Grendon Thompson
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Ofgem
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18th October 2019

RE: Mid-year call for evidence on ESO performance

Dear Mr Thompson,

Please find here Sembcorp's response to your Call for Evidence.

Context of response

Sembcorp Energy UK is part of the Singapore-based Sembcorp Industries group (Sembcorp), a leading energy, marine, and urban development group, operating across multiple markets worldwide. As an integrated energy player, Sembcorp provides solutions across the energy and utilities value chain, with a focus on the Gas & Power, Renewables & Environment and Merchant & Retail sectors. On the Wilton International Industrial site (Wilton) in Teesside, Sembcorp Energy UK delivers high-quality, centralised utilities and services to energy-intensive manufacturers. With 200MW of installed capacity, one of the largest and most efficient Combined Heat and Power (CHP) plants in the UK supplies electricity and heat to on-site businesses via the private distribution systems that are owned and operated by Sembcorp. Furthermore, Sembcorp's arrangements with National Grid at Wilton are possibly unique in the UK, as the CHP plant within our own Private Wires Network is directly connected to the National Grid Transmission System.

Customers at Wilton International include chemical and process plants, operated by international conglomerates, who have invested heavily since coming to the UK and have the desire to invest further. All are dependent on Sembcorp's reliable and secure supply of power and heat to successfully operate their assets; generating vital export revenues for the UK.

Sembcorp Energy UK is also the leading provider of secure, flexible, low carbon electricity and services to the UK power market. With a contracted portfolio of over 1GW of decentralised thermal power generation and battery storage assets, Sembcorp helps keep the country's electricity system balanced and resilient. Our fast-ramping and efficient assets are located across England and Wales, improving competition, contributing to security of supply, and delivering better value to consumers. Our assets are, and will continue to be, crucial to the delivery of a flexible energy system in which a greater proportion of energy is delivered by intermittent, low carbon generators.

Executive Summary

The ESO are facing a number of challenges with the pace of change of the industry. High-level communication on strategy is very good, although we are concerned some of the ESO's ambitions for the near-term projects are not fully fleshed out at an early enough stage. This can lead to confusion between participants as to what was originally promised. There is a wider disconnect between long-term strategy and ambition and the day to day operation of the network, but generally Sembcorp believes the ESO are fulfilling their duties appropriately. The ESO are ambitious in their future plans for RIIO2 and have a clear desire to adapt to exceed their current obligations, such as the evolving

System Operability Framework, the ESO Forward Plan, the extended scope of the stability pathfinding project and tenders for local reactive requirements through high voltage pathfinding projects.

Sembcorp have engaged in a number of meetings with the ESO over the first half of this period, both bilateral and as part of wider industry engagement. Bilateral meetings in particular are very useful, productive and have helped Sembcorp understand the ESO's position on a range of matters. The ESO is good at attending industry meetings and have good stakeholder communications using specialised subscriptions for particular projects.

Principle 1: Support market participants to make informed decisions by providing user friendly, comprehensive and accurate information.

Generally, the ESO is good at publishing regular operational reports (Market Outlook documents, monthly BSUoS reports etc.), which are comprehensive and provide industry with suitably detailed information. They could be improved with commentary, for example, explaining differences in certain balancing services from previous reports and/or forecasts. This would allow the industry to put ESO actions into context and increase understanding. The ESO is not particularly proficient at publishing information that is not in a regular format. For one-off events, such as the August 9th power cut, detailed numeric information can be extremely hard to find. Irregular reports from different projects are described in several ways, meaning it is difficult to find the information needed. The official reports on the August 9th power cut from the ESO were well-written, the ESO's role and obligations were described clearly with enough information to understand the ESO's response.

The procurement of balancing services, both in advance through tendering contracts and closer to real time, is changing significantly and the ESO is still the major purchaser of flexibility services. Market confidence could be improved if there was more information available on how the ESO choses which flexibility tools to purchase, and the amount required. Currently, there is a risk of market distortion as flexibility providers try to "second-guess" the ESO's strategy, which could be hindering price discovery and preventing the ESO from taking the most cost-efficient solution. In RIIO-2 presentations, the ESO have reflected the industry's concerns on this matter and Sembcorp looks forward to discussions on the topic, which the ESO have indicated their openness towards. We also very much look forward to the reserve and response roadmap that the ESO committed to publish by the beginning of November: this document will provide a much needed overview and explanation of the products characteristics and the balancing decisions of the ESO.

The Future Energy Scenarios continue to be a useful source of long-term planning, with the four scenarios representing mostly plausible solutions. The range of publications – summaries, conferences, the full publication – means users can efficiently select the information they need and makes a large project very accessible. The change to the publication timetable shows the ESO are continuing to improve on an already successful area and has improved the experience. Given the timing of the amendment to the Climate Change Act legislating net zero carbon emissions by 2050, it is understandable that was not a full scenario and we are looking forward to seeing the target as a fully fleshed out scenario next year. The ESO has the potential to take a leading role in Great Britain's decarbonisation, through Pathfinder projects and encouraging investor confidence, but must not risk fundamental principles or interfere with government policy. The ESO is technological neutral and must remain so.

Sembcorp would like to see more transparency in the Electricity National Control Centre (ENCC) real-time decisions. We appreciate that minute-by-minute decisions must respect a range of factors, not all of which are visible to the industry. Currently, there is no appropriate path to gain visibility of real-time decision, other than their results, or understand the reasoning behind them. It is possible to call the ENCC directly, but the ability of operators to deal with

queries is limited, as that is not their role. We are glad to see an update of the Control Room is being discussed for RIIO2 – this will be a significant project, so future preparation is essential. This would be an opportunity to build in open and visible decision making.

Principle 2: Drive overall efficiency and transparency in balancing, taking into account impacts of ESO actions across time horizons.

Increased transparency is also necessary on those bilateral contracts that NG ESO has in place with specific technologies. We refer here to Spin-Gen contracts and related issues that we have flagged in several occasions to both Ofgem and NG ESO.

Principle 3: Ensure the rules and processes for procuring balancing services maximise competition where possible and are simple, fair and transparent.

Sembcorp has been eagerly engaging with NG ESO on the System Needs and Product Strategy (SNaPS) project and we welcome the ambitious work streams that were presented to industry in 2017. Simplification and standardisation of products has progressed well, and reductions in Firm Frequency Reserve prices reflect the tighter competition. However, the development of new products has been slow, resulting in little or inconsistent progress. Industry has been making investment decisions based on the promises and the expectations set by NGESO, which have systematically been altered and subject to delays without timely notification or engagement with industry. For instance, the progress on Faster Acting Frequency Response Products and the related auction trial suffered severe delays while the products were in design phase with little consultation with industry on the development of such products. There were also uncertain timelines on the roll out of the auction trials: industry was informed of Phase 1 and its scope, while the scope of Phase 2 underwent some changes that were not communicated to industry in a timely manner.

We recognise that designing new products and introducing them to the system requires careful planning and considerations from the ESO to ensure a stable and reliable system, and we appreciate the engagement efforts have been overall substantial, yet industry was at times faced with unexpected changes to the plan, without being offered an explanation or the possibility to know in advance if any given work stream could not be delivered as initially expected. This has been affecting investment decisions and undermining industry's ability to provide the services the ESO requires in time.

We very much support the need to trial new services and we encourage the ESO to be ambitious and meet the timelines that it has set itself, as only in this way will it be possible for providers to truly support its deliverables.

Furthermore, while TERRE represents a significant change to balancing services and the flexibility markets with naturally some unknown factors for the industry and the ESO, Sembcorp does not believe that implementation of future changes to balancing services should continue to be tied to project TERRE, such as for instance, the correction to the calculation of the imbalance price, should P371 be approved by Ofgem.

Principle 4: Promote competition in the wholesale and capacity markets.

The Charging Futures Forum continues to be very successful: it provides a good opportunity for industry participants to meet with Ofgem and senior figures in the ESO and puts the wide range of charging proposals into context with each other. Given the scope of material, the Forums themselves are not particularly detailed, but they provide a good

"entry level" view. At the Forums, the ESO strike the appropriate balance between presenting their views on the charging alterations and allowing the industry to speak freely.

It is clear the amount of change happening in the industry is placing strain on the ESO in their role as CUSC and Grid Code Administrator, however the relevant teams are dedicated and skilled. It is worth noting that the ESO's role as Code Administrator is limited by the feedback they are given by Ofgem. Given the depth of some of the modifications in-flight (for example CMP317[1]), a clear steer from Ofgem at Workgroups will allow the change process to be more efficient and help the industry meet Ofgem's expectations. The Codes administrated by the ESO are the among the largest in the industry, and the increased staff in the codes teams has made noticeable improvement. Sembcorp are still concerned the amount of work required is more than the ESO is funded for. The ESO is funded very differently from other Code Administrators, such as Elexon, and in general, provides a service that is good value for money. The ESO writes the legal text for the majority of CUSC modifications, which is not an obligation for them, and this extra work should be recognised, especially given the complexity of modifications in-flight.

Principle 5: Coordinate across system boundaries to deliver efficient network planning and development

Sembcorp recognises that system boundaries are often out of the ESO's direct scope, due to Significant Code Reviews and policy consultations addressing the issues directly. During the code modification process, the ESO are actively trying to avoid creating further distortions across system boundaries and are inviting Transmission and Distribution Network Operators into Workgroups where appropriate. There is a still a need for education to the industry on the relationship between multiple systems and NG ESO, with other parts of National Grid, would be an obvious party to do this.

Principle 6: Coordinate effectively to ensure efficient whole system operation and optimal use of resources

The Power Potential project is going well but appears to be progressing slower than originally intended. The same is true of Distributed ReStart – an innovative project to trial Black Start from Distributed Energy Resources (DER). Sembcorp are pleased the ESO has recognised the potential DER has in system operations but we feel the trials could have been more open to more technologies. The technical specifications were precise and aimed at DER that was already capable of self-starting in black-out conditions. The project will need to reach wider conclusions quickly in order to move on to the next phrase, which should be to use all types of DER, including those cannot truly self-start or with limited fuel as part of isolated Power Islands.

The ESO is fully engaged in discussions around the future of flexibility through the ENA Open Networks project, as they chair working groups, and Sembcorp appreciates the "off-line" bilateral meetings that have allowed us to understand Open Networks more completely. Currently, the Open Networks project occasionally feels like a struggle for power between Distribution System Operators (DSO) and the ESO. We believe the occasional friction is because the relationship is quite new and the scope of DSO services is not yet decided. The ESO seem committed to creating complimentary markets for flexibility and have been cooperating fully to that end. In that sense, we welcome Ofgem's latest paper on Distribution System Operation, which refer to the new function as opposed to focussing on the entity/entities that could fulfil the new role. We support the transition to a more active system operation role as long as there is legal separation between network operators and this new DSO role. Primarily though, all parties will work

[1] CMP317: Identification and exclusion of Assets Required for Connection when setting Generator Transmission Network Use of System (TNUoS) charges

best under clear guidance from Ofgem, which will allow the industry to be prepared and use existing resources most efficiently.

Principle 7: Facilitate timely, efficient and competitive network investments

Communications between the ESO and the Transmission Operator (TO) are still largely obscure, especially around constraints and the decisions between network investment and purchasing of balancing services. The improvements made to this year's Network Options Assessment (NOA) report, specifically ESO-led commercial solutions, are welcomed. Sembcorp is cognisant of the secure nature of infrastructure discussions, but clear conclusions will increase transparency and reduce doubt around the cost of balancing services, constraints and connection charges. More detail around the ESO-led commercial solutions would help market participants understand their specific impacts. It may also be useful to create less technical or summarised illustrations to help educate the industry. During open meetings around the cost of balancing services, it is clear that most industry participants do not understand the NOA process, or how discussions are made, leaving the ESO representative explaining a complicated area outside of their specific expertise, referencing a 160+ comprehensive report. When this happens, such as within Working Groups or future strategy discussions, it is generally handled extremely well, suggesting individuals within the ESO have a clear understanding of the wider questions the ESO faces.

The ESO is facing a challenge around net zero carbon emissions by 2050: Sembcorp believes that decarbonisation should be largely policy-driven but the ESO will be the face of some of these policies. There is a balance between being outspoken on decarbonisation but also respecting the fundamental economic principles which must govern investment and operation in Great Britain's electricity network. So far, the ESO have met that balance well but we believe there will be increasing pressure on the ESO to be vocal and active in decarbonisation of Great Britain.

We welcome the opportunity to discuss any of these points further. Should you have any questions, please do not hesitate to contact me at grace.smith@sembcorp.com

Kind regards,

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