

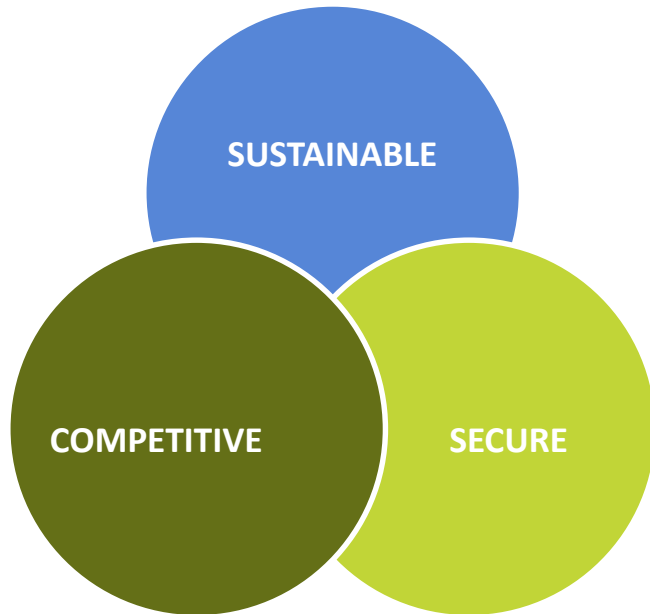
Decarbonizing through gas networks – TSO perspective

**Presentation to Madrid Forum
– 16th October 2018**

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Delivering on EU Energy Goals

EU Internal Energy Market Goals:



Market & Security of Supply goals

- Have been achieved or will be achieved within few years in main parts of EU
- Further improvements still to be made

Sustainability goals

- Requires a strong focus on decarbonization of gas and gas infrastructure in coming years
- Some key elements:
 - Which pathways for faster and more substantial decarbonization via gas?
 - Which regulatory framework to support and incentivise such development?
 - How to achieve an efficient and decarbonized energy system by sector integration?

2020 Gas Package to pave the way for achieving the sustainability goals

for gas as well as for electricity/gas interaction

– and at the same time continue pursuing the goals on gas markets and security of supply



Some quantification of the gas potentials

Cost efficiency with green gases vs. full electrification in studies:

- Pöyry 2018 Decarbonisation Study estimates 94 B€/y savings for EU
- Ecofys 2018 "Gas for Climate" study estimates 138 B€/y savings for EU
- DENA-Leitstudie (pilot study) estimates up to 600B€ savings to 2050 for Germany

European-wide exchange and storage of renewable energies via the gas infrastructure



1 000 GW
cross-border capacities
>100% of EU demand

Gas cross-border transmission capacity equals more than 3x current wind/solar capacity



270 GW
EU wind & solar capacity



1 100 TWh
EU Gas storage capacity

Gas storage equals 3x annual energy production from current variable e-RES



372 TWh
EU wind & solar generation 2016

ENTSOGs Themes for Gas Package 2020



Hybrid Energy Infrastructure
Building on both electricity and gas is more efficient, resilient, sustainable and less expensive EU energy system



Product & Service Innovation
Products & services of TSOs to address market needs & support efficient and sustainable use of assets

Technology Neutrality
All relevant technologies to contribute to transition based on a level playing field for support schemes & funding

Enabling decarbonisation by gas and gas infrastructure



New Gas Markets
CO2 reductions and air quality gains with natural gas in some regions - and in longer term with decarbonised gas

Green Gas Innovation
Improved framework for green gases in decarbonised gas system to speed up EU energy transition



Solutions to be driven by need for & contributions to decarbonisation - and should include sector coupling, energy efficiency and digitalisation



ENTSOG Messages for Gas Package 2020



BUILD ON SYNERGIES

- *Political acceptance/support at EU and MS level for a hybrid energy carrier system - utilizing electricity and gas assets efficiently and obtaining improved flexibility and security of supply*
- *Improve sector integration between electricity and gas, also including transport and heat*
- *Obtain better regulatory coordination between electricity and gas on both EU and MS level*
- *Ensure level playing field for clean energy technologies, including renewable/decarbonized gas support schemes*

INNOVATE WITH GAS

- *Promote and support innovation on decarbonizing the gas sector*
- *Establish consistent terminology for renewable/decarbonised/climate-neutral gases*
- *Establish EU-wide certification system for gases to ensure trustworthy tracking and efficient cross-border trading of renewable/decarbonized gases*
- *Incentivize TSO product/service innovation - meeting the needs to decarbonize EU energy system*
- *Clarify role of grid operators in facilitating decarbonizing of EU energy system – including scaling up R&D/pilot projects, investing & operating P2G biogas facilities etc.*
- *Establish risk-reward scheme for gas-related innovation ensuring sufficient investments/R&D*

ENTSOG will contribute actively and constructively to the Gas Package 2020 process



Thank You for Your Attention

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