

We will start at 09.32 to allow participants to finish previous meetings and join the call

While you are waiting, please access Sli.do which we will be using for Q&A **Event Code:** #GTX4 Sli.do Instructions: You can access Sli.do at www.sli.do or by downloading the Sli.do app. Once you've logged on, enter the code above when prompted.

nationalgrid

Welcome and Opening

Thank you for joining us today
Please get involved via SLIDO

Slido.com #GTX4



Chris Logue
Gas Market Change Delivery Manager

Who will be speaking today?

Neil Rowley
Gas Markets
Strategy Manager



Suki Ferris Hydrogen Market Strategy Lead



Nera
Lenden
Stakeholder
Experience
Manager











Logistics



Should last for approximately about 60 min



Questions and polling via slido.com #GTX4



All callers will be placed on mute



We will circulate the slides and a recording of this webinar

Agenda

The Gas Market Plan

H2 Blending

H2 Guarantees of Origin

Long Term Access Review

Programme Forward Look

Q & A

The Gas Market Plan

Working with the industry, GMaP steps towards the gas market of the future



Programme Components







Future Of Gas Steering Group

GMaP Projects

Industry Engagement

Current Policy Landscape

To what extent will decarbonised and renewable gases play a role in the future?



Quick poll

Which of these publications have you read?

H2 Scenarios

Published May 2021

H2 Town Market Considerations

Published May 2021

Long Term Access Review

Published September 2021

Implementing Proposed Gas Quality

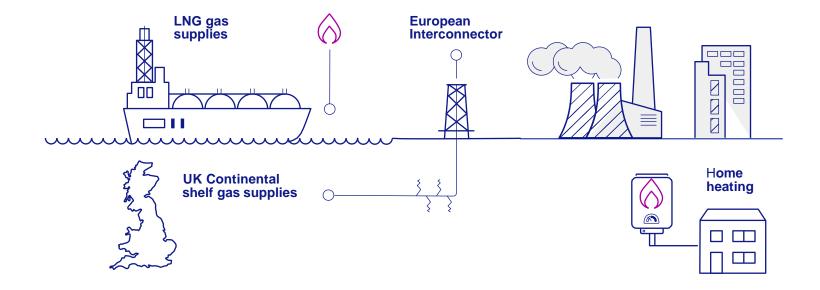
Published April 2021

Not read any

GMaP 2021 Delivery

- 1 H2 Scenarios
 Published May 2021
- 2 H2 Town Market Considerations
 Published May 2021
- 3 Long Term Access Review
 Published September 2021
- 4 Implementing Proposed Gas Quality
 Published April 2021

- **H2 Blending Market Timeline**To be published Q4 2021
- **Gas Balancing Regime Review**To be published Q4 2021
- **Guarantees of Origin GB**To be published Dec 21/ Jan 22



Quick poll - results

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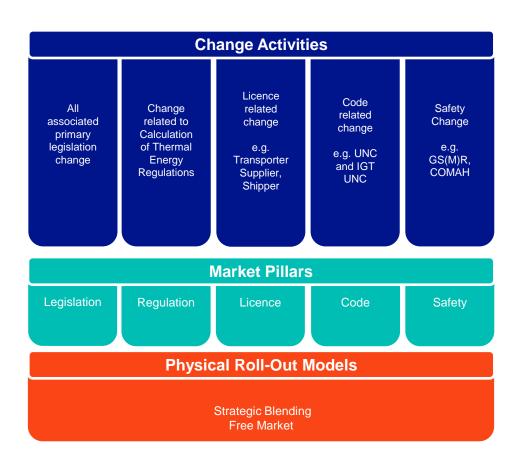
Not read any



Project Overview

Part A

- This is a Market based project, looking to create timelines of market framework change required to facilitate hydrogen blending
- The project has built the timelines on 5 market pillars of change, these are: regulatory, legislative, safety, license and code
- The project has produced 2 timelines, both of which aim to be ambitious yet credible
- Roll-out model exploration undertaken on two potential transformations



Timelines Created

The project created two timelines to illustrate how the uncertainty surrounding key change activities could impact timescales.

Target 2023 Timeline

- Timeline created to align with the government strategy, as outlined in the Energy White paper
- "the Energy White Paper notes ambitious intentions to enable up to 20 per cent hydrogen blending on the networks by 2023 (subject to trials and testing)."
- Target driven timeline created, to showcase how the market frameworks could be changed, recognising this would be ambitious and would require accelerated decision

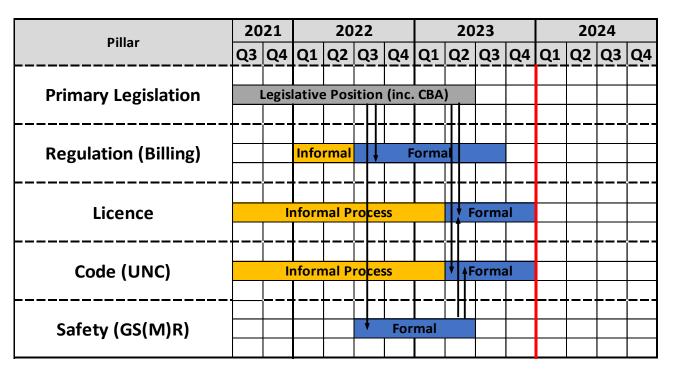
Sustained Progress Timeline

- Timeline shows steady progress
 delivering the requisite market and
 system change to enable network
 blending by 2025, as an alternative to the
 target driven nature of the Target 2023
 timeline
- The 'Sustained Progress' timeline is ambitious, it recognises that there is still uncertainty related to key change activities
- The timeline requires early industry coordination and collaboration

Timelines

- Both 'Target 2023' and 'Sustained Progress' timelines are covered in detail within the projects final report.
- The report is due to be published next week and will be available on National Grid Future of Gas <u>webpage</u>
- The high-level timeline by market pillar provides a flavor of how the different market framework change could be sequenced.

Target 2023 Market Pillar Timeline



National Grid

Key Conclusions

2023 is an ambitious yet achievable target, but only if the industry pursues the route of minimum viable change to deliver blending

Early policy clarity can accelerate change

Delivery of timeline requires centralised co-ordination of change plans

Need for industry collaboration and engagement **before** final policy decision is made

5 Implement quick-win system solutions first

Blending Next Steps

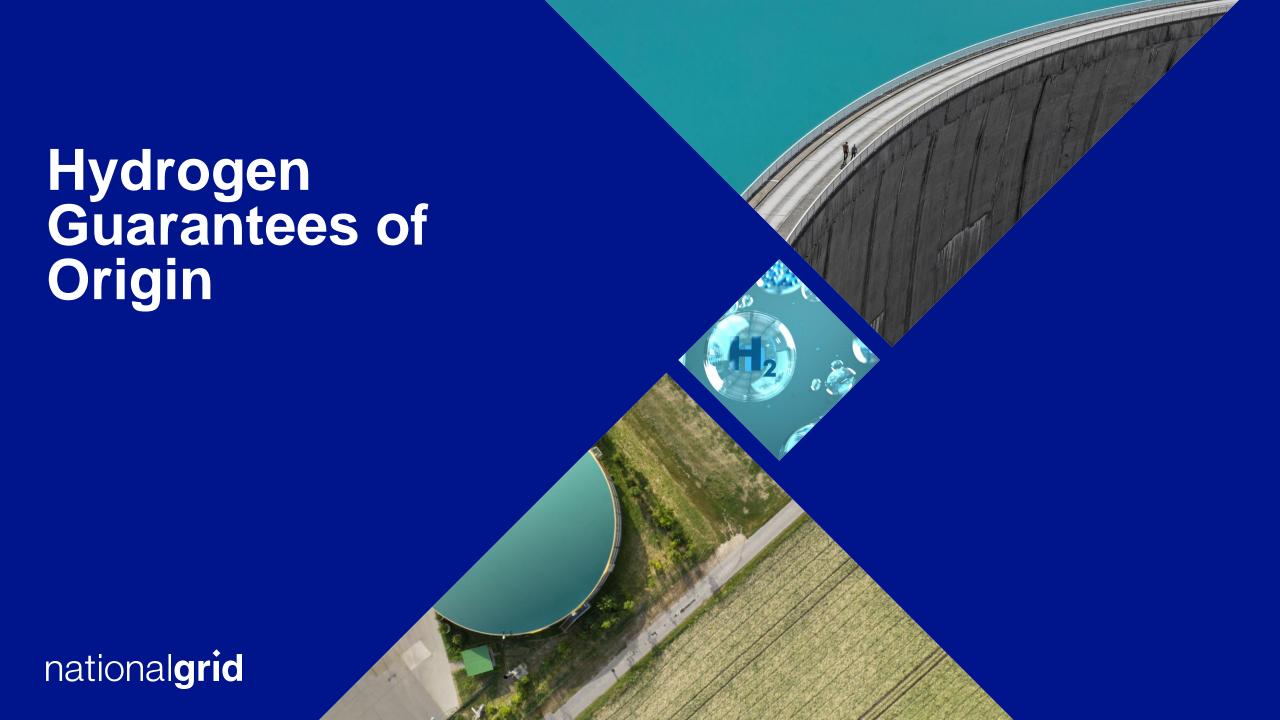
- ENA considering next work package phase
- Current expectations is that it will consist of 4 bespoke projects

1. The Blending Model

3. Regime Changes

2. The Blending Blueprint

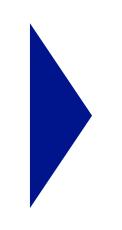
4. The Cost Benefit Analysis



Project Overview

Problem statement:

How can consumers engage in a hydrogen market?



Project purpose:

What role could a UK hydrogen GoO scheme play in a future UK hydrogen market?

What is a Guarantee of Origin (GoO)?

GoO definition:

- Provides information on the origin (source) of energy products.
- GoO's can be traded separately from a physical commodity to maximise the climate attributes of an energy product.

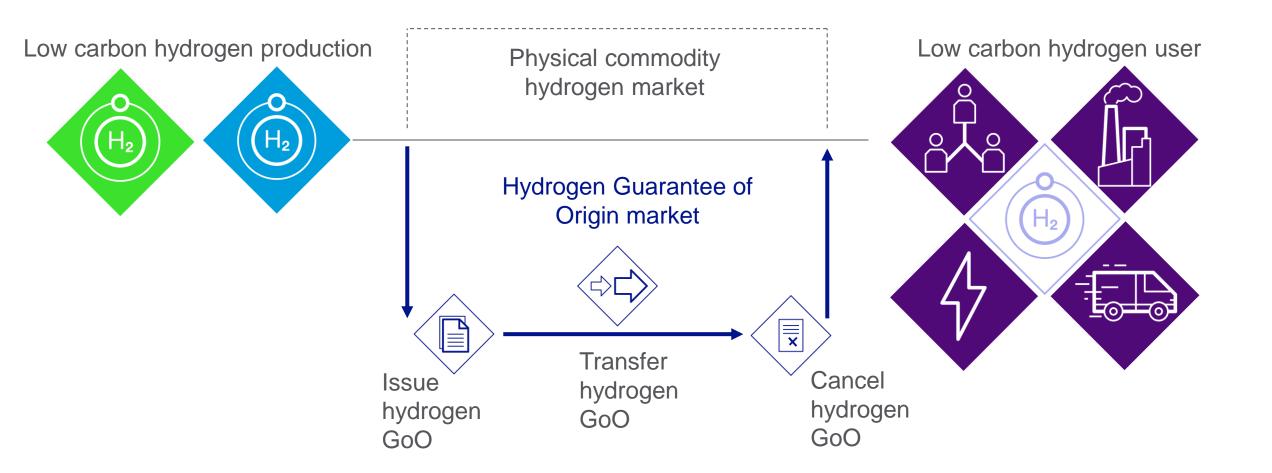
Guarantee of Origin Production technology: Date of production: Location:

GoO analogy:

- A crowd-funding tool for consumers to show preference for energy.
- Buying a GoO does not mean you are buying or using the energy itself, it is a mechanism to indicate consumer preference.

Where, how, when energy was produced...

How do GoO's work?



Why explore Hydrogen GoO's?



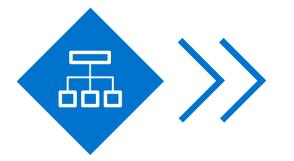
It will be important for market participants to disclose the climate value attributes of low carbon gases:

- Biomethane
- Hydrogen



Extensive H2 GoO work is taking place globally and in the EU, which will likely impact future cross-border trade:

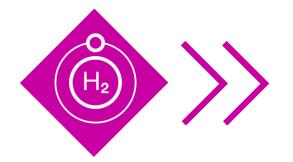
CertifHy (EU funded EU hydrogen GoO scheme)



A H2 GoO scheme will likely interact with existing UK climate value schemes:

- REGO (Renewable Electricity Guarantee of Origin)
- **ETS** (Emissions Trading Scheme)
- RGGO (Renewable Gas Guarantee of Origin Biomethane)

Benefits of Hydrogen GoO's



Benefits to Hydrogen producers:

- 1) Premium for low carbon hydrogen products
- 2) Evidence of consumer appetite



Benefits to Hydrogen consumers:

- 1) Mechanism to engage in hydrogen market
- 2) Mechanism to indicate preference for hydrogen energy products



Benefits to Hydrogen transporters:

- 1) Infrastructure facilitates the market
- 2) Mechanism to enable virtual trade ahead of physical change

Next steps:

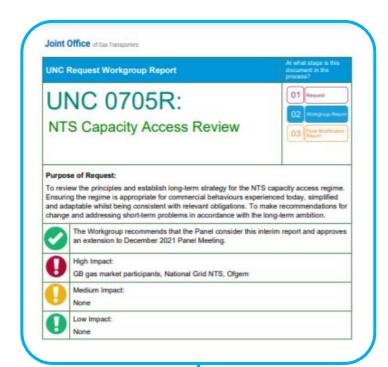
Final report

For more information, please visit our Hydrogen
Gas Market Plan
webpage

- 1. Assessment of current GoO landscape in the UK / EU
- 2. Benefits of a UK hydrogen GoO
- 3. Recommendations to implement a UK hydrogen GoO scheme



Long Term Access Review



national**grid**

Capacity

Access Review:

Strategy

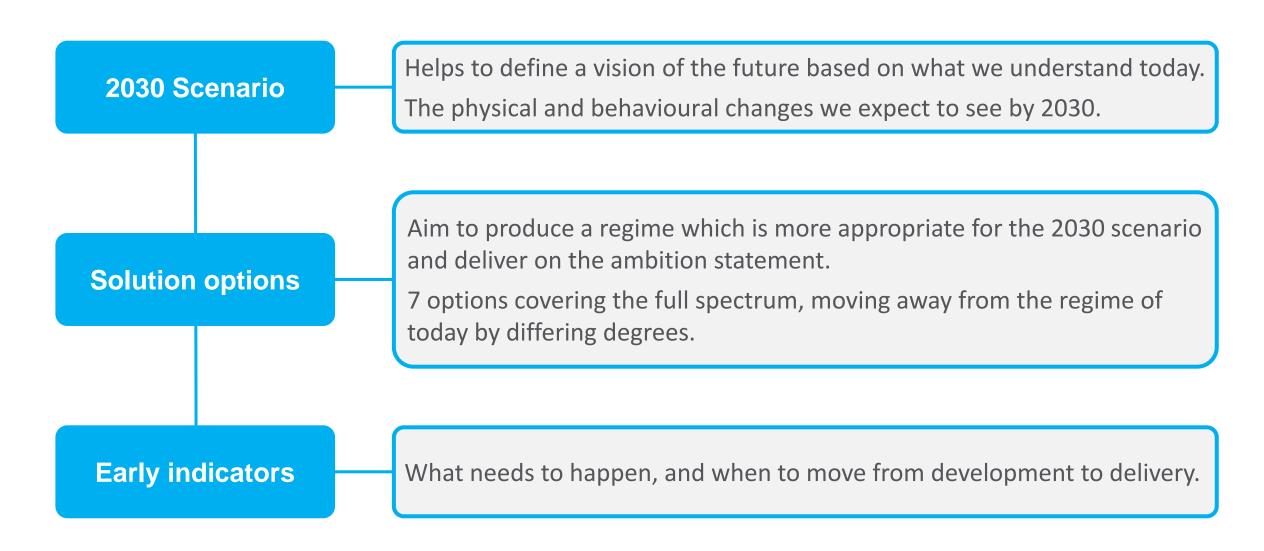
Consultation

January 2020



Long Term Access Review Development

Development of a 2030 Access Regime



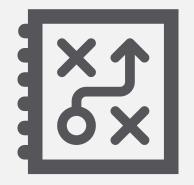
Looking forwards

Test work completed to date



Consultation responses invited by 30th November Views on scenario and next steps

Inform next steps



Identification of early indicators

Further development of preferred solution options

Long term ambition



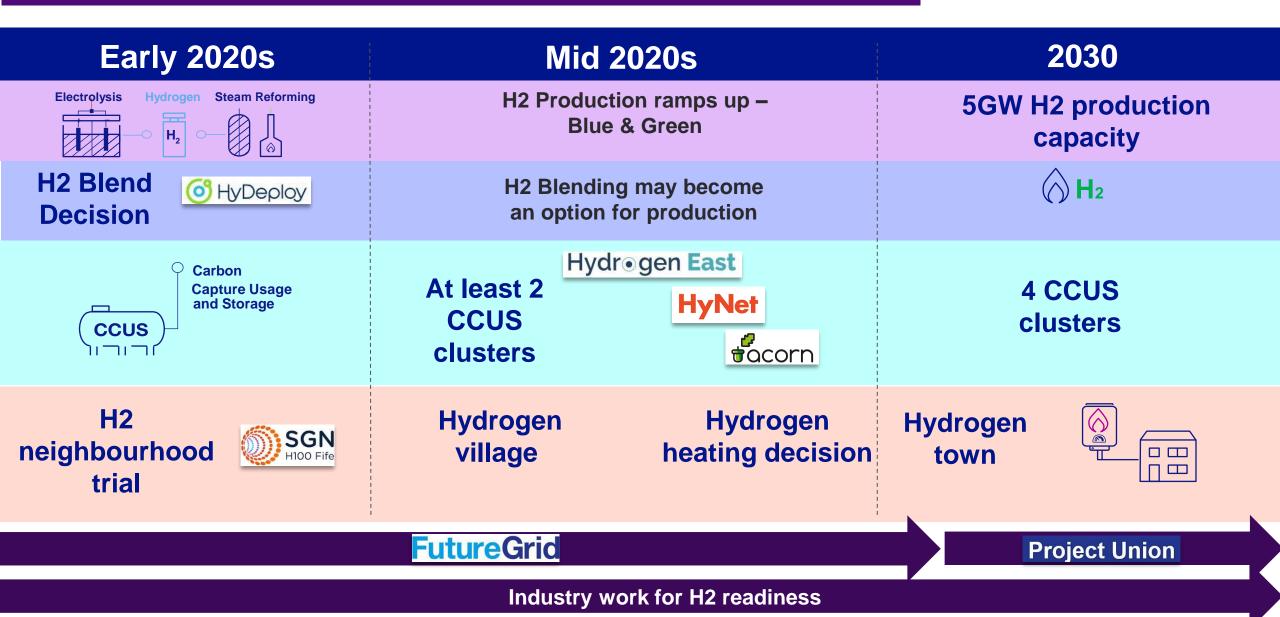
A future access regime that delivers on the needs of our customers and National Grid as TSO.

Quick poll

Which areas are of most interest to you?

- The Market Roadmap
- H2 theme
- Blending theme
- Natural Gas theme

Possible future requirements



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Programme Forward Look

'Live' 2-10 year Market Development Roadmap

Facilitating decarbonised Gas

H2 market development

Reason: H2 strategy provides further direction, First cluster being progressed and the building blocks to start the H2 economy in industry

1st Projects: Market rules for first cluster connections

Gas Market
Frameworks in
Transition

Project Themes

H2 Blending requirements

Reason: H2 blending government decision from 2023 to enable early developments to happen.

1st Project: Possible Deblending market rules

Gas Market
Frameworks in
Transition

Natural Gas Framework

Reason: Supply, demand and use of the natural gas networks will continue to evolve in the 2020

1st Project: Implementing the new Wobbe range

Quick poll - results

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- Blending theme
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Quick poll

How would you like to engage in the future?

- Webinars
- Email/newsletters
- Social media
- Debates
- Other...Please specify



Quick poll - results

How would you like to engage in the future?

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Upcoming events

Keynote speech	Complete	Watch again
Future of Gas	Complete	Watch again
Innovation – broadening the horizon	Complete	Watch again
Gas Market Plan	Complete	
Transitioning to a hydrogen backbone	Thu 02 nd Dec 10.00 – 11.00	Register here
Managing methane emissions	Thu 02 nd Dec 13.00 – 14.00	Register here
Supporting regional hydrogen transitions	Fri 02 nd Dec 09.00 – 10.00	Register here
Understanding the skills needed for a net zero world	Mon 06 th Dec 13.00 – 14.00	Register here
Digital Strategy and Information Provision	Tue 07 th Dec 13.30 – 14.30	Register here
Operating the network	Wed 08 th Dec 09.00 – 10.00	Register here
FutureGrid 2021 Progress report	Tue 14 th Dec 10.00 – 11.00	Register here
Annual Network Capability Assessment Report	Wed 15 nd Dec 10.00 – 11.00	Register here

What next?



You will receive the recording and material from today's session



If you have any further questions or would like to discuss anything specific please get in touch with box.FOGForum@nationalgrid.com



Feedback is important to us, therefore if you have not already taken part, we would like to put you forward for a survey

Thank you for joining us today



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