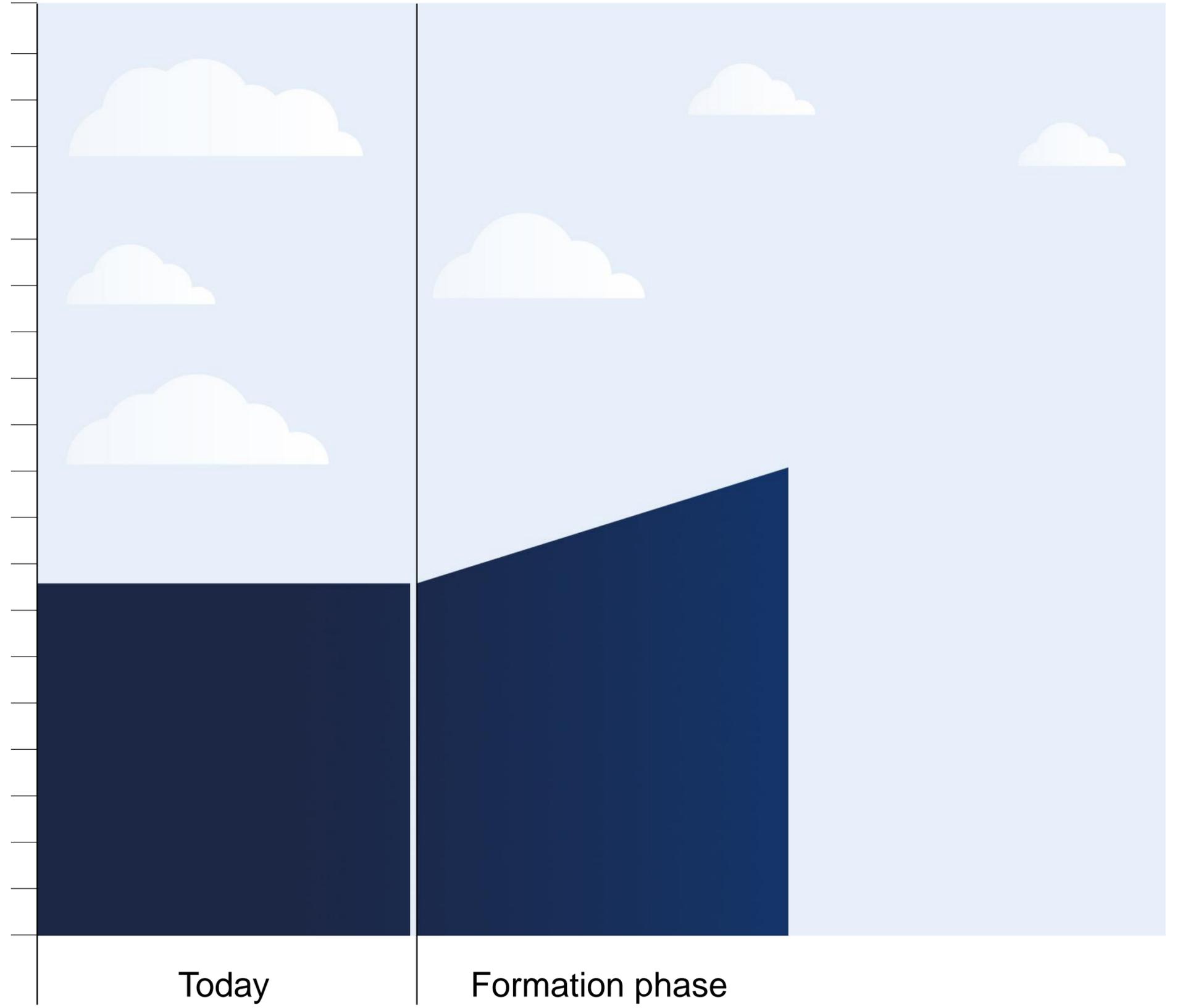
**Sector coupling** will be the key to keeping energy prices low in the long-run

*Network charges in EUR/kWh*

**~0.15**

Today

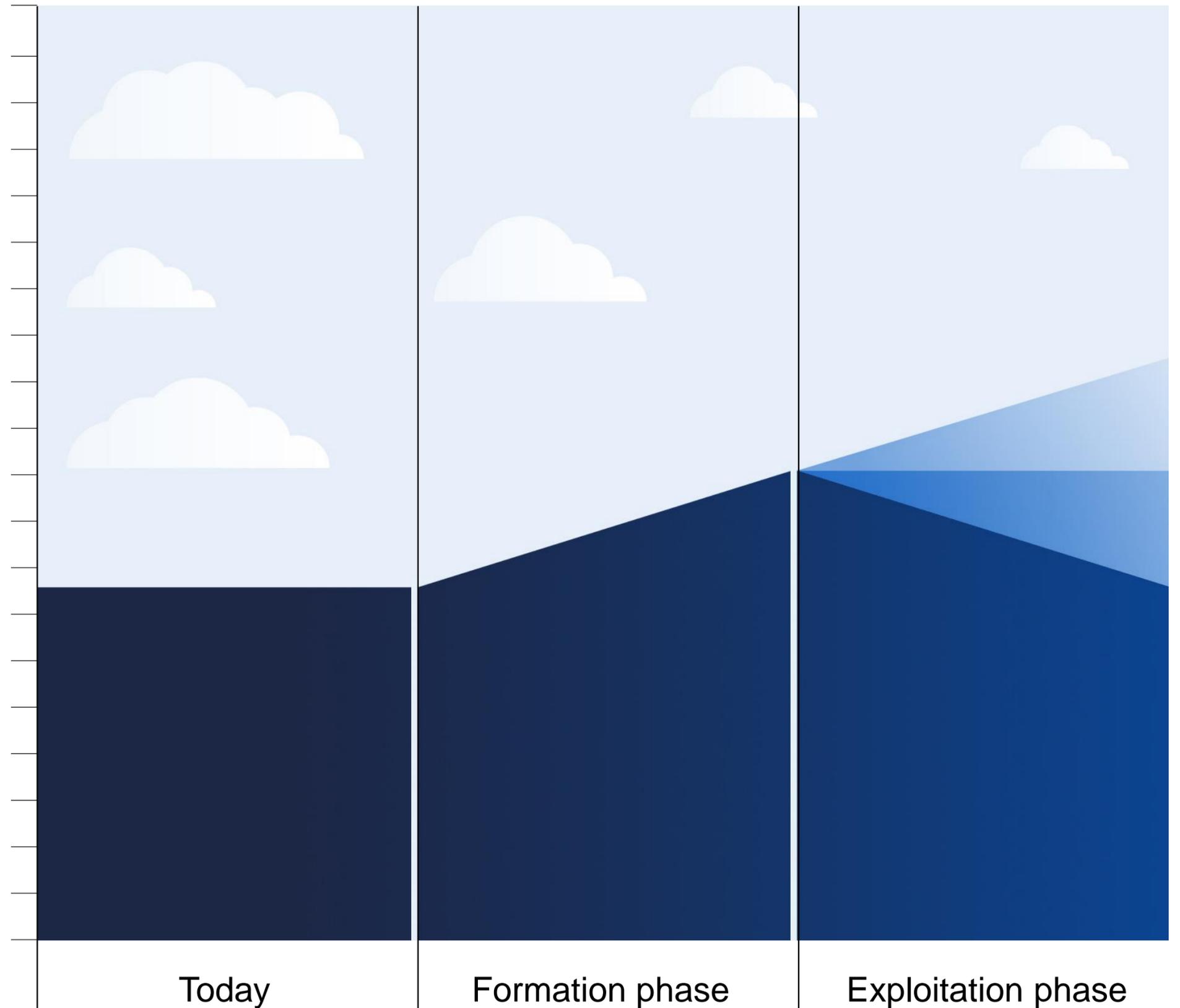
Formation phase



**Sector coupling** will be the key to keeping energy prices low in the long-run

*Network charges in EUR/kWh*

**~0.15**



**The sector coupling** will  
require efficient cooperation  
on cross-sector investments

**The sector coupling** will require efficient cooperation on cross-sector investments

1

## Building up **new roles and responsibilities**

Connecting utilities from electric, gas, oil, heating, and transport sectors

Connecting market and non-market stakeholders

Connecting utilities and end-users



**The sector coupling** will require efficient cooperation on cross-sector investments

1

## Building up **new roles and responsibilities**

Connecting utilities from electric, gas, oil, heating, and transport sectors

Connecting market and non-market stakeholders

Connecting utilities and end-users



2

## Joint development of **cross-sector digital twins**



**The sector coupling** will require efficient cooperation on cross-sector investments

**1**

## Building up **new roles and responsibilities**

Connecting utilities from electric, gas, oil, heating, and transport sectors

Connecting market and non-market stakeholders

Connecting utilities and end-users



**2**

## Joint development of **cross-sector digital twins**



**3**

## Initiation of cross-sector **investment projects**



**CEER 2021 Annual Conference**  
Tuesday 30th March 2021

# HYDROGEN EUROPE

**Jorgo Chatzimarkakis, Secretary General**

# 9 PRINCIPLES

1

Hydrogen: from innovative niche technology to system element.

2

Hydrogen's key role in delivering climate neutrality means it merits a dedicated framework .

3

Clean Hydrogen definition: Clean Hydrogen is EU Climate Law compliant hydrogen. Carbon content as currency; science based definitions, clear LCA methodology and thresholds.

4

Hydrogen Act focuses on infrastructure and market aspects, describing 3 phases of development: kick-start, ramp-up & market-growth.

5

Making hydrogen part of 'smart' energy system integration system, including through the use of ledger technologies.

6

In order to meet the 2024 and 2030 targets, the kick-start phase will require exceptions and derogations from existing EU rules, e.g. relaxation and/or reform of state aid rules.

7

Different tools can be utilised to incentivise market uptake and functioning, on the production side and the demand side.

8

Need for a certification scheme that is Trackable, Traceable, Transparent, Transportable and ultimately Trustworth.

9

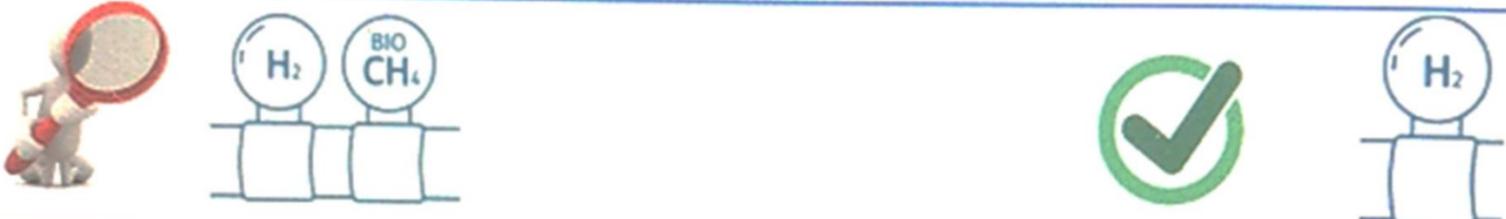
Hydrogen Act should contribute to framing Hydrogen Europe's "replacement strategy" of fossil carriers.

# REGULATION OF HYDROGEN NETWORKS

**ACER** European Union Agency for the Cooperation of Energy Regulators

**CEER** Council of European Energy Regulators

## Findings on blending and recommendations on pure H2



**Blending of H2 and biogas injection**

1. Blending readiness differs across EU
2. Pilot projects drive developments
3. NRAs support EU-wide approach to H2 limits
4. Pure H2 and blending could co-exist
5. Gas quality standards need revision to ensure interoperability
6. NW plans to focus on repurposing
7. Limited regulatory change needed (under gas legislation)

**Regulation of pure H2 network**

1. Regulate gradually
2. Monitor H2 sectoral development
3. Clarity on key regulatory principles
4. Allow temporary exemptions
5. Assess NW repurposing
6. Keep cost-reflectivity

- EC has shown its intentions in TEN-E: separate h2 networks.
- The development of the h2 market will not develop in the same way as the gas market did.
- The unbundling models may not strictly speaking be the same as in the gas market.
- Market tests to assess the different situations across Europe.
- Close alignment between ACER / Hydrogen Europe recommendations on hydrogen infrastructure regulation presented in H2 Act paper, our gas grid paper (2019) as well as our input to the LBST/Trinomics study on Hydrogen Regulation.
- Clear distinction in approach to blending of hydrogen and pure hydrogen.

# HYDROGEN GUARANTEES OF ORIGIN

## Guarantees of origin should be

**T**RACKABLE,

**T**RACEABLE,

**T**RANSSPARENT, and

**T**RADEABLE

**T**RUSTWORTHY

- We promote hydrogen as a distinct energy carrier. Blends belong in the gas world but pure hydrogen is meant for pure hydrogen consumers.
- A market for hydrogen will emerge; hydrogen GOs should transparently reflect GHG intensity of the hydrogen.
- EC FASTGO project: *“the hydrogen sector unanimously and strongly reacted to the stakeholder consultation, asking for separate hydrogen GOs that would acknowledge that hydrogen is a separate energy vector to other gases.”*
- Synergies of GO system with funding/incentive mechanisms.
- Use of ledger technologies e.g. blockchain, to facilitate traceability.
- GOs for imports to be implemented.

# Our mission – zero emission!

---

## HYDROGEN EUROPE SECRETARIAT

Avenue de la Toison d'Or 56-60  
BE-1060 Brussels

[secretariat@hydrogeneurope.eu](mailto:secretariat@hydrogeneurope.eu)

+32 (0) 2 540 87 75

[www.hydrogeneurope.eu](http://www.hydrogeneurope.eu)



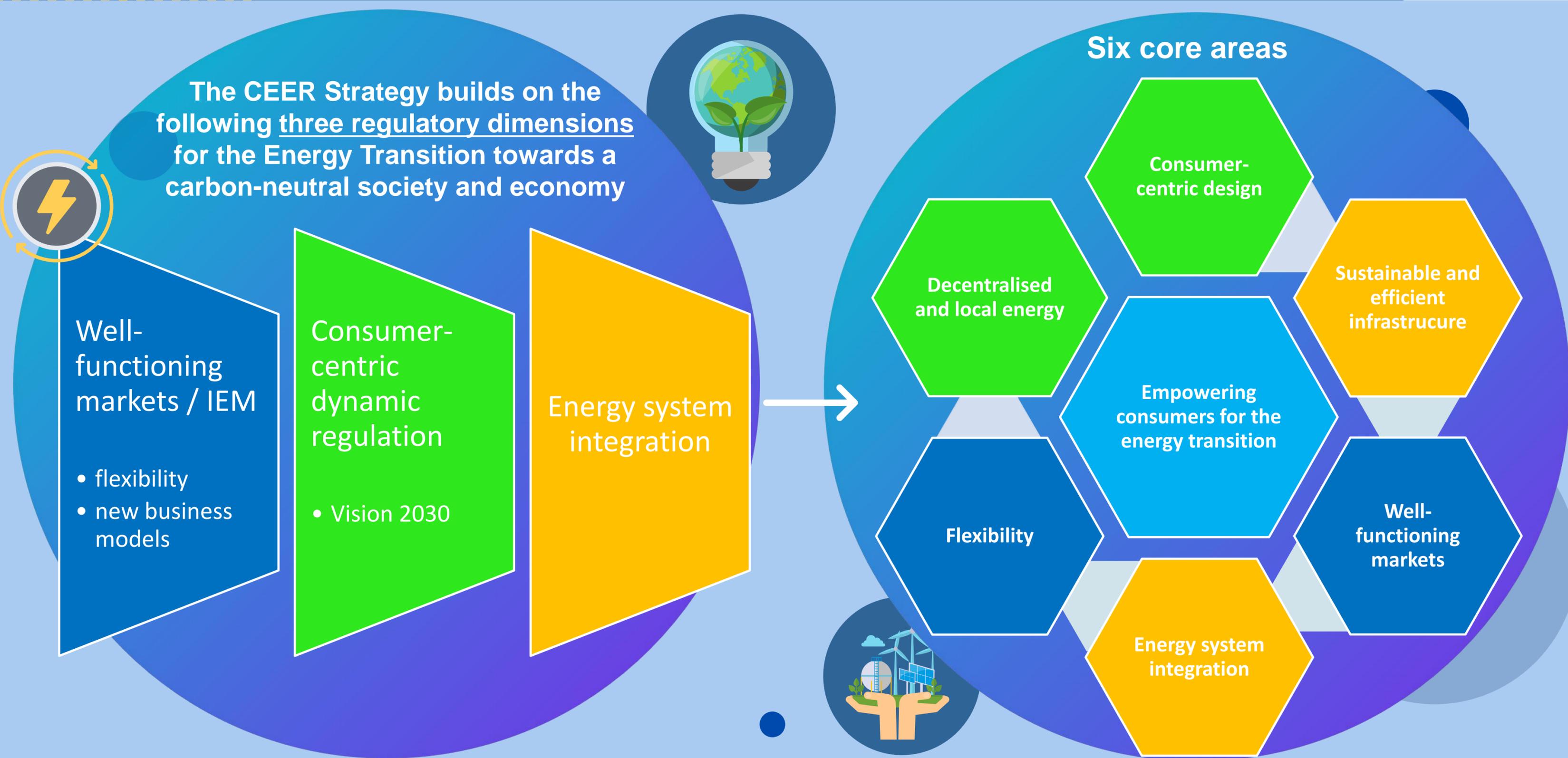


- **Introduction to CEER's draft strategy**
- **Conclusions and wrap up of the conference**

**Annegret Groebel, CEER<sup>26</sup> President**

#CAC2021

# CEER Empowering Consumers for the Energy Transition Strategy for 2022-2025



The public consultation  
is open until 30 April

YOUR FEEDBACK IS  
MUCH APPRECIATED!

You can find the  
strategy and  
questionnaire here:  
[www.ceer.eu/public-consultation-on-new-strategy](http://www.ceer.eu/public-consultation-on-new-strategy)



# Thank you for attending!



COUNCIL OF EUROPEAN ENERGY REGULATORS



#CAC2021