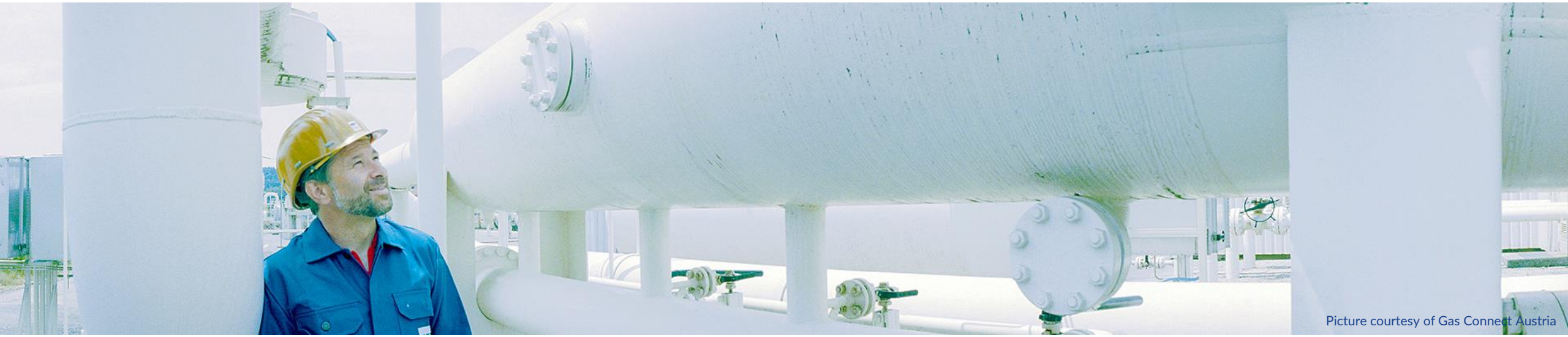
26 October 2021

Final



Picture courtesy of Gas Connect Austria

# 4th meeting of the Advisory Panel for Future Grids

## Key take-aways from the meeting on 26 October 2021

# Panel 1: Planning and Regulation for hydrogen

- **Florence School of Regulation:**
  - H2 infrastructure should be demand driven, focus first on decarbonising existing demand and on clusters of demand
  - Regulation should be gradual and main regulatory pillars (TPA, unbundling, tariffs) should apply to H2 networks since the beginning
  - TPA: initially when private networks connect clusters - no TPA, as clusters expand - negotiated TPA with reg oversight, going beyond clusters - regulated TPA
  - Unbundling: should be in place since the beginning (existence of natural monopolies), operating electrolysers as a competitive activity, could be run by independent P2G operators, during an initial period TSOs & DSOs could build, own & operate P2G under reg conditions, with market test to check interest
- ACER
  - Horizontal unbundling: at least separation of accounts, cost related to operation is kept separate & any subsidisation is clearly visible
  - Vertical unbundling: gradual approach, final preferred model is ownership unbundling, in initial stages up to MS to decide the right model
  - P2G - similar view as FSR, market related activity, network operators to be involved only if network safety implication
  - TPA: flexibility – need to regulate TPA in a way which is gradual, start with negotiated TPA
  - Infrastructure planning: no-regrets approach, develop things when most needed, main objective is climate objective
- Gas Infrastructure Europe
  - existing infrastructure is tremendous asset to develop future proof H2 infra – repurposing existing pipelines is more efficient than building new ones
  - basic regulatory principles for gas & electricity should also apply to H2 market from the outset to give legal certainty to investors.
  - TSOs should be able to own, operate and invest in H2 networks
  - User-friendly solutions for TPA

Main reg principles to apply for H2 networks, gradual approach to regulation needed, P2G a competitive activity

# Panel 2: Cost/risk allocation (financing)

- **Florence School of Regulation:**
  - H2 infrastructure demand driven, meaning demand for H2 transport services, not just how much but from where (from EU or outside?)
  - Where there is demand, repurposed assets provide cheaper option.
  - H2 development planning – the shares of new and repurposed infrastructure - influences the total costs of H2 assets.
  - New & repurposed pipes will have spare capacity at first, if overcharge or allocate full cost to fraction of capacity - network becomes prohibitive in terms of costs
  - Rapid transition to H2 is policy driven, as in the case of stranded costs, the gap could/should be covered by policy makers/ taxpayers
  - There is limited rationale to charge gas network users to cover the gap, except pragmatism that: i. constant increase in the cost of gas (transmission) might accelerate the transition away from gas (in favour of decarbonised energy vector). However, such an increase in gas transmission charges will also hit RES gasses; ii. increase in gas tariffs might be limited and much lower for hydrogen users than cost-reflective tariffs; iii. it would not be first time that energy consumers are charged with costs which are extraneous to the services they demand as in electricity (on average 12% of the bill of EU households); One advantage would be that it would be transitory
- **Eurogas:**
  - Cost-effective approach to use existing infrastructure
  - Blending best interim approach, blue H2 with CCS needed to reach net zero by 2050
  - Different ways to support conversion of pipes: public (TEN-E, Recovery, etc) and private (Taxonomy)
  - Cross-subsidisation – no final position yet in Eurogas, need to be careful, can see pros and cons, H2 used mainly for industrial purposes at first, natural gas used by many households, cross-subsidisation seems to be households paying for industrial users having H2, difficult political sell
  - Direct support is needed, as done for solar/wind, the best approach to go in the first instance, and private finance will follow and then this will reduce burden on society
- **ACER/CEER:**
  - Gradual and flexible approach needed, also on a regional level fit-for-purpose, to speed up development
  - Before repurposing, the transparency of gas assets value and roles should be guaranteed. The cost of repurposing should not impact cross-border gas transmission tariffs
  - The development of H2 infrastructure should be in line with needs aligned with electricity (and gas) and should be paid back by the hydrogen sector, be it in a long-term perspective
  - No clear rationale for subsidies from gas, whether they take the form of asset transfer below their residual value or direct payment of H2 transportation cost by gas network users.
  - Practicality of a support of H2 by gas should not prevent from a sound management of network development: subsidies, if any, should come from dedicated mechanisms

Cost-effective approach needed, repurpossed assests a cheaper option, private and public funds needed

# Discussion take aways

**Planning:** Is the ‚'no regrets' planning approach effective? For the nascent market the NRAs would need to be the first ones to accept the de-risking process by allowing for ‚'overschalling" at the beginning. Imports could provide substantiv equantities, therefore infra needs to reach relevant regional and EU scale.

**Regulation:** Unbundlingfor H2 systems: Vertical– all three models (OU, ITSO, IS) deliver well, up to MS choice. Horizontally – accounts unbundling seems to be sufficent, additional leyers: by MS.
TPA: same approach as on electricity and gas, if exemptions needed – temporal, with gradual appraoch towards rTPA

**Financing:** Incremental costs of infra would be prohibitive: Solutions could be to:

a) **Mobilise targeted public and private funding** – but large competition on allocating the support in the value chain: more support needed for production, end use. Could grids attract enough financing in scale and on time?
b) **Accept policy intervention**: like for electricity, tariffs charges for RES connetions are not ‚unheard of'. Hard sell to tax/energy payers, but the Green Deal is a political choice, important to all citizens.
c) **Accept the cost mutualisation progressing over time**: less charges for the prime movers/first grids users, more costs transferred once more market players arrive. Mutualisation would not ‚'distort' for the wrong, but for the relevant reason and in the 'right direction'.

# Thank you for your attention

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