

## Future of Gas

### Minutes from the Steering Group meeting on the 18<sup>th</sup> May 2022

#### Location:

Virtual event

#### Attendees:

Martin Cook (Chair) – National Grid Gas  
Stella Matthews – Northern Gas Networks  
Robin Cannings – Storengy  
Richard Fairholme – Uniper  
Sam French – Johnson Matthey  
Joe Howe – Thornton Energy Institute  
Kirsty Ingham – Centrica  
Hywel Lloyd – UK100  
Lorna Millington – Cadent  
Bogdan Kowalewicz – Ofgem  
Angus Paxton – Afry  
Sarah Kimpton – DNV  
Will Webster – Offshore Energies UK  
Victoria Mustard – Xoserve  
Alexandra Howe – BEIS  
Ray Arrell – Regen  
Lisa Fischer – E3G  
Chris Logue – National Grid Gas  
Jennifer Randall – National Grid Gas  
Edmund Abbs-Brown – National Grid Gas  
Jonathan Cranmer – National Grid Gas  
Susannah Ferris – National Grid Gas  
Megan Bray – National Grid Gas  
Rosannah East – National Grid Gas  
Tom Earl – National Grid Gas

#### Apologies:

Julie Cox – Energy UK  
Bridget Hartley – Energy Networks Association  
Sam Hughes – Citizens Advice

#### Welcome and Introduction:

The chair, Martin Cook, welcomed the attendees, and proceeded to welcome new members of the National Grid team, Rosannah East, Megan Bray and Tom Earl. He also thanked the retiring members for their contributions to the group and highlighted that Bridget Hartley, who is the Interim Director of Gas at the Energy Networks Association is taking over from Tom Koller but unfortunately is unable to join us today.

#### Members updates:

**H2 Village Trials:** Vicky Mustard updated that Xoserve have been supporting the Hydrogen village trial (H2 in the existing network or electricity) announcement whereby NGN and Cadent have been awarded the next phase for development (Whitby (Ellsmere Port) and Redcar) and have 12 months to progress with the detailed plan for submission at the end of March 2023. The submission will include details of code mods required, design for villages,

engineering plans, appliance swap out and consumer sign-up. BEIS and Ofgem will then decide which will proceed. Xoserve have been supporting this with managing the gas industry engagement, including issuing monthly newsletters and monthly engagement meetings with the different segments of the industry and network. Vicky requested that SG members send her any additions to the updates and Vicky will circulate newsletters and updates to the SG members.

Cadent Hydrogen Village trial: <https://hydrogenvillage.com/>

Kirsty Ingham also provided an update on the H2 village projects British Gas (Solutions & Services) are involved, partnering with the networks to help with the households surveying an installation of boilers and alternative heating solutions.

**Network Innovation Strategy:** Ray Arrell updated the group on the work Regen have been involved in including, having worked with all network companies and the ENA to publish the 2022 Network Innovation Strategy. This identifies projects and opportunities for innovation funding and covers 5 themes: data and digitalisation, flexibility and market evolution, net zero and the energy system transition, optimised assets and practices, supporting consumers in vulnerable situations and whole energy system thinking.

<https://www.regen.co.uk/wp-content/uploads/Energy-Networks-Innovation-Strategy-2022.pdf>

**A day in the life of the 2035 electricity transmission system:** Regen worked with the ESO to develop “A Day in the life of the 2035 electricity transmission system” which is an interactive step through of a cold, calm winter day and explaining the challenges involved.

<https://www.regen.co.uk/project/a-day-in-the-life-2035/>

**Role of floating offshore wind in the Celtic Sea:** Regen studied the role of floating offshore wind in the Celtic Sea.

<https://www.regen.co.uk/new-study-reveals-floating-offshore-wind-benefits-for-the-south-west/>

**Upstream Gas:** Will Webster highlighted that there is a lot of attention on making more gas available in short (improvements in production efficiency), medium (new investments) and long term (new exploration round at the end of this year). The Ukraine crisis has brought more emphasis on homegrown energy sources. Will mentioned the NSTA (North Sea Transition Authority) has just granted 2 new storage Licences to BP and Equinor.

<https://www.nstauthority.co.uk/news-publications/news/2022/bpequinor-awarded-carbon-storage-licences/>

**Blue Hydrogen:** Will mentioned the 4<sup>th</sup> blue hydrogen project between Shell and Uniper recently announced.

<https://www.uniper.energy/news/shell-and-uniper-to-work-together-on-blue-hydrogen-production-facility-in-the-uk>

**FES 2022:** Alex Haffner updated the group that FES 2022 is looking to be launched on 18<sup>th</sup> July 2022. Assumptions around hydrogen blending have been amended in the latest edition of the scenarios in line with recent indications on how blending would be supported.

**Gas and Electricity Transmission Infrastructure Outlook (GETIO):** Alex mentioned the GETIO Innovation project which is being undertaken by National Grid Gas and National Grid Electricity Transmission and is looking at the benefits from whole system network development for optimisation.

**Impacts of H2 on the electricity system:** Another ESO innovation project, looking at different value chains and use cases for production, storage and distribution and end use to understand their interactions.

**NGG Operational Update:** Martin Cook stated that our system is being used very differently to how it is usually used at this time of year, we're seeing high LNG imports going out to Europe meaning the Interconnectors are currently very busy which impacts the operation of the Transmission System.

**Project Union:** Martin updated the group that Project Union was launched in the House of Commons last week which marks the end of the first stage of the feasibility study on repurposing the NTS and dedicating large sections of it to build the first hydrogen backbone.

**Green Hydrogen Standard:** Lisa shared the recently published Green Hydrogen Standard.

[https://gh2.org/sites/default/files/2022-05/GH2\\_Standard\\_2022\\_A5\\_11%20May%202022\\_FINAL\\_REF%20ONLY%20%281%29.pdf](https://gh2.org/sites/default/files/2022-05/GH2_Standard_2022_A5_11%20May%202022_FINAL_REF%20ONLY%20%281%29.pdf)

**Hydrogen Supply and Demand:** Alex Haffner highlighted how hydrogen demand and supply align and ensure there is no mismatch. The uncertainty around the likelihood of demand appearing creates difficulty in establishing the FES scenarios. Martin suggested that some visibility could be brought of the emerging supply and demand picture (subject to confidentiality). Sarah mentioned that DNV are working on a similar tool.

### **Future of Gas Steering Group Direction:**

Jen took the group through the proposed outline for the direction of the FoG SG, particularly highlighting the request for SG members to suggest and lead debate topics; the idea of including standardised key project updates along with the ad-hoc; the proposition that non-markets-based projects, which would be sponsored by the SG, could be an output of the debates; along with the possibility for the Steering Group to publish collective positions.

Feedback from the SG included that gaining consensus across quite a diverse group for SG lead positions would be challenging. It was also suggested by the Chair that a forward-looking agenda on the key projects is created which would highlight appropriate timing for deeper discussion of those projects. Other areas the group highlighted as useful areas for future discussion were around what the gas network would need to look like to deliver FES scenarios (GETIO); what will the retail market look like in the future; H2 storage; the impacts of the transition to net zero on the natural gas market.

### **Developing the GMaP Plan**

Jen presented the overview of the 2022/23 GMaP plan, highlighting the key work to be undertaken on each of the 3 vertical themes, hydrogen, blending, natural gas: and each of the 5 horizontal themes, heat, power, industry, transport, fair and just transition.

Feedback from the group stated that industry should be more of a priority than transport given that current gas usage (and carbon emissions) in industry are much higher than in transport and given where technology development is.

Suggestions from the SG members to include CCUS; the future for biomethane (particularly if networks convert to hydrogen).

Tom Earl then took the group through our plans to develop the longer-term GMaP plan. Suggestion from the group to prioritise areas where Government policy can be influenced and to areas which are prioritised by Ofgem particularly with the new Strategic role of Ofgem in the Code Governance process.

### **Debate: Impact on the Future of Gas arising from the Ukraine conflict**

Megan took the group through the consequences of the Ukraine crisis on gas prices, and both the EU and UK Gas markets. SG member highlighted that the EU are continuing with Green Deal targets and even increasing. Member States (representing over 70% of EU gas consumption) response has been to accelerate the energy transition (including Germany in their Energy Efficiency Plan). This will impact some of the UK's longer-term decisions in terms of North Sea gas supply and export.

[https://9tj4025ol53byww26jdkao0x-wpengine.netdna-ssl.com/wp-content/uploads/Future-of-EU-Gas-Demand\\_E3G-briefing.pdf](https://9tj4025ol53byww26jdkao0x-wpengine.netdna-ssl.com/wp-content/uploads/Future-of-EU-Gas-Demand_E3G-briefing.pdf)

<https://www.euractiv.com/section/energy/news/germany-presents-energy-efficiency-work-plan-to-reduce-fossil-fuel-demand/>

<https://www.e3g.org/publications/eu-can-stop-russian-gas-imports-by-2025/>

There was discussion around the security of LNG supply and the increased EU competition in the global market for LNG to mitigate for loss of Russian supplies.

Suki Ferris opened the debate on the impacts of the Ukraine crisis and that the situation could amend some of our previously held assumptions on the future of gas, focussing specifically on UK gas prices, twin-track approach to Hydrogen production, biomethane, LNG and storage.

SG members reflected that market liberalisation is being undone very quickly with the intervention of Governments which is interesting in the context of what that means for the Future of Gas. Longer-term it will depend on what happens in the markets in coming months and years. Some countries had independence from Russian gas as a target for some time.

The economics of LNG flows into Europe and to which terminals will depend on commercials in place at that time, capacity available at those terminals and capacity downstream of terminals to get gas to where it needs to be. What does this mean in terms of disruption for our market and markets in Northwest Europe, transportation charges, capacity usage, framework development and revenue recovery? Implications could be far reaching.

Current existing gas storage in the UK is not the right type of storage to turn into seasonal storage as it's based on short-term markets and flexibility, if they were to fill up over the winter then they lose the main role and benefit they currently give to the market (flexibility within day and between days). No new gas storage is being actively developed; a lot that was being considered is now being considered for Hydrogen. Even if seasonal storage is built then we'd be looking at least a decade away before operational. Government subsidies for seasonal storage would ruin the market for other participants making them less viable. Nothing has changed in terms of the UK storage position.

How we define energy security or better frame resilience is an important conversation to have, storage is one part of that, but gas prices are set globally or at least regionally so, it doesn't insulate the UK from external shocks; other sources of resilience, e.g., reducing gas consumption should be part of those considerations. Significant pressures on supply chains when delivering the green transition and speed (e.g., materials, human resource). Important when we are defining energy security and resilience that we don't stick to how it's been done previously and consider new possibilities that have a result on the green transition.

Expect the price of gas to trend back towards long-run marginal cost. Interesting to revisit the work done by BEIS (nee DECC) in 2016 on the long run marginal cost curves. For years gas has been relatively cheap but, take out certain sources of gas, or constrain amount traded globally, what does this mean for future gas prices, will they go back to being cheaper or go up? Short run prices in the next couple of years are higher but what we expect to see in the next 10-15 years is important. This impacts the blue hydrogen discussion as contracts aren't going to be entered into now for gas for hydrogen, rather long-term contracts will be entered into for methane for blue hydrogen. It would be useful to revisit the work done on what does the global market look like.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/565992/BEIS\\_WM\\_Fossil\\_Fuel\\_Supply\\_Curves\\_Final\\_Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/565992/BEIS_WM_Fossil_Fuel_Supply_Curves_Final_Report.pdf)

Do the current high gas prices and the potential for future price convergence as costs for green hydrogen come down and are more able to compete with blue mean that blue hydrogen projects don't come forward? Is there a risk that blue hydrogen projects get squeezed out of the market? If the start date of blue hydrogen projects gets pushed out too far because of the high prices, does that impact the viability of those projects if green hydrogen becomes more competitive within the lifetime of the blue hydrogen project?

Biomethane could probably be bigger than we think but we need to be careful as you can quite quickly get into unsustainable practices for certain volumes as above a certain volume, biomethane becomes very bad for the environment. How far could we go in a sustainable way and what's the maximum potential for sustainable biomethane in the UK? This probably hasn't been addressed before.

## **Future of Heat**

Tom Earl and Rosannah East presented the possible work packages on Future of Heat. Sought feedback from the group on which of the work packages should be taken forward; regional differences in building type, use and hydrogen production; enablers for effective heat policy, exploring heat networks using hydrogen; accepted levels of disruption and value of convenience to consumers in changing heating systems; consumer awareness and engagement (not recommended).

There was a general consensus from the group that the work-packages 1, 2 and 3 were the most preferable, whilst also recognising that work package 5 would be useful however this isn't the appropriate place to take forwards. The suggestion was also made to look at domestic as well as I&C consumers as part of the work packages.

## **EU Decarbonised Gas Package**

Ned Abbs-Brown presented the 3 main problem statements of the EU Decarbonised Gas Package that will require further exploration to understand implementation within the UK. He highlighted that following exploration of these areas; outputs will be shared with BEIS and Ofgem and used to influence the development of the Package within Europe and, UK policy development where appropriate.

## **AOB & close**

Martin thanks attendees for their input to the meeting.

Next meeting will be on 13<sup>th</sup> July, 1pm-3pm, via Teams