

RWE's Response to National Grid Gas's Long Term Access Review Consultation, September 2021

1. What further developments do you see happening within the energy regime (either specific to your sector or more broadly) by 2030 which could have any influence on the 2030 scenario?

In our view, one of the largest drivers of the 2030 scenario will be the ability, investment appetite and rate at which producers and consumers can transition to hydrogen and hydrogen blends. To date, much of the work to plan the hydrogen transition has been led by National Grid in its GMaP, HyNTS and Project Union programmes, which appear to focus on planning future development and use of the transmission system primarily based on the technical capability of the pipeline system to transition to different blends. The published documentation from these projects only report plans for the development of the system at a very high level, lacking the detail and certainty that is required for producers and consumers to incorporate into their own plans for asset investment in the transition to hydrogen. We think a lot more active engagement with producers and consumers will be critical in order to coordinate the transition and avoid unforeseen delays in the progress to Net Zero. A lot more work needs to be done to understand the opportunities, risks, decisions and constraints that Users face, in order to develop an optimal plan for the transition to hydrogen for the whole end to end gas supply chain, and we believe that this should be led by BEIS, the HSE and Ofgem who are responsible for defining the trade-off between rate of de-carbonisation, security of supply and impact on consumers. The development of the transmission system itself considering hydrogen capability is only part of the plan. We are not clear, for example, why the decision appears to have been taken by National Grid to blend hydrogen in steps of 2%, 20% and 100%, and whether this is the optimal approach for de-carbonisation across the whole industry.

We believe the scenario definition in the consultation document already looks very much like the gas system of today and the vision of 2030 needs further thought and development. Further consideration needs to be given as to the details and terms of access for hydrogen technologies including storage, the potential need for access to hydrogen de-blending and access to the proposed hydrogen backbone.

1a. What would be an early indicator of these developments taking place?

We believe one of the largest drivers to be funding of low carbon support for hydrogen. We expect that the GS(M)R gas quality will be amended to pave the way and ensure it is not a delaying factor for hydrogen blending. Therefore, it will be important that all producers and consumers are fully informed and given as much information as possible about the actual timing of gas quality changes in addition to the regulatory change alone, for example, by providing information about new connections applications as early as possible. This will help to ensure as efficient a transition as possible, including the ability for the market to operate efficiently by anticipating alternative sources of supply and demand. The electricity Capacity Market could be a good indicator of gas consumption for electricity generation, but only if these Users are fully informed about hydrogen blending plans. The upcoming Capacity market auctions early in 2022 for delivery 2025/26 already overlap with National Grid's indicative route-map for significant

hydrogen injection into the network. We suspect that some parties participating in the auctions may not be aware of the extent of the proposed gas quality changes and many are likely to need 3-4 years to plan for any change to a 2% hydrogen blend.

2. What option/combination of options (outlined in Section 3c, and further detailed in Appendix C of this document) do you believe best achieve the 2030 scenario and why?

There is a great deal of uncertainty in the 2030 scenario and this makes it very difficult to develop a detail capacity access plan. We think it is too early to begin work on capacity access re-design until the work has been done to understand further detail of likely User requirements. A key factor in the selection of an access and charging framework will be the extent of network constraints and any drivers of network investment and strategic network decisions, such as repurposing and decommissioning. We currently have very little visibility of these plans and decisions, and therefore cannot assess whether network constraints are likely to exist and in what timeframe.

We believe that Option I, to do nothing, is the best option until the late 2020's. The current charging regime has recently been re-designed, and provides for some flexibility. We believe that the current regime does need improvement as there are some inconsistencies between User requirements and access design such as the absence of capacity shape (where products only tend to provide for flat capacity) and some reluctance to move to more flexible arrangements such as short term assignments, reduced notice periods and expectation that Users will always be able to avoid overruns.

However, it seems highly likely indeed that increased system flexibility will be required due to the increased variability of offtake, and going forward the likely increase in variability of injection, not only throughout the day, but also day to day and week to week. This means that User's capacity requirements will become even more uncertain until delivery.

Due to the factors described above, we think Option B below is probably the best solution in the long term. Capacity may no longer be necessary as a product in a declining network, where National Grid already know what the maximum injection and offtake is likely to be at all points and where capacity availability always exceeds these levels. Rejection of nominations, with pre-defined rules, could be used to manage any short term constraints, if they exist. However, this option may not be appropriate if capacity is constrained due to the repurposing or decommissioning of pipelines or equipment at entry and exit points. Enhanced scheduling charges could be used to ensure shippers nominate accurately, but this would only be appropriate if there were cost implications resulting from inaccurate nominations.

We consider Option A, where access is based solely on flow, to also be a potentially suitable option in the scenario that shipper nominations provide limited additional information on how gas will flow during the day. This may be the case for instance if the within day use is highly volatile and unpredictable and nominations are difficult to accurately assess, and if forecasting techniques have advanced significantly so that National Grid are able to model potential flows based on publicly available operational and market data anyway. However, this approach may be too flexible and National Grid may need nomination data to check that shippers are responding to balancing actions, particularly locational trades.

We believe that Option C, where access to capacity does not require a financial commitment would result in Users over booking capacity to the extent that it could foreclose the market at some entry and exit points. This approach would need to be accompanied by a robust UIOLI procedure.

The Option D pay as you go approach appears to be a complex solution, and we are not clear what benefit this would provide over other solutions in managing the system. If this solution was developed further, consideration needs to be given as to how access would be structured: whether it would be at specific entry and exit points, or if it was based on a regional or national approach and whether usage would be firm in all cases, conditional or interruptible. This approach would also require nominations.

It is not clear in Option E, where daily access is based on flows, but long term is based on booked capacity, in what scenario this solution would be suitable. If long term bookings are required, this implies that there is a requirement to secure capacity because it may be constrained. However, if this were the case then capacity constraints should be expected in the short term, in which case a supply/demand market mechanism is probably needed and therefore daily products based on flows would need to allow for some type of allocation depending on a bid price for access.

Option F, where access is booked for short duration is likely to result in the scenario where shippers are unlikely to book daily capacity more than a few days ahead, and we are unsure what the benefits of this additional insight is compared with a nominations approach.

Option G, where access rights are booked, will only become necessary where constraints exist and might result in the return of contractual congestion and hence a robust UIOLI mechanism will be required. This approach may also benefit large players and incumbents, and it will be essential to ensure there is sufficient access available for new Users.

Option H, where the NTS is used as storage, is a very specific scenario for the long term future of the NTS, depending on rate of decarbonisation. Our expectation is that this may be a relatively cost inefficient storage solution. However, the existence of a hydrogen/methane blend system may be required if biomethane production continues, which is expected given the recent announcements regarding the Green Gas Levy.

2a. Do you have any preference on an option(s) to develop further?

We believe that Option I, to do nothing, is the best option until the late 2020's, at which point we anticipate that Option B is likely to be the best fit for optimal management of the transmission system and User requirements.

3. When should further development and implementation of the preferred option take place?

As described in our response to Question 2, we think more work needs to be done, with full engagement with Users to develop a more credible and robust plan for the transition to hydrogen. This will be an essential first step to define the most likely 2030 scenario before the access

arrangements are developed based on network costs drivers, investment and decommissioning plans.

3a. Do you have a view on the prioritisation of the development of the options?

We believe it is too early to have a view on prioritisation.

3b. Do you have a preference towards whole scale or a more incremental approach to change?

The rate of decarbonisation and amount of resources available across industry may mean that there is limited time and bandwidth available to go back to the drawing board to design a perfect solution. In future, when it is clearer to what extent the access arrangements may need to change, an assessment can be made as to whether an incremental approach or whole scale change is needed.

4. Are there any other options which should be considered? Please provide any details of how you would see the options working at a high level.

It is difficult to generate alternative options until clear requirements have been established, but we believe that any new access regime should accommodate more variable usage and therefore could for example include flat and profiled capacity offered at different prices. The development of any future capacity nominations regime should include a review of whether 1/24th rule is still relevant. Different arrangements could apply at entry and exit, including gas quality specifications which could also vary by region.

5. Do you have any other comments?

We do not have any further comments.