



European Union Agency for the Cooperation
of Energy Regulators

Hydrogen and Decarbonised Gas Market Package: what's new for ACER?

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- **Who are ACER and the emerging hydrogen market team**
- **ACER's role on hydrogen**
- **Developments in the hydrogen market**
- **Financing hydrogen infrastructure**
- **Gas TSOs cost efficiency comparison**
- **Final reflection**

Who is ACER?

ACER role and governance



- **Supporting the integration of energy markets in the EU**
- **Contributing to efficient trans-European energy infrastructure**
- **Monitoring** energy markets to ensure that they function well, **detering market manipulation and abusive behaviour.**
- Where necessary, **coordinating cross-national regulatory action.**
- Governance:
 - **Regulatory oversight is shared** with national regulators.
 - **Decision-making** within ACER is collaborative and joint (formal decisions requiring 2/3 majority of national regulators).
 - **Decentralised enforcement** at national level.
- Headquartered in Ljubljana, Slovenia. **Engaged across the EU.**

ACER's role on hydrogen

ACER's role regarding the hydrogen market

Overview of ACER's competences regarding the hydrogen market



Hydrogen Market Rules and Monitoring

Network codes (NCs)

- Prepare non-binding framework guidelines.
- Review and revise NCs proposals.
- Monitor NCs implementation.

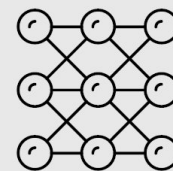
Market Monitoring

- Assess the impact of market developments on consumers.
- Evaluate access to the network.
- Review progress on interconnectors.
- Identify barriers to cross-border trade
- Publish an annual report.



Hydrogen network tariffs

- Provide recommendations on the methodologies for:
 - inter-temporal cost allocation;
 - determination of the asset transfer value;
 - financial transfers and allocation among final customers.
- Give the factual opinion on the methodology for setting the hydrogen network access tariffs or reserve prices for interconnection points.



Hydrogen network infrastructure

- Provide an opinion on national hydrogen TYNDPs to assess their consistency with the EU TYNDP.
- Give an opinion on ENNOH's draft Union-wide TYNDP, the draft annual work plan, and other related documents.
- Provide an opinion on the hydrogen PCI/PMI list.
- Monitor the implementation of PCIs/PMIs.



Governance

- Provide opinion to the European Commission (EC) on the draft statutes, member list, and draft rules of procedure of ENNOH and the EU DSO entity.
- Monitor the execution of ENNOH's tasks (and those of the EU DSO Entity) and report findings to the EC.
- Oversee the implementation of network codes and guidelines by ENNOH.

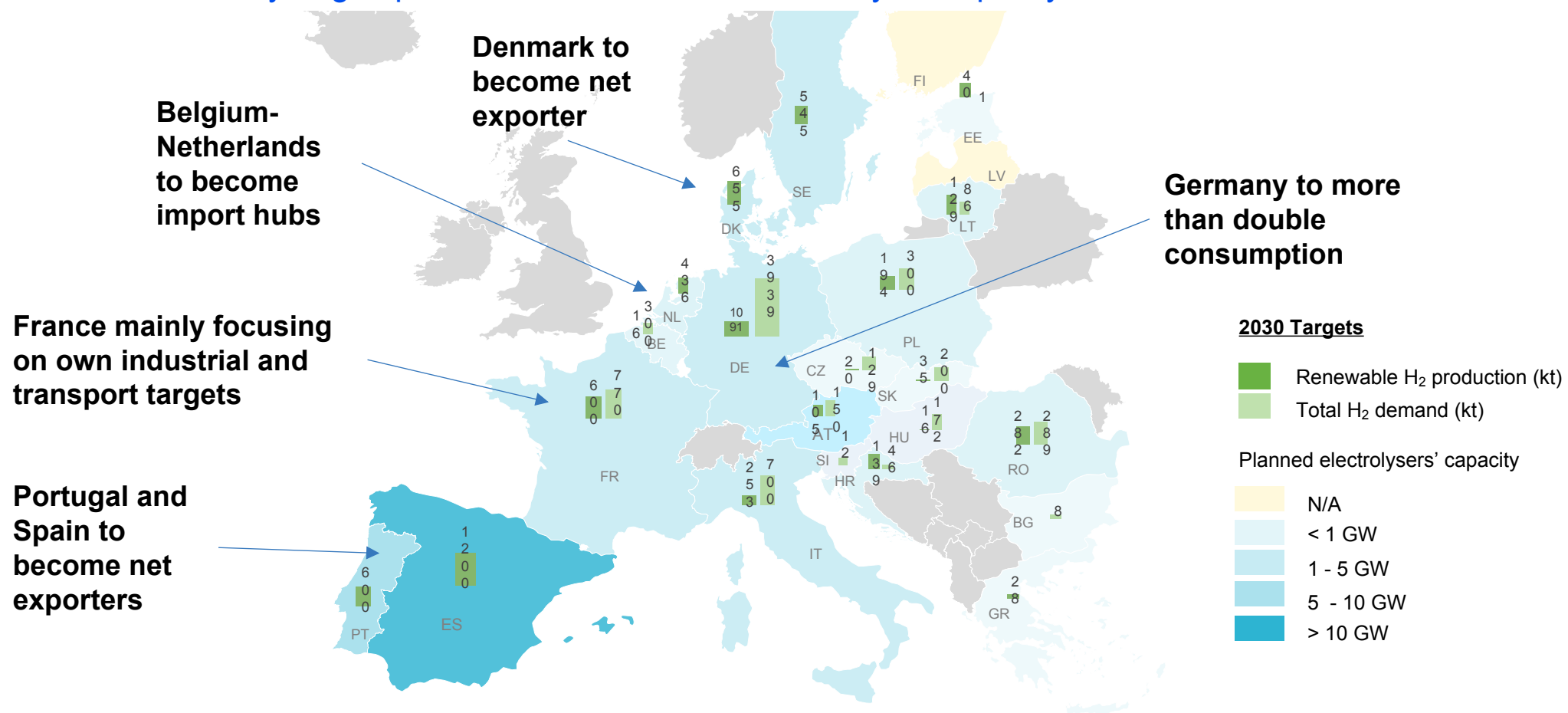
Developments in the hydrogen market



Based on 2024 Market Monitoring Report on European Hydrogen Markets

A variety of national plans

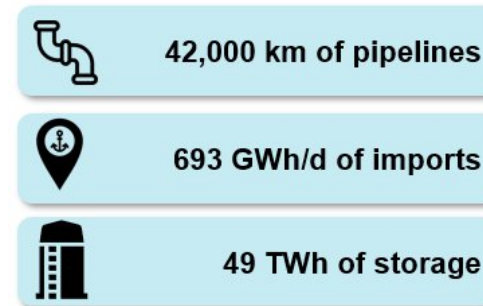
Planned hydrogen production, demand, and electrolyser capacity in 2030



Uncertainties about hydrogen networks

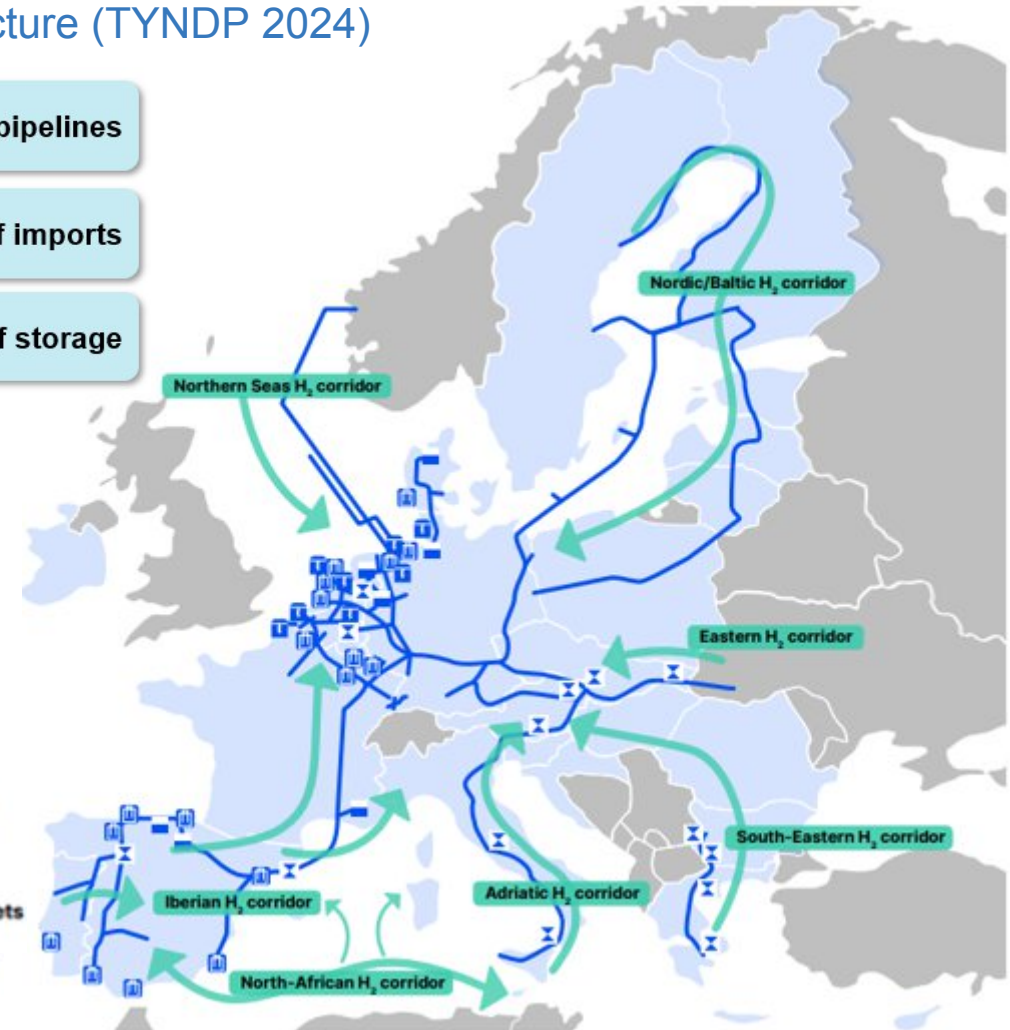
- Future demand is uncertain, increasing financing risks
- Actual cost of repurposing may vary significantly
- Inter-dependencies with gas and electricity system call for integrated planning
- Electricity grid delays affect deployment of electrolyzers and renewable generation
- Locational signals for electrolyzers to support efficient planning

Planned infrastructure (TYNDP 2024)



PCI/PMI

-  Hydrogen pipeline
-  Electrolyser
-  Hydrogen terminal
-  Hydrogen storage
-  Other hydrogen assets
-  Hydrogen corridor



ACER's key recommendations



Legislation

Quickly transpose the hydrogen and decarbonised gas package into national legislation and proceed with its implementation. Member States need to develop their national hydrogen markets in line with the European framework to enable infrastructure development and avoid fragmentation.



Electrolyser deployment

Speed up electrolyzers deployment and decarbonisation of electricity sector to increase renewable hydrogen competitiveness.



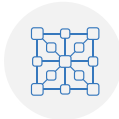
Forecasting and planning

Improve forecasting and accelerate integrated planning to identify realistic hydrogen infrastructure needs, avoiding overinvestments and reducing cost related to under-recovery risks.



Infrastructure development

When future demand is highly uncertain consider **incremental infrastructure development** based on market needs (to avoid building too much network too fast and avoid stranded assets).



Repurposing of gas networks

Consider carefully the repurposing of gas networks for hydrogen to minimise costs, but do not overlook the potential impacts on the broader gas sector (including security of gas supplies).



Risk mitigation

Address future demand risk in financing hydrogen networks. Properly identify different risks associated with uncertain future hydrogen demand. Allocating these risks among stakeholders (considering also cross-border implications) is key to enable hydrogen infrastructure investments.



Market certainty

Provide market certainty over the role of non-renewable, low-carbon hydrogen. Clarity on the uptake of non-renewable hydrogen should be provided by the European Commission and Member States.

Financing hydrogen infrastructure

Reflections on the forthcoming ACER recommendation on intertemporal cost allocation

EU Regulation provides the legal basis

- EU Regulation (2024/1789) on the internal markets for renewable gas, natural gas and hydrogen provide rules for hydrogen markets and tools for developing infrastructure
- Article 5(3): Member States may allow hydrogen network operators to spread the recovery through network access tariffs of hydrogen network costs over time in order to ensure that future users duly contribute to **initial hydrogen network development costs**.
- Article 5(6): ACER shall issue recommendations to transmission system operators, distribution system operators, hydrogen network operators and regulatory authorities on the methodologies for **setting the inter-temporal cost allocation**.

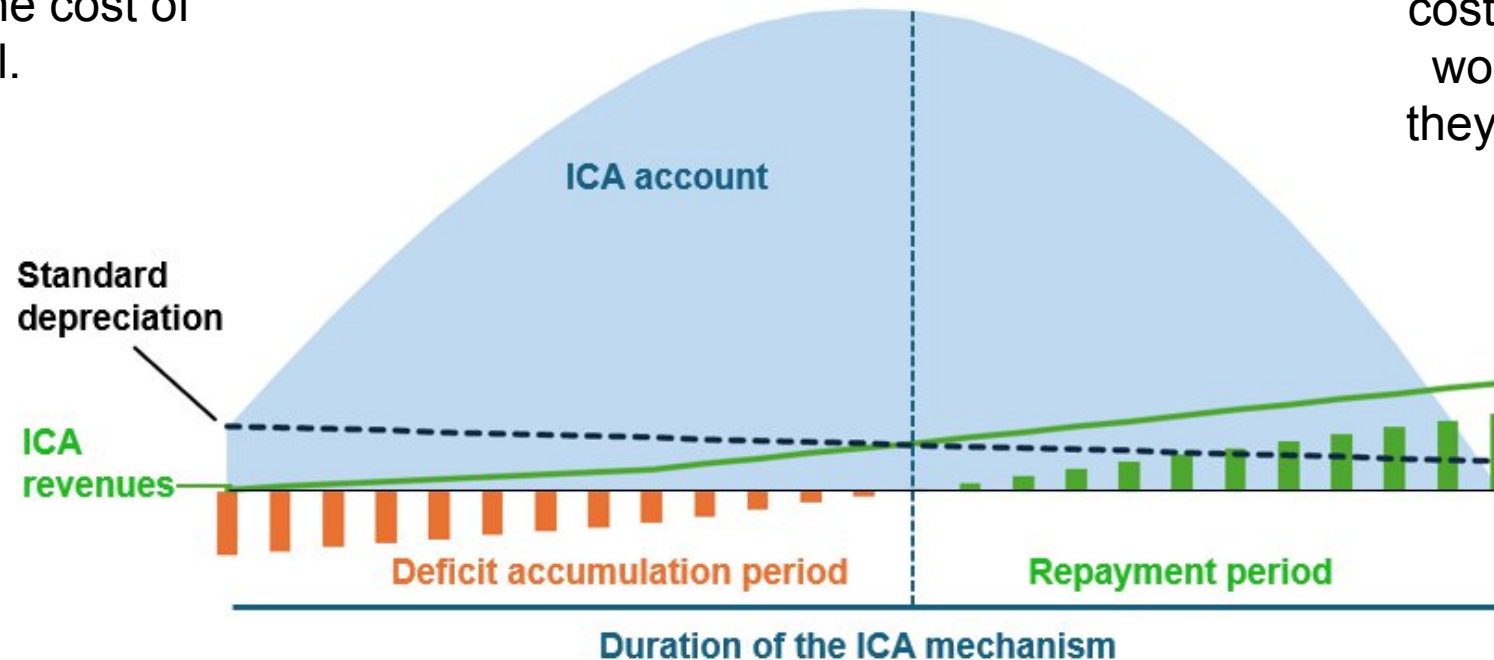
Why is an intertemporal cost allocation useful?

Manage the effects of uncertainty

Future demand is uncertain: this increases financing risks, hence the cost of capital.

Reconcile high costs with affordable tariffs

Developing infrastructure for future use imposes high costs for early users which would reflect on tariffs, if they are to stay affordable.



Risks in H2 infrastructure development

H2 consumers	H2 suppliers	H2 network operators	Storage/terminal operators
- Regulatory risks linked to delays/uncertainty in transposing EU policies - Uncertain market for green products - Uncertain supply linked to lack of infrastructure - High-investment needs and technological lock-in - Uncertain and difficult funding	- Regulatory risk, also connected to RFNBO* and low-carbon rules - Uncertain demand linked to lack of infrastructure - Uncertainty over cost reductions potential and green electricity costs - Lack of funding	- Regulatory uncertainty, including also on market rules - Demand risk, both on future volumes and on ramp-up - Risks from complicated coordination for cross-border networks - Convertibility and repurposing cost uncertainties	- Similar risks as network operators - Uncertain infrastructure needs' assessment due to lack of coordinated planning - Unclear permitting and acceptability - Import prices (at terminals)

*RFNBO – Renewable fuels of non-biological origin

Elements of Inter-temporal cost allocation

1

Planning

Realistic and transparent network planning and demand projections are essential inputs to increase efficiency and reduce risk of stranded costs.

2

Risk mitigation

Long-term commitments mitigate risks for both operators and users. Methods to encourage long-term bookings can be used.

3

Financial solidity

ICA shall ensure full recovery of costs over time including cost of financing and potential risk premiums.

4

Coordination

Hydrogen corridors include national infrastructure of different nature. Coordination on cross-border cost and risk allocation is key to ensure, in perspective, an efficient EU H2 market.

Gas TSOs cost efficiency comparison

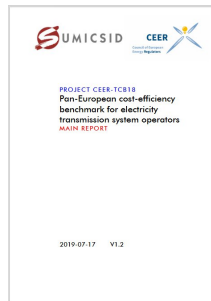
New ACER legal requirement: Study comparing the efficiency of gas TSOs' costs

Article 19 (2) of Regulation (EU) 2024/1789: Revenue of transmission system operators

The costs of the TSO shall be subject to an efficiency comparison between TSOs. ACER shall carry out that efficiency comparison. By 5 August 2027 and every four years thereafter, ACER shall publish a study comparing the efficiency of TSOs' costs, subject to the protection of data considered by ACER to be commercially sensitive. The relevant regulatory authorities and the TSOs shall provide ACER with all the data necessary for that comparison. When periodically setting the allowed or target revenue of TSOs, the relevant regulatory authorities shall take into account such comparison and national circumstances.



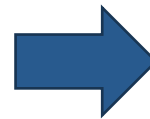
E2Gas (2015-2016)



TCB18 (2018-2019)



TCB21 (2021-2025)

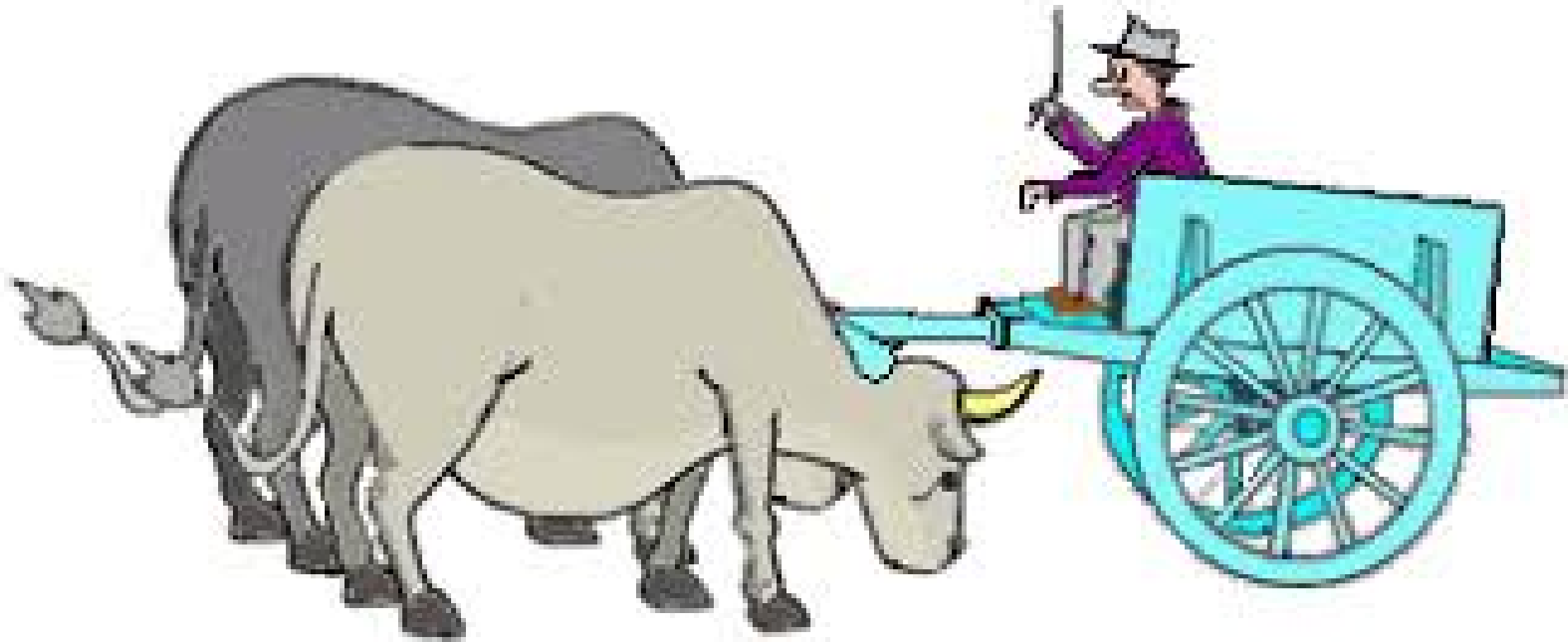


New requirement for ACER under Regulation (EU) 2024/1789

- Mandatory for all EU TSOs
- First publication by 5 August 2027
- Published every four years
- Publication subject to a confidentiality assessment by ACER
- NRAs should take into account the results when setting the allowed or target revenue of TSOs
- CEER's previous benchmarks will be considered, but the objectives and methodology of the ACER comparison will be redesigned.

Final reflection

Developing hydrogen markets and regulation



Thank you. Any questions?



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