

ENTSOG 2050 ROADMAP ACTION PLAN

Presentation: 2050 Roadmap Action Plan

ENTSOG Transparency Workshop, 19 November 2020

ENTSOG 3 Pathways of transition with gas grids

- Depending on Member States and regional/local choices, gas grids can facilitate coal-to-gas-to-hydrogen switch

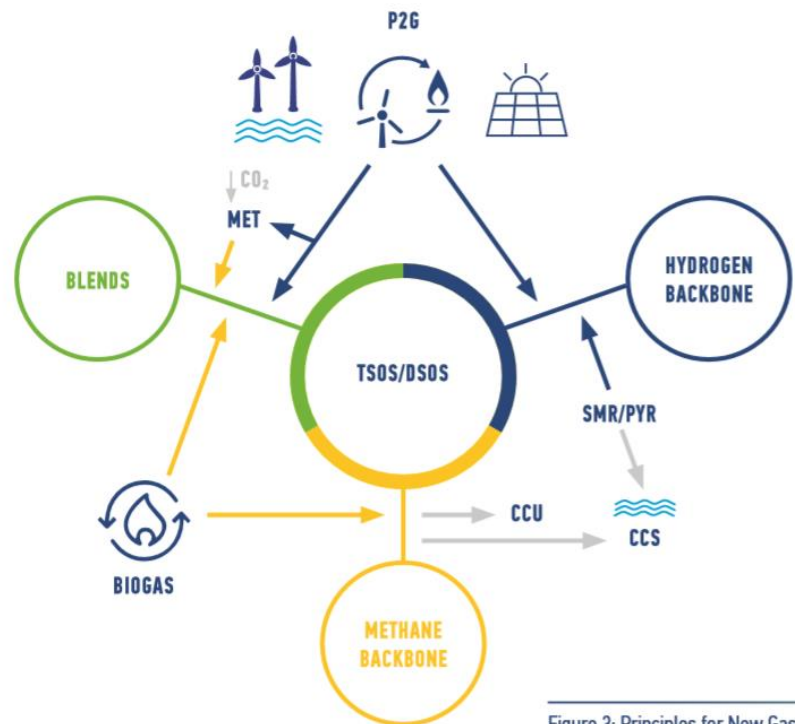


Figure 3: Principles for New Gases Transportation, ENTSOG, 2019.



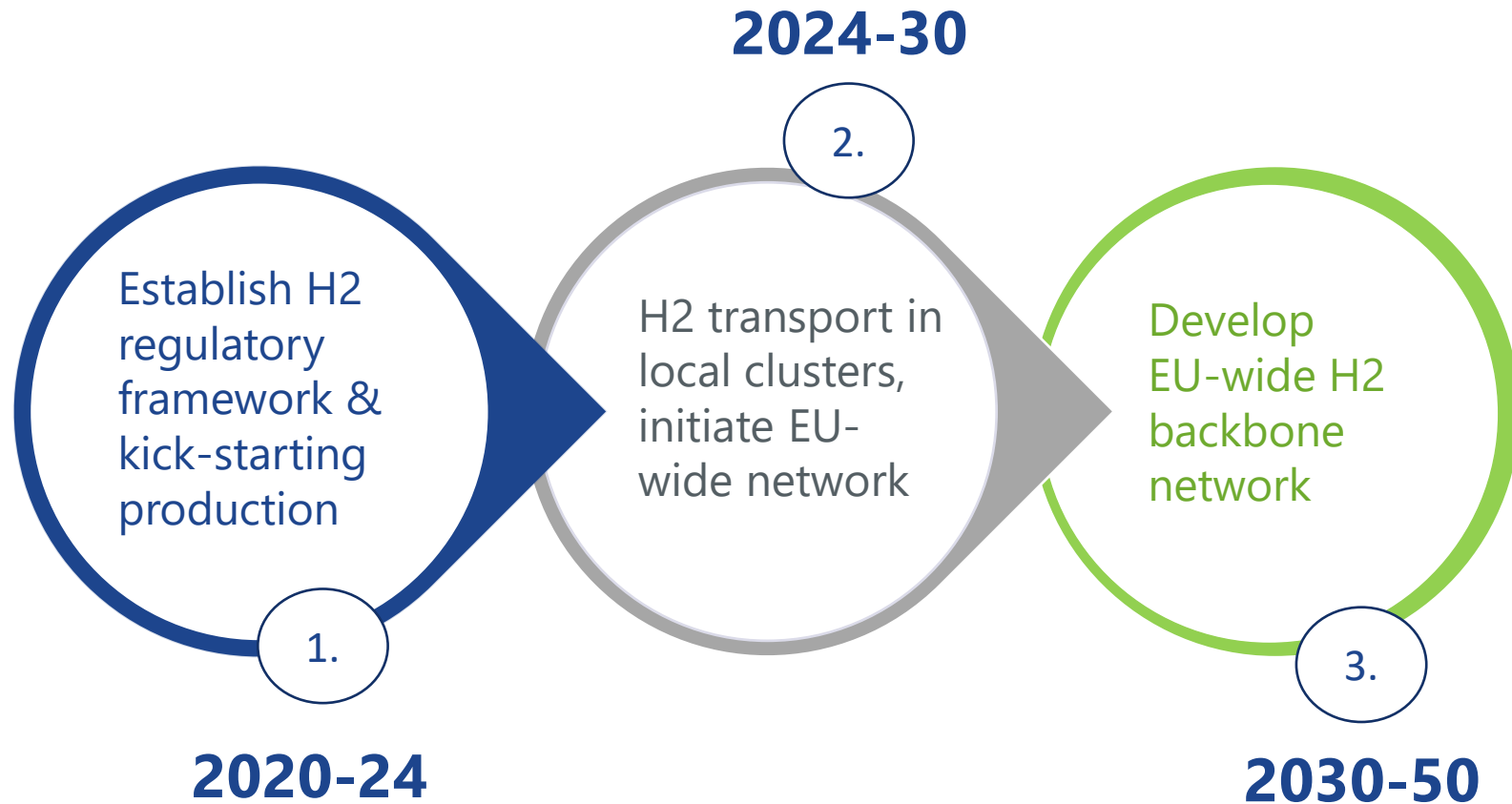
To learn more about possible grids configurations you can visit [ENTSOG Roadmap](#) watch this [ENTSOG film](#)

ENTSOG Roadmap 2050: Seven Recommendations to Decarbonise Gas Grids



Gas TSOs' propose enablers necessary to achieve net-zero GHG emissions by 2050 with gas grids

ENTSOG Approach to the European Hydrogen Economy



Hydrogen backbone to be a priority for EU to facilitate hydrogen development

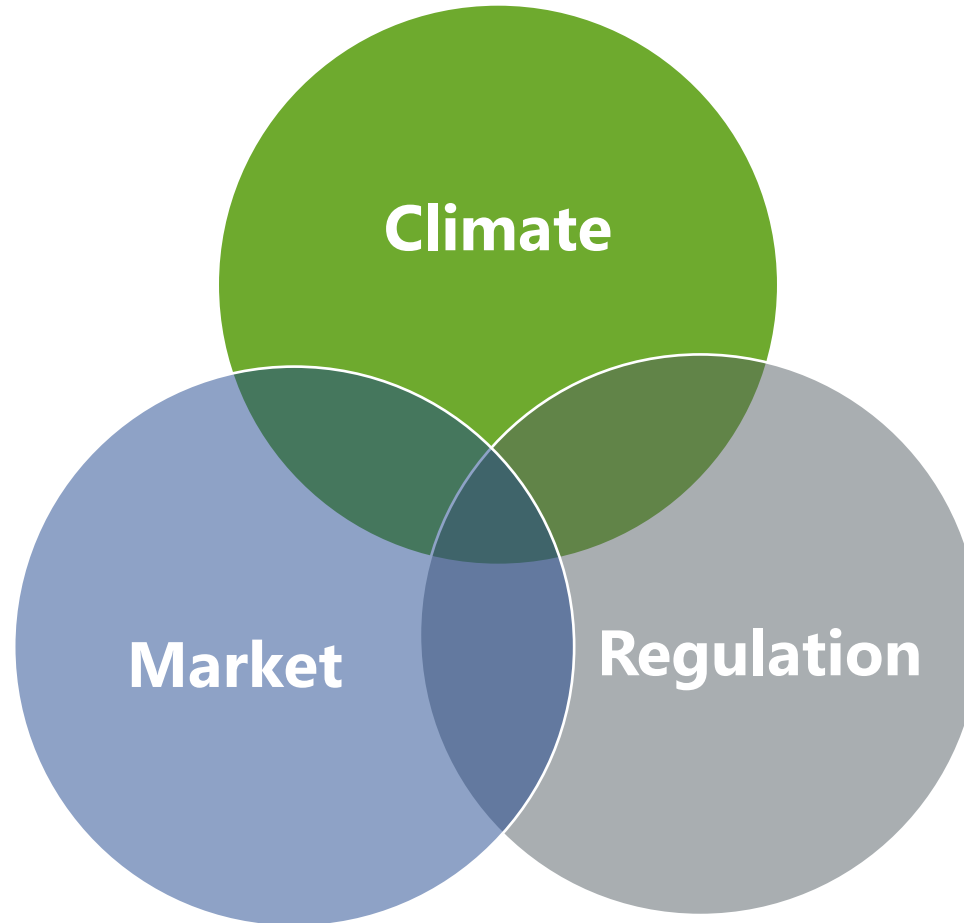
Agenda for Decarbonising Europe's Gas Grids



| Markets | Infrastructure | TSO's role |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Same market principles for all gases including H2</p> | <p>Delivering EU's Future Gas Networks, including H2</p> | <p>TSO's as integrators of energy systems</p> |
| <ul style="list-style-type: none"> • Open access to grids & neutral TSOs • EU-wide GOs & certificates linked to ETS • GHG assessment of all energy carriers | <ul style="list-style-type: none"> • Include EU H2 backbone in TYNDP 2022 to connect clusters • ENTSOG & ENTSO-E Interlinked Model • Cross-sectoral infrastructure planning | <ul style="list-style-type: none"> • TSOs as owners & developers of H2 infrastructure • TSOs as system integrators for molecules & with electrons • Smart TSO services already supporting clusters |

1. Markets: Same principles for all gases including H2

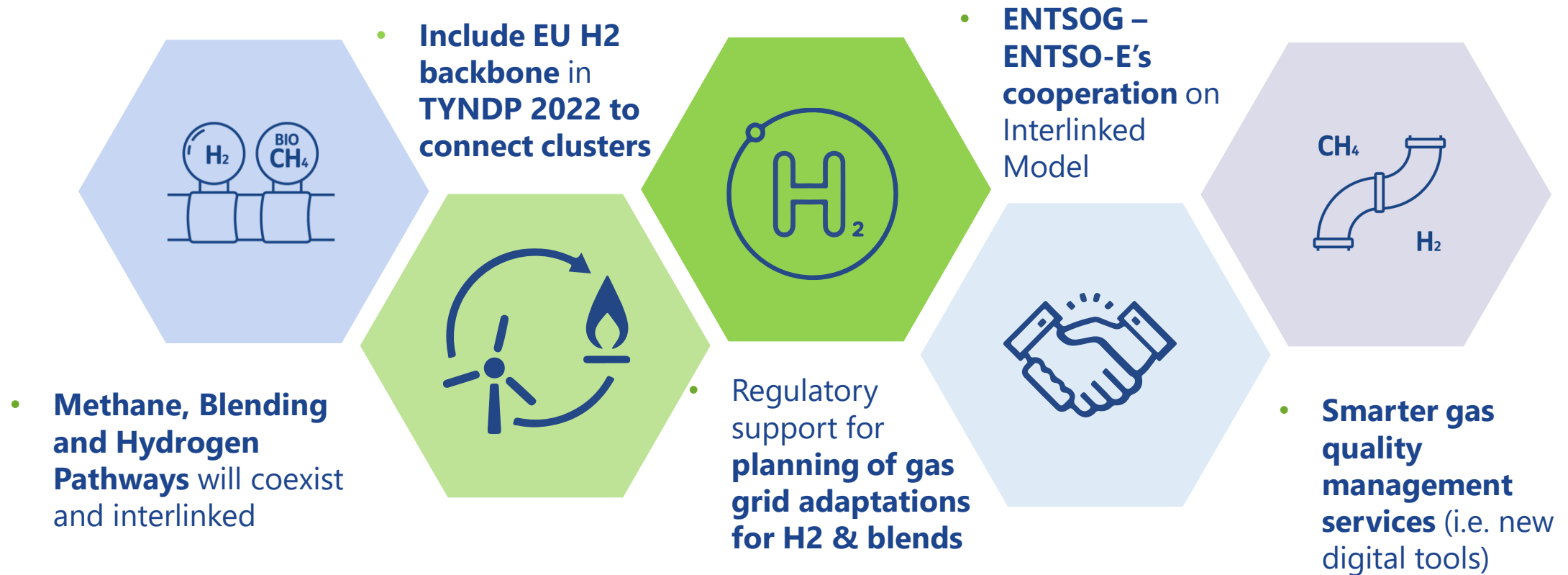
- EU-wide GOs & certification system linked to ETS



- All H2 to compete on an objective basis from clusters to an integrated market

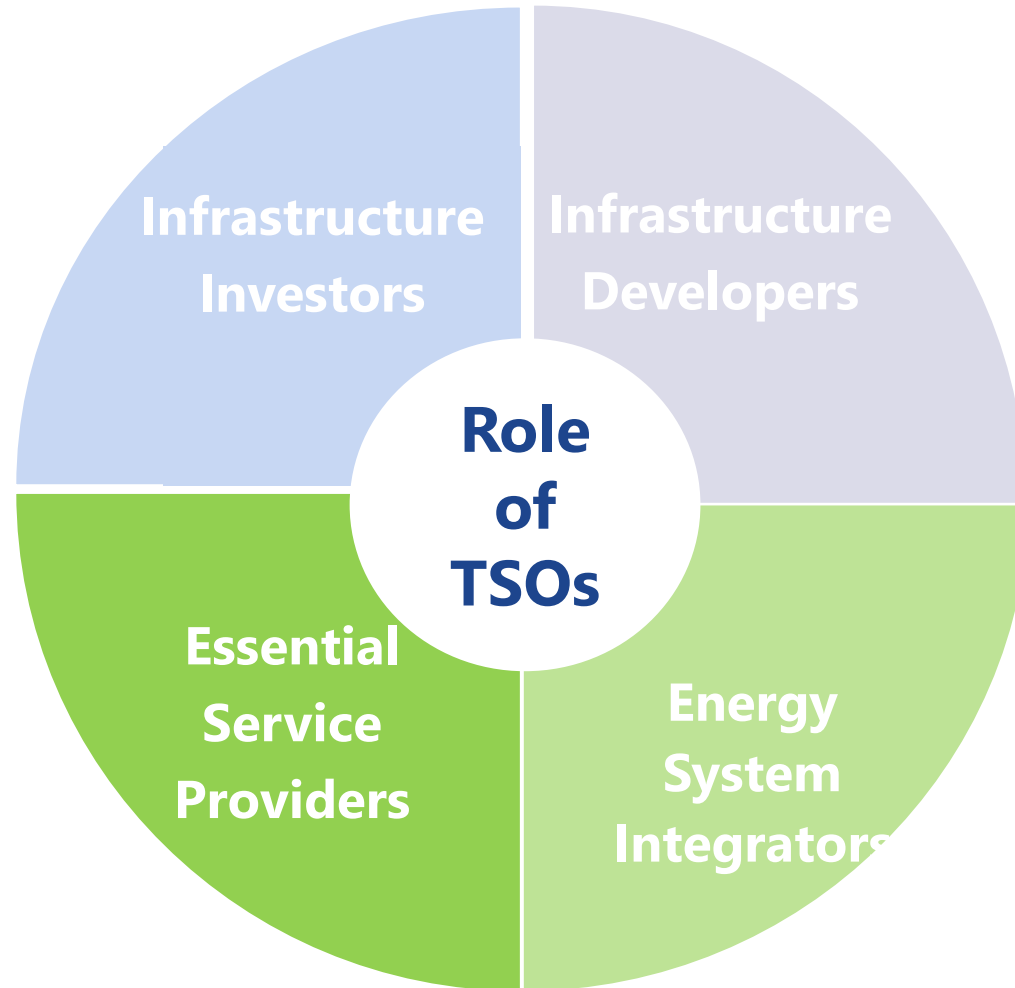
- Market design based same principles for all gases including H2

2. Infrastructure: Delivering Europe's Future Energy Networks



3. Role of Gas TSOs in Integrated Energy System

Infrastructure Investors -
TSOs can play key role in initial stages of emerging hydrogen market



Infrastructure Developers
- TSOs to own, plan, build and operate dedicated hydrogen networks

Essential Service Providers -
Max. integration & interoperability of renewables & decarbonised gases

Energy System Integrators
- Between different **types of gases** & **energy carriers** (**molecules & electrons**)

ENTSOG's Next Steps



Clean Hydrogen Alliance

active participation



Advisory Panel for the Future Gas Grids

establishment of a high-level body



TYNDP Joint Advisory Panel

establishment of a joint ENTSOG – ENTSO-E Panel



Guarantees of Origin

continuation of prime mover group



Gas quality handling and hydrogen

establishment of prime mover group



SET-Plan

participation to Energy Efficiency in Industry (WG6)



Thank you for your attention

ENTSOG - European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, 1000 Bruxelles
www.entsog.eu | info@entsog.eu

