

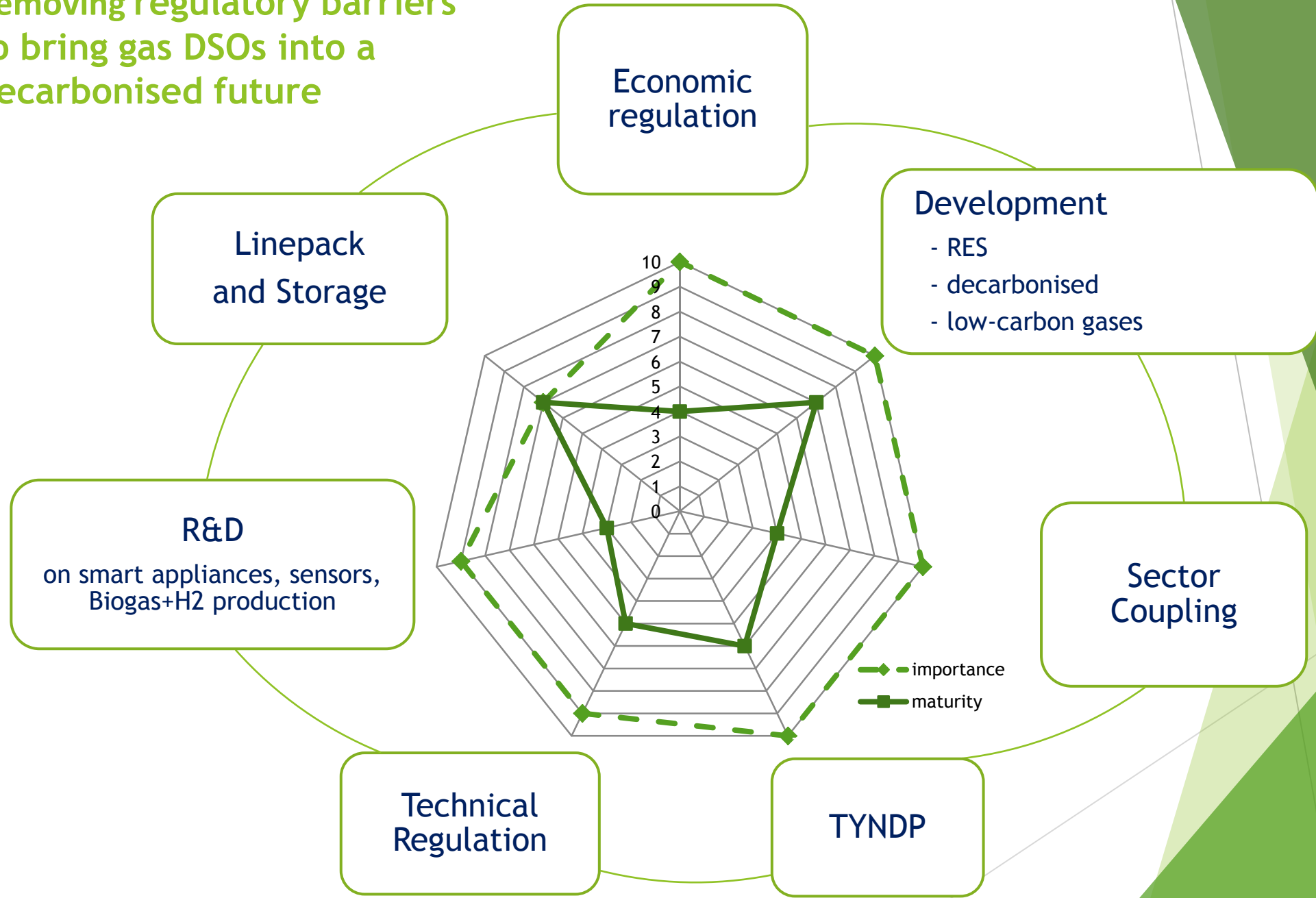


# The role of DSOs in the decarbonisation process and regulatory barriers

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Session - Sector coupling – Enabling regulatory framework for the energy transition

# Removing regulatory barriers to bring gas DSOs into a decarbonised future



# Regulatory changes needed to enhance decarbonisation of the system

1. More flexible and future proof **economic regulation** e.g. flexibility on tariff design to allow DSOs to invest in H2 ready grids
2. Progressive national legal frameworks supporting the development for **RES/decarbonised /low-carbon gases**
3. **Local sector coupling view** at a local level to optimise gas, heat, transport and electricity infrastructures
4. **TYNDP** must be designed between TSO, DSO, market players in gas and electricity to find the optimal infrastructure investments

# Regulatory changes needed to enhance decarbonisation of the system

5. Update **technical regulation** for EU and national rules to allow injection of various gases in the grid and cross border transport
6. **R&D**: smart appliances to accept various gases, H2 sensors, grid materials, production techniques etc.
7. DSO should be allowed to build/operate **line Pack** and pipe **storage** to maximise injection of RES/decarbonised/low-carbon gases in to the DSO grids

# Regulatory changes needed to enhance decarbonisation of the system

*“The large diversity of DSOs in the EU in terms of size, activities or organisational structure will not be able to cope with a “one size fits all” future model. However all DSOs face the same challenge: connecting more than 90% of customers and ever growing numbers of local renewable generators in a fast-changing, more decentralised and digital energy world”*

Source: Flexibility in the energy transition a toolbox for gas DSOs, 2018

Gas DSOs remain committed to facilitate the energy transition by facilitating the injection of increasing levels of renewable and decarbonised gas



# Regulatory changes needed to enhance decarbonisation of the system



ANNEX – detailed slides

# Regulatory changes needed to enhance decarbonisation of the system

1. More flexible and future proof **economic regulation** e.g. flexibility on tariff design to allow DSOs to invest in H2 ready grids

Various types of gases injected into the grid → DSOs must be enabled to serve the connected customers with the fitting gas quality. This can be facilitated through:

- Frequent information flow from the TSOs and investment into monitoring technologies.
- Digitalisation of the grid with the uptake of technologies such as sensors allowing to provide further information to consumers and facilitate the integration of renewable energy.

Rules for the connection of biomethane plants to the grid should not put undue restrictions on the producers without endangering the security of the grids.

2. Progressive national legal frameworks supporting the development for **RES/decarbonised /low-carbon gases**

- Considering increasingly variable flows, ensure coordinated approach between DSO and TSO planning to achieve highest efficiency
- New ideas have to be developed between the TSO and DSO to let gas flow as cost-efficiently as possible during the times of high production and low demand.
- Odourisation rules should be discussed.

# Regulatory changes needed to enhance decarbonisation of the system

## 3. **Local sector coupling view** at a local level to optimise gas, heat, transport and electricity infrastructures

Local CHP of all sizes is one of the longest standing sector coupling element producing heat and electricity close to the consumer.

CNG stations can distribute gas directly from the grid, without systematic use of virtual pipelines.

In the future, local P2G facilities producing hydrogen close to the fueling station could also supply vehicles with hydrogen.

⇒ This is all only possible, if RES/decarbonised/low-carbon gases are acknowledged in the national building legislation as foreseen in the EPBD and in future legislation on the transport sector e.g. for the car fleet CO<sub>2</sub> emission calculations.

## 4. **TYNDP** must be designed between TSO, DSO, market players in gas and electricity to find the optimal infrastructure investments

DSOs only have a clearly defined role in the scenario process in a few national grid development plan.

⇒ Due to the changing flows in the grids, the involvement of the DSO should become the norm in order to bring as much information to the scenarios as possible.



# Regulatory changes needed to enhance decarbonisation of the system

5. Update **technical regulation** for EU and national rules to allow injection of various gases in the grid and cross border transport

The research results of the many projects should be collected throughout Europe to speed up the expertise on the injection of H<sub>2</sub> into the grids and appliances.

6. **R&D**: smart appliances to accept various gases, H<sub>2</sub> sensors, grid materials, production techniques etc.

7. DSO should be allowed to build/operate **line Pack** and pipe **storage** to maximise injection of RES/decarbonised/low-carbon gases in to the DSO grids