

Future of Gas

Minutes from the Steering Group meeting on the 17th of March 2022

Location:

Virtual event

Attendees:

Martin Cook (Chair) – National Grid Gas
Stella Matthews – Northern Gas Networks
Robin Cannings – Storengy
Julie Cox – Energy UK
Steven De Ranter – Interconnector
Richard Fairholme – Uniper
Sam French – Johnson Matthey
Joe Howe – Thornton Energy Institute
Kirsty Ingham – Centrica
Hywel Lloyd – UK100
Lorna Millington – Cadent
Marcus Newborough – ITM
Bogdan Kowalewicz – Ofgem
Angus Paxton – Afry
Sarah Kimpton – DNV
Will Webster – Offshore Energies UK
Victoria Mustard - Xoserve
Chris Logue – National Grid Gas
Jennifer Randall – National Grid Gas
Bill Goode – National Grid Gas
Edmund Abbs-Brown – National Grid Gas
Jonathan Cranmer – National Grid Gas
Susannah Ferris – National Grid Gas
Ashley Adams – National Grid Gas

Apologies:

Ray Arrell – Regen
Sam Hughes – Citizens Advice
Alex Haffner – National Grid ESO
Robert Hewitt – BEIS
Lisa Fischer – E3G
David Mitchell – Chemical Industries Association
Thomas Koller – Energy Networks Association

Welcome and Introduction:

The chair, Martin Cook, welcomed the attendees, and highlighted a new member to the Steering Group, Sarah Kimpton from DNV who is in replacement of Corin Taylor. Sarah has been working in the gas industry for over 30 years and now works at DNV as the low-carbon lead for the UK and Ireland with a focus on the imminent changes to gas quality with respect to Hydrogen, Hydrogen blends and GS(M)R specifications. Martin concluded the introduction by confirming the agenda for the session.

Members Updates:

Centrica: Were pleased to announce that they will be working with National Grid Gas on the discovery phase of the SIF funded project looking at establishing a framework for green hydrogen injection into the NTS alongside other partners; CNG Services, Element Energy and SSE Power Distribution. British Gas (Parent: Centrica) has announced that it has installed its first air-source heat pump in Devon working with Daikin as the technology partners and,

under the PH Jones brand, Centrica are looking to install up to 1000 air-source heat pumps in social housing per year. Centrica are training 3500 apprentices on green technology: hydrogen, heat pumps and, EV's. Centrica confirmed that the Rough storage facility is in its final stages of production with decommissioning activity due to complete in the next ~2 years but there are several options open to the site which are being explored.

Green Hydrogen Injection into the NTS: <https://smarter.energynetworks.org/projects/10023216/>

Heat Pump Installation: <https://www.centrica.com/media-centre/news/2022/british-gas-completes-first-heat-pump-install-in-devon/>

National Grid Gas: Confirmed that as lead party to the SIF project on green hydrogen injection into the NTS, we are very pleased to be working with Centrica and the other partners. They then explained for all members that SIF is the replacement funding model to the NIC competition funding and it's a funding competition for large scale innovation projects aiming to support network innovation that contributes towards the achievement of net-zero. SIF projects are split into several different stages beginning with a discovery phase which is a 2-month desktop study phase. Moving on from that, further applications must be made for the alpha phase which is a 6 month more in-depth study and then the beta phase which are 1yr+ projects. The current discovery phase of the SIF project looking at injection of green hydrogen to the NTS is looking to establish a technical regime for green hydrogen injection into the NTS. This is looking at things like flow control to manage hydrogen injection into the NTS to prevent reaching blend cap limits, developing models for whole system configuration such as optimal locations for electrolysers and then to review the economics of green hydrogen production and injection into the NTS. Further stages of this project will be seeking to develop a pilot green hydrogen injection into the NTS potentially by 2022-23. They then confirmed that the final hydrogen GMaP project on Guarantees of Origin will be available publicly in the next few weeks.

OEUK: Confirmed they had a company name change from Oil & Gas UK to Offshore Energies UK to better reflect the interest of its members in amongst other things, hydrogen, CCUS, offshore wind, offshore storage, and the integration of those technologies.

Xoserve: Provided an update on the consultation phase of the Future Billing Methodology project which Xoserve have been running on behalf of Cadent. They have had over 100 questions raised as part of the engagement phase of the consultation with answers to all, available online. The consultation has now closed, and feedback is being examined before going back to Ofgem where it will then be available publicly by the 31st March 2022.

Future Billing Methodology Consultation: <https://www.xoserve.com/services/future-billing-methodology/>

Northern Gas Networks: Updated members on the hydrogen village trials submissions. Ofgem have now released a consultation on whether to fund the next stage of the trials.

Consultation: <https://www.ofgem.gov.uk/publications/consultation-our-minded-decision-fund-detailed-design-studies-hydrogen-village-trial>

Open discussion on the Russian invasion of Ukraine

Martin Cook introduced the next agenda item and passed to Chris Logue to offer opening remarks and lead the conversation. Chris confirmed that the group will have an opportunity to discuss the impacts of the crises in a future steering group meeting once the implications are more fully understood. Chris confirmed that the UK has been well supplied with gas throughout the winter's tensions leading up to the invasion of Ukraine and the UK does not rely particularly heavily on Russian gas with Russia supplying around 3% of current supply to the UK. The focus areas for National Grid Gas have been around market disruption and the resulting high gas prices as well as, how the UK can support Europe as we move into summer and next winter if, there should be a disruption of gas flowing into Europe. National Grid Gas have been providing information and support to both BEIS and Ofgem since the invasion began but are not party to any discussions surrounding potential governmental sanctions.

Members of the group had a thoughtful discussion around the current crises and noted the emerging policies relating to energy security/provision and their immediate potential impacts with an agreement to re-visit the topic in more detail in a future steering group meeting.

Future of Heat: Next Steps

National Grid Gas started the topic by recapping the previous presentation as facilitated by Afry and E3G and the resulting debate around this topic held at the last steering group meeting in January. Then moving on to what National Grid Gas sees as potential next steps within this topic area, these steps were broken down into three main categories with potential projects noted under each category. These were:

Development of existing studies and data granularity.

- a. Suitability of different technologies across all residential building types
- b. Regional prevalence of different residential building types and possible impact on technology type utilised
- c. Future anticipated efficiency of technologies
- d. Other projects / studies are being completed from a network's perspective

Consumer choice

- a. What are the levels of consumer choice (e.g. from free choice to no choice)
- b. Historically what level of consumer choice has been given and the effects?
- c. How do consumers make choices and how can consumers be provided with information to make informed decisions?

Local vs National decision making

- a. Governance framework and interaction between national decision makers and local authorities
- b. How could national level H2 production be linked with Local Authority demand?
- c. Timing and sequencing of solutions

Members had an engaging discussion with all parties agreeing on the potential questions presented as next steps within for the Future of Gas programme in this topic area. Members provided feedback on specific areas for development as well as, sector concerns to address as to help refine the groups activity in this space which included:

- The need to add a gas storage dimension into the Local vs National decision-making section
- The need to add in a consumer education dimension into the Consumer Choice section
- Noting that a lot of research activity has/is taking place; a literature review should be undertaken before initiating any of the projects as to best target activity
- Exploration of the possibility of using the FES spatial heat model with respect to marrying technology type to residential building type
- Concerns around the impact upon the wider network and its users in relation to hydrogen blends and 100% hydrogen conversion of the networks
- Noted lots of work is focussing upon the industrial clusters but there is a lack of vision and understanding of what will happen when on the wider network
- Noted that no-one was aware of any studies assessing the impacts of either blended hydrogen or 100% hydrogen will have upon the current generation assets in GB noting that retrofit/adaption/rebuild programmes take a significant amount of lead time
- Many Mayors, devolved authorities and local authorities are getting on with net-zero adaption and looking for a decarbonised solution well before the target 2050 date. There may be a need to marry some of these leaders with parts of the gas network as there is opportunity there for scale development of hydrogen and this may help to flush out some of the practical things that sit underneath the question we're asking.
- Noted that the shipper and supplier community are finding it difficult to identify what are the top priorities as they are missing that higher level overview/plan of what can happen and when which is causing concerns.

It was agreed by National Grid Gas to engage with members on a bi-lateral basis, to explore the feedback in greater detail, as the immediate next steps to the discussion before returning to the group with a refined set of potential projects at a future steering group meeting.

EU Gas Package: Next Steps

National Grid Gas started the topic by recapping the presentation from the previous steering group meeting. National Grid Gas then presented to the group their thinking with members on the five key areas raised by the package and the response National Grid Gas is minded in providing to the consultation. These were:

Compatible Standards

New low carbon gas standards should be compatible with third countries, such as the UK in order to ensure liquid cross border flows. NGG welcome the introduction of the 'low carbon hydrogen' definition, but we seek clarity and assurance that it will be compatible with the UK 'twin track' approach of both blue and green hydrogen. To that end, we believe that all colours of hydrogen should be tradable with the EU, so long as they meet the 70% emission reduction criteria specified.

Third Countries

NGG welcome that third country status is considered in The Package, however we think that the unique situation of the UK sandwiched between the Republic of Ireland and the EU requires more detailed criteria and further clarification. Currently, much of the Regulations specify 'cross-border trade', however this appears to concern only inter EU trade and not trade with third countries. To that end, we think there should be more explanation of the process for cross-border trade with third countries and the legal standing of the Regulations regarding third countries.

Cross Border Measures

The Package details cross border measures on gas quality, transparency, tariffs, codes, and interconnectors. NGG welcome where the Regulations build upon the natural gas market because it is a well-functioning, liquid market which has delivered effective trade for decades. We are concerned by measures which appear to radically depart from this, such as abolishing cross border tariffs and we consider that it could create unnecessary complexity in the collection of costs. We welcome the ambition of introducing an obligation to accept a 5% hydrogen blend across interconnectors, while leaving domestic blending decisions up to member states. Blending is an important first step on the hydrogen economy journey, which National Grid has a strong domestic focus on. National Grid are working to better understand the implications of a 5% blend on our system, and we continue to work closely with our gas TSOs to determine the potential for blending.

Methane Emissions

NGG welcome and share the ambition of measures to reduce methane emissions, however as a third country we will be developing our own processes for monitoring and reporting, which must be compatible with new EU requirements and not act as a barrier to cross border trade.

Security of Supply

NGG believes natural gas in combination with CCUS will play a transitional, long-term role in the economy, including a small role by 2050 in a Net Zero economy, therefore securing longer-term supply is essential for all decarbonisation pathways. Ensuring an appropriate balance of ensuring security of supply as both the UK and EU seek to decarbonise gas and adapt our existing gas infrastructure. The UK is a reliable partner and that there is future scope to increase the volumes of gas transported via the interconnectors between the UK and EU in both directions. The UK has many advantages as a large trading partner for the EU, given that the UK government now has a hydrogen plan, favouring all types of hydrogen and is within proximity to the EU.

Interconnector noted broad agreement with the responses National Grid Gas are going to provide to the consultation, with other members raising concerns held within the industry at large at the potential impacts upon users of the network. These concerns centred around the impacts of 5% by volume of blended hydrogen being introduced to the GB gas networks from 2025 where there has been little assessment of the impacts that this will have to all users of the network as was mentioned during the discussion on the Future of Heat. Discussions around this highlighted the difference between an agreed set of principles and what can be delivered practically in a real-world situation noting, that agreeing a standard may not result in the immediate realisation of that standard within the networks. It was agreed by all members that a more detailed roadmap of implementation with anticipated timescales for the delivery of blended gas at the interconnector points would be needed to allow for the necessary planning to take place within the UK with respect to the standard. It was signposted that National Grid Gas will share the potential work packages arising from the gas package with the group to allow for prioritisation of the future work programme.

AOB:

National Grid Gas confirmed that the next steering group event to be held on the 18th May 2022 will be an in-person event and asked members for their thoughts on possible locality with further details to be shared before the next meeting.

Meeting Close

The Chair thanked all for their participation and closed the meeting.

Post Meeting Member Update

Regen were unable to make this steering group meeting but have provided some updates for members on their activities, post event.

Regen have launched the latest DFES analysis for SSEN's North of Scotland and Central Southern England licence areas earlier this month via a joint press release. Regen have also just published an article covering some of the headline scenario outcomes for the two licence areas and the scale of the analysis undertaking.

Original joint press release with SSEN here: <https://www.regen.co.uk/local-forecasts-of-a-global-transition-net-zero-in-2050/>

Article here: <https://www.regen.co.uk/regional-analysis-of-the-net-zero-transition/>

The full reports are available to download here: <https://www.regen.co.uk/publications/ssen-distribution-future-energy-scenarios-2021-reports/>

Regen has also been working with National Grid ESO to assess the day in the life of the electricity system in 2035. This study provides a snapshot of how a net zero power system could function on a cold, calm and cloudy winter day. Presented through an hour-by-hour analysis, it highlights the energy system challenges that must be addressed to ensure system resilience and maintain security of supply.

Press release here: <https://www.regen.co.uk/new-interactive-report-sets-out-workings-of-a-net-zero-power-system/>

Interactive online report here: <https://www.regen.co.uk/publications/day-in-the-life-2035/>

Offline PDF version here: <https://www.regen.co.uk/wp-content/uploads/A-Day-in-the-Life-2035-v3-1.pdf>