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21st October 2021

RE: System Services Future Arrangements (SSFA) High Level Design Consultation, SEM-21-069

Dear Dylan and Owen,

Bord Gáis Energy (**BGE**) welcomes the opportunity to respond to this consultation on the high-level design for system services future arrangements, SEM-21-069. Our response is divided into four sections: **A.** Executive summary outlining BGE's high level position on the SSFA High-Level Design (**HLD**); **B.** Context for our position and BGE's more detailed proposals for the SSFA HLD; **C.** BGE's preferred auction design for 'daily' i.e. 'utilisation' auction and related market design elements; **D.** Appendix where we provide answers to the questions posed in the consultation.

A. Executive Summary

Re-designing one of the three main revenue streams in SEM given our 2030 decarbonisation targets, the aims for 100% SNSP by 2030 and the ongoing investment hiatus in SEM is not an easy task. We understand and accept that the Regulatory Authorities (**RAs**) are seeking to achieve EU compliance around System Services (**SS**) procurement approaches and that is a key driver for this workstream. The problem is that the ongoing investment gap in any capacity in SEM, be it flexible or otherwise, needs to be solved in early course also. Otherwise we will miss our 2030 targets ultimately to the detriment of end consumers.

The main thing that needs to be addressed in BGE's view to solve the current investment hiatus is the lack of long-term investment signals coming through in both the system services and the capacity markets. As diminishing energy revenues are an accepted consequence of a Renewables (**RES**) dominated market, long-term price signals must necessarily come from system services and capacity markets if existing efficient units in SEM are to be maintained and new investments in flexible capacity are to materialise on time for 2030.

Our assessment of the main proposal in this consultation, daily auctions for system services, is that auctions alone in the high-level format proposed will not deliver the investment signals badly needed for flexibility in SEM. Internal assessments have shown that a 'race to the bottom' in daily auctions can be expected if no longer-term level of price forecast-ability and stability to incentivise investment is incorporated in the SSFA design. If the SSFA does not enable some level of price stability for investors BGE expects the SS market to be of little to no value to investors trying to deliver flexible capacity by 2030. A likely knock-on impact is that units will seek higher clearing prices in the capacity market to make up for lacking system services revenues.

The solution must be one that delivers on the "investor clarity" criterion the RAs have helpfully adopted while also balancing the other criteria including value for the consumer and EU compliance. Investors necessarily must be permitted some level of foresight on likely price outcomes if they are to make any investment bankable.

Our proposed solution to the SSFA HLD therefore, that we believe achieves the right balance, is:

- i. A long-term auction that provides auction winners with a stable 'availability' payment for a specified duration, and
- ii. A daily or 'utilisation' auction that provides winners with a shorter-term price. To achieve the price forecast-ability and reasonable stability that investors require for project finance however we believe that the utilisation element of our proposed two auction approach should include a range of price floors that a unit can expect to at least earn if they clear in the auction and provide the capability to deliver the volumes in real time. The price floor ranges could for example be correlated to the medium-long term need for more volumes in the product and the forecast renewables output levels (high/ medium/ low) at the time of the auction. It is this auction that could be designed to achieve EU compliance in particular in our view. Payments under either auction would not be dependent on having cleared in the other auction.

The specifics of the design are complex, and we do not have all the answers at this point in time. We believe however that the above approach could minimise or even avoid the need for less competitive procurement of system services. For example as the RAs become more confident that the volume of services needed, and the array of service providers required to deliver in times of high/ medium/ low RES output at optimum value for the consumer, exist then over time certain services could gradually migrate away from the availability towards the utilisation payment basis. We do not however believe there is sufficient certainty at this point in time to determine that the volumes and providers needed for all of the system services required for 2030 will be there such that a grid with 100% SNSP and security of supply can be maintained. The two-auction approach above should thus apply to all SS products at least to 2030 in BGE's view.

Certain open issues remain that must necessarily be addressed in the short term and in the detailed design including:

- ❖ What is the appropriate payment basis for successful system service (**SS**) auction winners? Principles that BGE believes must necessarily apply in this regard include:
 - The risk of a constraint action or a unit's location impacting a unit's auction committed SS volumes and SS payments (or possible penalties) should sit with the TSO.
 - Where a unit that did not clear in a SS auction is constrained to provide SS, it should be paid for the SS provided in a transparent manner. The level of the payment is highly dependent on the market power position of the unit however and possibly ex ante trades. The impact of the highly constrained nature of the network on how to ensure SS participation is appropriately incentivised is a key matter for the market detailed design phase too.
- ❖ What is the interaction between Physical Notifications (**PNs**) and TSO action decisions? BGE seeks a highly transparent market solution where TSO discretion is minimal.
- ❖ How should any penalties be designed to ensure that the price signal for investors is not undermined? Their design should be highly transparent and predictable and ensure perverse signals regarding SS auction participation are minimised. High one-off penalties severely risk undermining investor confidence.
- ❖ What scalars are appropriate to retain depending on the HLD and what perverse incentives need to be mitigated? We envisage scalars may be best suited to the utilisation auction. It may be pragmatic to only reduce the temporal scarcity scalar in line with the SNSP trajectory. The current penal nature of performance incentives needs revisiting to mitigate investor uncertainty – e.g. to mitigate the effective current assumption that one underperformance event will perpetuate for up to 6 months, we suggest an ex post performance assessment over a period of months and where underperformance *regularly* occurs its implications would be known in advance for a period well into the future.
- ❖ Is the current range of 14 system services appropriate for a market moving to auctions or should some simplification of products, e.g. streamlining products that naturally sit together to reduce auctions, occur?
- ❖ How would introducing the consultation's concept of "firmness before payment or participation" avoid creating a further disincentive for investors in flexibility? Unless evidence is shown as to how such an approach would not undermine transparency in the performance of the grid (in which DBCs play a key role) and would not deter much needed flexible capacity investment, BGE does not believe the concept merits further consideration.
- ❖ We need the TSO's insights on the full range of products needed and volumes of each product needed in a trajectory to 2030 and beyond, where those volumes are needed, the types of technologies expected to be able to provide each product and their determination on any shortage of volumes from technology types that needs to be filled to meet 2030 targets.

B. Context for BGE's position and BGE's Proposed Solution

1. Context for BGE's proposals for the SSFA HLD

System services, capacity and energy revenues are the three main revenue streams for investors in SEM today. Given our 2030 decarbonisation targets and the continued and new investment in technologies necessitated by 2030 targets, the discussion on what one of the main revenue streams looks like for the next decade or so in BGE's view must necessarily start with today's investment environment.

It has become clear over the last twelve months that insufficient investment in capacity, flexible or otherwise, is being delivered in SEM. For example:

- i. The capacity market is not delivering the level of capacity required to ensure that security of supply is maintained,¹ and
- ii. Investors are no longer factoring in any reasonable level of revenues from the system services market given the uncertainty about its design, its price signals and whether the level of revenues that needs to be paid out under the market will be forthcoming given the RAs' indications that the current level of annual spend on DS3 will not be permitted to grow under the SSFA, and
- iii. Energy market prices and revenues typically reduce with increasing levels of renewable generation. Although we are not seeing that in 2021, this is an atypical year with low wind levels and highly volatile gas markets.

Altogether, the above picture presents a market that new investors cannot currently develop sound business cases under. It is also putting the business cases of existing investors under pressure. As per point (iii) above, deteriorating revenues in energy are a factor of an increasingly renewables dominated market, so the main signals for continued and new investment if 2030 targets are to be achieved must come through the system services and capacity markets. If some level of price forecast-ability does not materialise in system services, this will put pressure on the capacity market to deliver the necessary investment. The problem is that without sufficient assumed revenues from system services finding their way into capacity market auction bids, the capacity that will be forthcoming in the main will be less flexible than what is needed by a system aiming for 100% SNSP by 2030. While the type of technology delivering the system services by 2030 will vary depending on for example high/ low renewables output there will be times when the renewables output will be low, sometimes for prolonged periods of time, and the traditional sources of system services can be expected to play a key role in system service provision then. Other times, e.g. at high SNSP penetration, newer types of technology will play a more central role. Ultimately, the system services market and its price signals must work for an array of technology types² and the importance of system service revenue estimates finding their way into capacity market auction bids should not be underestimated. Otherwise, BGE believes that we risk seeing investments materialise that are less flexible than they could be (under the capacity market) and we also risk missing 2030 targets by virtue of insufficient flexible technology types being invested in (due to inadequate system service market signals). Given it is consumers that underwrite both capacity and system services markets, it will prove better in the longer term for end consumers if a stable price signal materialises for SS as early as possible which will for example also enable existing and new units to factor in future SS revenues in capacity bids leading to optimal cost outcomes, delivering flexibility.

Most technologies - existing or anticipated to be needed in the SEM for 2030 - have lifetimes of at least 20 years. When establishing business cases investors will take a holistic view on potential revenue earnings and will develop their business cases on the prospects of earning some revenue from the three revenue streams.³ While investment assumptions will be made for the duration of the plant's lifetime that is not to say that investors want certainty in revenues they can categorically say they will earn for the 20+ years. No market would be expected to do that. What investors need however, and what markets need to deliver to enable investment decisions, is a sound basis on which to extrapolate the likely level of prices and therefore revenues that can potentially be earned for the unit's lifetime. In essence long term forecast-ability of prices is central to achieving investor clarity on the potential for successful business cases in flexible capacity.

Our assessment of a standalone daily auction for any system service without any semblance of price forecast-ability is dismal. We see it that it is likely there will be a race to the bottom in standalone auctions unless they are accompanied first by a long-term auction based availability payment. System services prices would be so volatile and unpredictable that the existing hiatus in investments will not only continue but will worsen. The business cases of existing units will increasingly come under pressure too, potentially driving up prices in the capacity market. As mentioned above those prices might attract units that are less flexible than if units were capable of bidding in reasonable levels of system services revenues in their capacity auction bids. We can therefore expect the gap in flexible capacity investment to widen between now and 2030 with standalone auctions only.

¹ The capacity market saw insufficient capacity being bid and clear in the T-4 for CY2024/25 auction. There have been several notifications of terminated contracts in 2021 with over ~500MW that was due for delivery from October 2022 being terminated. Poor outlooks for capacity margins in the coming years were recently confirmed by the TSOs GCS with a deficit as low as -180MW for Ireland this winter 21/22 p.64 <https://www.eirgridgroup.com/site-files/library/EirGrid/208281-All-Island-Generation-Capacity-Statement-LR13A.pdf>

² Working to maintain efficient existing units signalling continued utility from traditional service providers and signalling provision from new sources suited to SNSP 95%+.

³ Although the extent to which some technologies rely on system services revenue over capacity and vice versa will vary from technology to technology

While in theory one could argue that a ‘race to the bottom’ type of outcome is good for consumers, in practice any such benefit would be short-lived. As the investment hiatus of today continues and comes to a critical juncture likely in the later 2020s (with standalone system services auctions that provide poor levels of price forecast-ability) it is highly likely we would see urgent reactive measures taken for pure flexibility-driven reasons akin to the measures announced for security of supply recently. Such outcomes would ultimately lead to longer term higher costs for consumers.

The sooner we lock-in investor clarity the sooner the investment hiatus ends and the sooner we can start seeing the benefits of units being able to incorporate SS revenue in capacity bids coming through in capacity auctions in terms of a) more competitive prices from units that are more flexible than others, b) increased alignment in the objectives of the capacity market (to cover fixed costs/ missing money) with the type of decarbonised market we are seeking to achieve for 2030 and ultimately 2050. The RAs added “investor clarity” to their list of assessment criteria for the system services market design in March recognising that “*a well-designed market should provide an appropriate pricing signal for the requisite services*” and the market should “*aim to provide early and clear pricing signals*” to inform investment decisions.⁴ BGE believes that investor clarity can be achieved while also respecting the other assessment criteria such as EU compliance, consumer value, system need and simplicity through our proposed two-auction approach to SSFA.

2. BGE’s Proposed solution for SSFA HLD – two auctions (long term and daily with price floor ranges)

Against the above context we must achieve clarity in the system services design in a manner that informs potential revenue outcomes. Clarity and stability of pricing outcomes will in turn lead to optimum levels of competition materialising in the market for the ultimate benefit of the consumer.

Our proposals below are to get us over the clarity, and stability, of pricing forecast hurdles. Our proposed high-level solution we expect would enable investors to better forecast *potential* revenues from system services suitable to their technologies. At the point in time in future where it is clear that we will have the appropriate mix of flexible technologies that will provide system services suitable for a system with SNSP of 100% and that our security of supply situation in Ireland is under control, then consideration can be given to whether standalone auctions in specific or all system services would be the most cost-effective and secure solution for investors and consumers. We do not believe however that we are at that point yet.

BGE proposes that:

- i. A form of long-term “availability for capability” type payment should form one part of the solution for each system service. It would be determined via an auction. Auction winners would be the SS product providers. The payment should be for a specific period of time that aligns with the duration over which investors need reasonable forecasting – we anticipate this would have to endure from 2024 to at least 2030. The capability paid for would be the ability of the unit to in real time provide the volume of specific system service that was procured in the auction, akin to the DS3 assessment on capability today. This would go some way towards satisfying investors’ need for a level of price forecast-ability on which to build investment cases and help mitigate continuation of the current investment gap; and
- ii. A “utilisation” type payment. This could be where the EU requirement around daily auctions could be complied with. E.g. the “utilisation” payment could represent conclusion of the full contract for the service which could be concluded day ahead. Practically, parties both committed under the “availability for capability” auction for the service and parties not previously committed would be permitted to bid into the “utilisation” auction. Parties would receive payment for the volumes cleared in this auction determined at the price this auction clears at. Those who do not have an availability commitment payment would also be entitled to earn the full utilisation fee at least for volumes they clear in the utilisation auction. We envisage the daily/ utilisation auction would need a ‘range’ of price floors (depending for e.g. on product and renewables output scenario) to provide the price signal needed. Volumes clearing in the utilisation auction would be paid the clearing price on the volumes they cleared in the auction that they are “capable” of providing in real time (akin to the current assessment under DS3).

Importantly, payment under the utilisation auction would not be dependant on having cleared in the availability auction. Nor would payment under the availability auction be dependant on having cleared in the utilisation auction so as not to undermine the price forecast-ability investors need.

⁴ SEMC decision 30 March 2021, <https://www.semcommittee.com/sites/semc/files/media-files/SEM-21-021%20System%20Services%20Future%20Arrangements%20-%20Decision%20Paper%201.pdf>

As is the case with several UK DSOs, it is possible that the “availability for capability” payment would be higher than the “utilization” payment for system services that are very predictable (like reserves). For less predictable services or services required after specific fault events for example the level of payment might be higher in the utilization auction – this is where the detailed design of the auction will be important to determine if the design can or should influence the weighting of payments needed; perhaps it is simply dependent on the volumes determined as needed under both auctions which hinges on the TSO insights we refer to in Section A and in point (i) below. With a view to enabling the price forecast-ability we discuss in our context section above, it is necessary in our view to consider a range of minimum prices a unit type can expect to earn during certain scenarios in the utilisation auction. This range of prices could vary for a product depending for example on whether a lot more volumes in the service are required to develop and depending on whether the wind forecast is high/ medium/ low wind. E.g. the price floor could be higher when the wind is high or vice versa depending on the nature of the product.

To make the above work optimally, we need a number of things including:

- i. A clear view from the TSOs of the volumes of the respective products they need for the year 2030 and in between, the volumes of those products available today, locations and whether new providers are required for products. This would inform for example which products might lead to or outturn (via auctions) higher “availability for capability” prices than others. It is possible that the auctions will lead to a discernible weighting of payments as between the ‘availability’ and ‘utilisation’ payments and they could work to achieve the balance in technology types and overall volumes required for 2030 avoiding the need for any of the ‘layering’ that the RAs refer to in the consultation⁵. Where a service is oversubscribed for example, the availability payment would likely be lower reflecting the volumes and competition available. Over time, as competition evolves in a respective system service, it may be the case that the RAs would see a move away from the “availability for capability” payment but we do not believe this is a possibility at present for any service given the investment gap. These TSO insights are therefore needed as early as possible.
- ii. To understand whether there will be an overall quantum of expenditure the RAs expect will be available for the SSFA until at least 2030 and if yes, what that is and a commitment that the quantum will not be arbitrarily reduced. BGE is concerned about an expenditure quantum given the influence it has had to date under DS3. DS3 today is subject to a €235m/year cap and a consultation in summer 2021 sought to reduce tariffs to stay under the cap which is negatively impacting investor confidence. Ideally, with competition, we should not need caps or floors in this market but given the highly constrained and concentrated nature of the Irish market we may need to consider the role of both caps and floors in the market to provide a balance between investment certainty and customer protection.
- iii. A commitment to maintaining the SSFA design until at least 2030 with 5 years’ notice of any potential changes to that design. The decisions in capacity that will help achieve 2030 decarbonisation targets can be expected to be made in the coming 6-24 months in particular and will be based on revenue expectations under capacity and system services markets from 2024-2030 (*potential* revenue earnings beyond this could be extrapolated from earnings assumed earnable by 2030).
- iv. On EU compliance, it is our view that one arm of the payment design (the “utilisation” fee) could be structured so as to ensure that compliance with the EU requirement for daily auctions is complied with. We would welcome the RAs’ view on whether the derogation option⁶ under the EU law might however be sought as we note the time period for derogation is only three years which in our view does not provide a long enough duration for clarity in revenue forecast-ability for investors. Our preference is to use the ‘utilisation’ auction to achieve compliance and avoid the need for a derogation.

In parallel with these arrangements the TSOs would be annually providing up to 5+ years’ ahead forecasts of system services needs/ volumes/ locations/ likely providers. BGE believes this information should be forthcoming as soon as possible. There are also several issues that need to be determined through the detailed design phase as outlined in our Section A executive summary section above.

We realise and agree that no market can “guarantee” or give full certainty of what revenues can be expected to be earned from it over time. In our discussion above we have demonstrated how unless there is some method of extrapolating what revenues a unit could reasonably earn from system services for a period of at least five years into the future (from when those revenues can start being earned) we are going to see a continued gap in investment and increasing pressure on existing efficient units that will also have a role to play in delivering system services needed for 2030 resulting in a shortfall of the technology mix we need for 2030.

⁵ In terms of the mix between daily auction contracts, bilateral or competitive procurement for longer periods or fixed volume procurement to enable investment as outlined by the RAs in their consultation

⁶ Article 6(8) Electricity Regulation 2019/943

Finally, enabling investors to bid with reasonable predictability a level of system services revenues into capacity auction bids should lead to a system that is more flexible than it would otherwise be. The earlier we start seeing capacity auction bids reflecting a higher element of system services revenue the better. Ideally the HLD decision would be made by end 2021. Practically speaking if a unit is bidding into a T-4 capacity auction it will need strong foresight of the potential system services revenues it can expect for at least 4 years' time for a reasonable period of time thereafter if the SS and capacity market are to work together to deliver capacity that is system adequate. On that basis we believe the SSFA should remain in situ until at least 2030 to achieve decarbonisation targets and at least 5 years' notice of changes to the design needs to be communicated and consulted on in advance of the change.

C. BGE's preferred auction design for 'daily' i.e. 'utilisation' auction and related market design elements

BGE's proposed two-auction market design above essentially expands on the RAs' proposal and the second auction ('utilisation market') we refer to is akin to the RAs' proposed daily auction. With that in mind, our comments below relate to the proposals outlined in the RAs' consultation but we would like to be clear that we do not believe that this market on its own will work to deliver the necessary investments in Ireland – it will only work if accompanied firstly by a long term availability market/ auction. More detailed insights are provided in answers 11-18 of our Appendix.

BGE's view on the auction process, commitment and payments is:

- The second/ utilisation auction would be akin to that outlined as 'Option 1 Post-DAM' by the RAs in their consultation. Our preference is that the price/ volume auction information would be submitted by participants post DAM results and the auction would clear between DAM results and IDA1.
- With regard to commitment obligations, the commitment for a unit clearing in the auction should be to deliver the auction cleared volume in real time, verified by its capability to provide the system service akin to today under DS3. Regarding PNs, our understanding is that a unit's PN based on its ex ante position should not be changed unless the PN was at a level that meant in real time it would not be seen as being capable of providing the service. Otherwise it misleads the TSO on the system balance and introduces unnecessary imbalances for a participant. We request clarity that our understanding as stated here is correct, in answer 12.
- Regarding payments, we believe that on an ex-post basis a transparent "real time capable" stack of volumes should be determined and compared to the stack of volumes that cleared in the ex ante day ahead SS auction:
 - Where a provider's volumes match between the SS auction it cleared in and the ex post stack, that provider would be paid at the SS auction clearing price.
 - If a unit does not clear in the SS auction but in real time it is dispatched to provide the service, that unit should be paid for its provision of the service. As to what level the unit should be paid at is a detailed design matter. The issue of market power and potential for its abuse will be relevant here as well as ensuring that we avoid perverse incentives for staying out of the SS auction.
 - For a unit that does not clear in an ex ante market, clears in the SS market but is not dispatched further consideration again would be needed at the detailed design stage to determine if measures need to apply to mitigate any perverse incentives of such an outcome.
- BGE strongly advocates for minimisation of TSO discretion in how they operate the system in real time. We would welcome more insight on the influence or not of PNs for units with no ex ante position on the dispatch decisions taken by the TSO if any? It is a matter in our view that should be addressed also through the detailed design.

BGE's view on penalties, scalars and firmness is:

- We believe the approach to penalties needs revision. We have concerns about one off penalties. We understand the TSOs need to incentivise delivery on committed (cleared) volumes but it is critical the penalty design does not render investment too unpredictable as to undermine project finance. The current performance scalar is overly penal whereby it can take 6 months before a unit is receiving its full price for a product again after a single poor performance event. We suggest ex post assessment over a period of months as opposed to after a single event and if regular non-performance occurs any implications should apply in the future with considerable notice to allow for financial planning. We understand the rationale for

moving away from the temporal scarcity scalar but believe further consideration for example around whether its removal should be correlated with SNSP improvements would be pragmatic. In general we would welcome more detailed discussion on the scalars and their impact once the HLD of the new SSFA is understood so as to ensure no perverse incentives in terms of auction participation or negative implications that could undermine investor clarity would arise depending on the chosen HLD. Scalars are a matter in our view for the detailed design before the exact type of scalars are locked in.

- In answer 16 in our appendix we address our view on the RAs' suggestion around introducing the concept of firmness into the SSFA reflective of the principle of usability. In essence:
 - We cannot support the concept of considering that all providers have non-firm access as this would see all providers being subject to a high level of TSO discretion in operations which is not currently as transparent as it should be. Furthermore it would lead to more volatile and less predictable or forecastable revenues, undermining the investment signals SEM so badly needs and putting 2030 targets at risk of being missed.
 - We do not support any retrospective changes to revenues earnable by existing units operating under non-firm access as it would send a locational signal after investment has been made and after the point at which an investor can react to the signal. BGE's preferred approach to creating locational investment signals is through the grid connection process.
 - We also do not support seeking to limit commercial decisions on SS auction participation depending on your firmness level for the same investor confidence and price forecast-ability reasons discussed above.
 - Overall we have concerns that given most new parties are being connected on a non-firm basis it may be some time before the TSO can take on the risk of constraints or curtailment and so it might dampen appetite for investment.
 - In any event we do not want to unduly dilute the signals for grid investment and the need for grid solutions that come through DBCs. Unless evidence is shown that such an approach would not undermine transparency in the performance of the grid (DBC) and would not deter much needed flexible capacity investment BGE does not believe the concept of correlating SS payments with a unit's level of firmness merits further consideration.

Overall, we ask the RAs to consider the SSFA design process from the perspective of today's investment environment and the need for price forecast-ability to arise across all system services. We urge the RAs to consider our two-auction proposal with a view to enabling the energy transition and bring forward the flexibility we need to cater for 100% SNSP while simultaneously influencing the flexible nature of capacity being procured in the capacity auctions.

I hope you find BGE's views and suggestions helpful. Please do not hesitate to contact me should you wish to discuss any of the above or answers in our appendix below, further.

Yours sincerely,

Julie-Anne Hannon
Regulatory Affairs – Commercial
Bord Gáis Energy

{By email}

D. Appendix – BGE answers to questions in consultation

Q1: Do stakeholders consider that the commitment to putting these arrangements in place on an enduring basis, at least to 2030, represents sufficient certainty of process?

The new SSFA, which should comprise a) an 'available for capability' auction-based payment and b) a 'utilisation' auction payment, needs to remain in place until *at least* 2030 in our view. As outlined in our cover letter, there is a major investment hiatus across the system services and capacity markets at present. This consultation is an opportunity to close the investment gap to an extent. To determine investment cases investors need a long-term price signal. While no market can guarantee prices, there should be scope for investors to relatively accurately forecast prices for a reasonable period into the future. At least 5 years' notice of possible future market change beyond this would be required so as not to undermine investment decisions. There is perhaps a case therefore that the SSFA should remain in place until ~2034. Our proposal in Section B of our cover letter we believe provides an outline for a future HLD which could be enduring although the parameters within it could change over time.

Q2: What are stakeholders views on the options and recommendations presented for qualification/registration? Are there further options that may be considered?

BGE favours option 2, a "rolling application process". Having the application window open all year around with an approval process that starts once an application is received and is approved within certain timelines would in our view maximise the opportunities for new and existing providers to prove capabilities and onboard and trade customer and unit flexibility as soon as possible. It is possible that some service provider types could be on-boarded much quicker than others so we would also support a reduced timeline (under 90 days) from the date of application to the point at which the provider could participate in the system services market, where practical.

Q3: What are stakeholders views on the proposed formalisation of the QTP?

We welcome the proposed formalisation of the QTP process. The approach put forward whereby the TSOs would issue an annual call for evidence each year to allow for industry, new entrants, and new technologies to input into the design of the trial, followed by a TSO led consultation on the trial design which would be approved by the SEMC greatly improves the transparency of the process. It would be helpful too if clear timelines for the duration of the trials were included at the design stage. The TSO milestone and end of trial reports will be important from a market information and development perspective and should form part of the stakeholder engagement annual assessment of the SO.

Q4: What are stakeholders views in terms of the introduction of a single System Services Code?

Q5: What are stakeholders views on the options in terms of governance of rules changes?

Q6: Do stakeholders have views on the potential to amalgamate different Panel meetings?

BGE takes these three questions together. As a starting point, the current array of documentation relevant to DS3 and their governance needs to change. We support progression of a single System Services Code. There is a need to consider how that Code will also sit alongside the DSO flexibility market arrangements that are progressing presently also and the role of the DSO in any determined Panel to govern the Code.

The current TSO a) regulated arrangements contracts, b) Protocol Document with technical requirements and, c) market ruleset are unwieldy as a rule set. The opportunity for market participants to suggest changes/improvements to these rules is limited and needs to change. Option 1 does not appear to offer sufficient additional flexibility in the governance arrangements that would enable market participants and indeed the RAs to have more of a say or suggest changes in rules that may not be operating well or properly. Option 2 – a System Services Code Panel – is closer to BGE's vision of how the governance process should work. We believe that a System Services Code Panel akin to the Trading & Settlement Code balancing market modifications committee should be considered. In this regard we note that there is no reference to panel members in the System Services Code Panel 'voting' at each meeting which we believe is useful and a clear indication as to parties' stance on issues which the SEM Committee can take into account when deliberating on decisions. Voting is a task that should be assigned to any such Panel in our view.

BGE notes the RAs' reference to the cost of running rules modification panels. We are open to the suggestion to merging the System Services Code Panel and another existing modification process such as the Grid Code or T&SC Panel. It is important however that the Panel with which a System Services Code panel is merged does

not suffer in terms of having issues heard and matters voted on, particularly at the start of the new SSFA in 2024 when we can expect several new “bedding in” modifications to appear on the agenda given previous market experience under the I-SEM project. To mitigate any such impact, meetings may need to be scheduled more regularly during the bedding in phase of the new SSFA compared to the regularity of meetings that may be required over the medium to long term.

Q7: What are stakeholders views on the funding arrangement proposals?

BGE believes that Option 1 (the current approach of paying for system services through DTUoS) has merit but we can support Option 2 (an annual supplier-based charge) on merit also. We believe Option 2 may introduce more transparency if the cost of system services appears as a line item for suppliers. There may be a case to move towards Option 3 (Trading Period Supplier Based Charge) over a much longer period of time but at present, from a supplier perspective, it would introduce significant day to day volatility and changes suppliers’ risk profiles and cost of managing risk for consumers. While there remains an element of volatility with both Options 1 and 2 we believe the volatility introduces less day-to-day risk and less cost of risk management for customers at a time when the costs are uncertain and the ability to react to costs is uncertain. We cannot support an approach that would lead in our view to potential severe risk implications, and knock on costs, for customer books which we would see arising under Option 3.

Q:8 What level of involvement should the DSO/DNO have in the governance process?

Q9: How should the interactions with distribution connected parties be governed?

Q10: Are there any further considerations for the High-Level Design of the Governance Arrangements?

BGE takes these three questions together.

We agree with the RAs that the DSO systems need to be adequately represented in the governance process. Distribution connected distributed generation and demand will have an increasingly important role to play in meeting our decarbonisation targets. They will play an important role in unlocking value from the distribution system to help meet 2030 and overall net zero targets. Ensuring DSO level capabilities are catered for in the SSFA at TSO level will also help unlock this value.

What this looks like in practice is difficult to decide on definitively at this HLD stage in BGE’s view until we also understand what the design at the DSO level will look like which the DSOs have recently commenced a consultation on. BGE is engaging in that consultation process in parallel to this consultation.

In order for the grids at transmission and distribution levels to operate smoothly and complement each other we believe that the DSO/ DNO needs to be heavily involved in the qualification and procurement/ provision of services across the DSO and TSO system. In principle we believe that it is sensible that distribution connected providers would engage with the DSO and transmission connected providers would engage with the TSO respectively, for qualification and procurement in either SO market. Where there are distribution/ transmission connected providers looking to also qualify and participate at the TSO/ DSO level for system services, this should be permitted and facilitated where possible and practical by the SO in question.

The Provider-led option appears too onerous especially when one considers the volume and size of distribution connected customers that will be participating in these markets in time. A hybrid of the DSO/ TSO led type approaches may be preferable. We request however that the matter of appropriate and pragmatic interactions between both SOs’ markets that achieve a balance between a) maximising the services of each system for the benefit of both systems and customers, while b) minimising the burden on customers in interacting in either market, is revisited once further insights on the governance under the DSO programme on which ESNB is currently consulting are available. BGE is responding to that DSO consultation which will also address governance, separately.

Q11: What are stakeholders views on the Auction Design options and SEMC Recommendation?

Q12: Are there any further considerations in terms of the Auction Design options?

BGE takes these two questions together.

As outlined in Sections A and B of our cover letter, BGE believes that the driver for finalising the optimum SSFA HLD that will remain in place until at least 2030 should be designing a market that has reliable long term price forecast-ability to ensure investor clarity materialises that enables the development of robust business cases. For BGE, this could be achieved by a long-term available for capability auction-based payment coupled with an

auction-based utilisation payment. Otherwise, without reasonable price forecast-ability of system services, we are at high risk of missing our 2030 targets to the ultimate detriment of the end consumer.

Our comments below relate to the proposals outlined in the RAs' consultation but we would like to be clear that we do not believe that this market on its own (standalone auctions) will work to deliver the necessary investments in Ireland – it will only work if accompanied firstly by a long term availability market/ auction. In terms of what the auction that would determine the *utilisation payment* looks like, BGE's preferred auction is closest to that conveyed through Option 1 – Post DAM Day Ahead System Services (**SS**) Auction. Our view on how the auction would work is as follows:

- **Step 1:** TSOs publish forecast volumes for each SS for which daily auctions are held. Forecast volumes are published before the close of the DAM covering all periods throughout the trading day.
- **Step 2:** TSOs publish updated volumes following the closure of the DAM, after the DAM results are known and published.
- **Step 3:** Participants submit a set of offers for each trading period including volumes and prices for each service. The bid gate closure is at a defined time following the publication of the DAM auction results.
- **Step 4:** The first SS auction will be held before the first intraday auction (IDA1). A single clearing price for each auction product applies.
- **Step 5:** The TSO publishes clearing price and volume results after each auction.
- **Step 6:** Market participants are responsible for reflecting the outcomes in their PNs where appropriate.

Under BGE's proposed SSFA HLD outlined in our cover letter, the choice of bidding into the "utilisation" auction would not be limited only to those who obtained an availability payment. We anticipate that where a scarcity arises, this would be reflected in the auction volumes and auction price. Headroom may materialise whereby volumes need to be procured in the auction above the volumes for which adequacy payments are being made. It is possible also that less volumes would materialise in the utilisation auction than were cleared in the availability auction. In order to not lose the price forecast-ability element of the auctions however, a range of price floors possibly determined based on the shortage of volumes in a product, need for new providers, and level of renewables output (high/ medium/ low) at the time. Such floors should apply in the utilisation auction for a reasonable period of time at least until the RAs are satisfied based on transparent criteria that sufficient volumes and range of technologies exist for a service(s) and the investment hiatus has ended.

We seek clarity on our understanding of the PN aspect of the proposed Option 1 by the RAs, however. The RAs suggest that market participants are responsible for reflecting the outcomes of SS auctions in their PNs. If this was true in every case, i.e. if a party had to adjust PNs for each SS result, it could lead to unnecessary imbalances and give the TSO an inaccurate view of the length of the system imbalance. We therefore ask the RAs to confirm that PNs should only be adjusted to reflect system services auction outcomes when a provider's maximum available generation minus their PN volume is greater than or equal to their system service auction cleared volume? This approach is optimum in our view to ensure that participants are not double paid SS and energy revenues and avoid unintuitive imbalance outcomes.

Regarding the SEMC's concern about a possible market power issue with having sight of DAM results before entering SS auction bids, BGE does not agree with the suggestion that perhaps price auctions could be held before the DAM opens with the volume auctions held post-DAM closure. BGE believes the price-volume auction should occur simultaneously between the DAM energy results and IDA1. If a unit does not obtain a DAM energy position, it should still be allowed to bid into the day ahead SS auction. It can be expected though that the bid of a provider with no ex-ante energy market position would be substantially less competitive than that of providers that win a DAM energy contract. If competition for a product is low on a day then any out-turning high SS auction prices are a signal that more providers are needed for that service. We cannot support the consultation suggestion of requiring submission of prices pre-DAM energy market gate closure and submission of volumes at the post-DAM energy auction stage – we do not believe that would be conducive to investment signals. It would be an unnecessary regulatory intervention in our view.

BGE does however recognise it is possible that market power potential and scope for its abuse may arise. Depending on the final HLD the potential for various market power issues to arise varies and we urge the RAs to revisit the market power potential issue in full in the detailed design. Please see Section A above for issues that in our view need to be addressed at the detailed design stage in this regard. The market power potential abuse concern in our view is central to who should get paid what and on what volume for system services. In order to determine the payments, we believe that a type of "ex post capability stack of volumes" should be determined. In essence, the volumes the TSO used in the actual post-DAM system service ex ante auction should remain static and the ex post stack should fill the auction-determined volume with who from the cleared

auction had volumes that were capable in real-time of providing the service (i.e. capability assessed akin to today's assessment under DS3). We envisage payments working as follows:

- All service providers that obtain a cleared volume in the day ahead SS auction and which ex-post are determined as having had the capability (akin to today under DS3), should be paid at the clearing price determined in the post-DAM SS day ahead auction.
- If a unit does not clear in the SS auction but in real time it is dispatched to provide the service, that unit should be paid for its provision of the service at a level determined in the detailed design stage. The issue of market power and potential for its abuse will be relevant here as well as ensuring that we avoid perverse incentives for staying out of the SS auction. If there are two or more providers in this position then depending on the circumstances the volumes attributable to each that should receive payment could be pro-rated but we would welcome further discussion on the fairest, most transparent approach to these providers.
- For a unit that does not clear in an ex ante market, clears in the SS market but is not dispatched consideration again would be needed at the detailed design stage to determine if further measures need to apply to mitigate any perverse incentives of such an outcome.

BGE strongly advocates for minimisation of TSO discretion in how they operate in real time. We would welcome more insight on the influence or not of PNs for units with no ex ante position on the dispatch decisions taken by the TSO if any? PNs and their influence on capabilities is a matter that should also be addressed through the detailed design.

BGE sees Option 3, the ex post balancing market solution as being very unpredictable and lacking transparency. Non-energy actions would likely play a key role in market and pricing outcomes and non-energy action decisions are currently regularly not intuitive or transparent which is not conducive to the price forecast-ability investors need to help end the investment hiatus. It could also severely dampen the signals for grid improvement needs/ solutions provided by dispatch balancing costs (DBC) which would not be in the longer-term interests of the consumer or optimal market functioning. The likelihood of Option 3 operating in a transparent manner whereby possible system service revenue outcomes could be simulated is lowest of all the options in our view, particularly considering the current lack of transparency around how actions taken for energy and non-energy reasons are determined. We cannot support Option 2 (Pre-DAM system services) as we see it as possibly undermining the liquidity of the DAM energy outcomes and is reflective of a market where pricing outcomes are arbitrarily influenced by local grid and congestion issues. These outcomes could feed through into day-ahead market coupling and render day-ahead market prices much less predictable than they are currently further widening the current investment gap in SEM. The risk of a constraint action or a unit's location impacting a unit's auction committed SS volumes and SS payments (or possible penalties) should sit with the TSO

Views sought on timing of the auction though options will be better developed in a next paper on auction format.

The RAs' consultation references auction type timings. BGE does not favour a combinatorial auction given the complexity involved and the high likelihood of low transparency such an option may result in. Lack of transparency is not conducive to investor certainty. We understand that the issue will be fully addressed at the next stage in the consultation process but currently we are most disposed to further considering multiple sequential auctions or multiple simultaneous auctions if bundling of reserve products might be considered.

Q13: What information is required to get a full view of the volumes requirements for System Services?

We agree with the SEMC's proposal that the TSOs should produce annual reports on the long-term system services requirements as well as frequent publications of shorter-term forecast requirements. Ideally the first of these reports should be published as soon as possible and in any event by Q1 2022. The range of information required applies to all system service products – it is insufficient to have the information for only a portion of the products as investors build business cases on the suite of system services as opposed to one portion of them.

The information required should include a view on:

- i. the full range of products needed (including if some services will end before 2030 and if new ones will be needed, when)
- ii. volumes of each product needed in a trajectory to 2030 and beyond
- iii. where those volumes are most needed and
- iv. the types of technologies expected to be able to provide each product as well as the expected shortage of volumes from technology types if any that needs to be filled to meet 2030 targets.

The information should be updated each year and look out at least five years' ahead as we get closer to 2030 (e.g. in 2026 the report should have an outlook to 2031 and so on).

Q14: What are stakeholders views on the development of Secondary Trading of System Services?

While we support the concept of secondary trading of SS in theory, we believe that this is a second order design issue. If the RAs consider our proposed two-auction SSFA HLD for further development depending on the products and auction timings the need for secondary trading to manage risk will vary. It should become more apparent once the HLD is decided upon and the TSO insights on products to 2030 are available, to what extent spending time on designing a secondary trading market for SS is warranted.

Q15: What are stakeholders views on the proposals regarding Commitment Obligations and Scalars?

Commitment obligation

BGE's view is that under both the availability and utilisation auctions, the service provider would be committing to being capable in real time to provide the volumes they cleared under each auction. Whether a unit performed as contracted under its availability and/ or utilisation auction outcome should be assessed for both on the unit's capability to provide the respective service in real time akin to how it is assessed for DS3 today.

BGE requests clarity about the SEMC's proposal about making the system service available to the TSO at their FPN. We believe that providing the system service at the FPN could unnecessarily mislead the TSO as to the expected physical running of units and the length of the imbalance on the system and could also cause unnecessary imbalance situations for service providers. Please see our answer to question 12 above where we discuss the issue in extra detail but in essence, requiring system service providers to reflect their commitment (post-DAM SS day ahead auction outcome) in their PNs and FPN should only apply when a unit's maximum available generation minus their PNs is greater than or equal to their system service committed volume. We request confirmation in the decision that this is the intent of what the RAs foresee.

Penalty

We believe the approach to penalties needs revision. We understand the TSOs need to incentivise delivery on committed (cleared) auction volumes, but it is critical the penalty design does not render investment too unpredictable as to undermine project finance. We have concerns about one off penalties. Furthermore, the current performance scalar is overly penal whereby it can take 6 months before a unit is receiving its full price for a product again after a single poor performance event. We suggest consideration in the detailed design of ex post assessment over a period of months as opposed to after a single event and if regular non-performance occurs any implications should apply in the future with considerable notice to allow for financial planning or revision of capabilities.

The calculation of any penalty should be pre-determinable and highly transparent well in advance of committing volumes under an auction. We ask that the penalty design is determined in further detail in the detailed design stage.

Scalars

We ask for further consideration of the appropriateness of scalars in the detailed design stage – performance, product and locational scarcity. On the face of it the temporal scarcity scalar should reduce as SNSP increases but there may be merit in considering its gradual reduction over time in line with the SNSP trajectory. Overall the appropriateness and utility of all scalars can be better decided on once the overall HLD of the new SSFA is understood to ensure no perverse outcomes can arise. Please see our comments under 'penalty' immediately above also.

Q16: Do Stakeholders have views on the introduction of the concept of Firm Access to the System Services market?

BGE disagrees with the concept of applying a firm access approach to SS procurement reflective of the principle of useability. Please see our cover letter and answers above where we outline how BGE supports continuation of payments for system services on the basis of a provider's capability in real time to provide the volume of the service it committed to (i.e. its cleared volumes in auctions). Whether a unit has firm or non-firm access should therefore be irrelevant. There should be no limitation on whether a unit can obtain an availability payment or enter a SS auction depending on whether the unit has firm or non-firm grid access. The risk of a constraint action or a unit's location impacting a unit's auction committed SS volumes and SS payments (or possible penalties) should sit with the TSO.

As explained in answers 11 and 12 above, if a unit is dispatched in real time from balancing market bids, and an ex post assessment shows that the unit's volume was in fact used to deliver the service capability then that unit should be paid. The level at which it should be paid however is directly related to how the auctions work, their timings and whether the unit in question has some market power. We ask that the issue is re-visited in detail at the detailed design stage to ensure perverse incentives around auction participation and bidding approaches are mitigated.

As we understand it the majority if not all grid connections at present are being made on a non-firm basis. Treating non-firm units less favourably therefore, even if for a specific period of time, will increase the cost of capital for investors at a time when urgent investment signals and price forecast-ability are necessary. Acknowledging the RAs' view that less favourable treatment for non-firm units could be a locational signal, we note that existing investors may be subject to non-firm access and so this is a retrospective negative impact for them which we could not support, particularly as after their investment has been made there is little chance to react to locational signals. BGE has a stated preference for providing locational signals at the connection process stage, before connection applications are made, whereby parties are aware of the cost of connecting generation and demand in an area based on the capacity of the grid in the area. In an area that had excess generation the cost of connecting demand would be lower than the cost of connecting generation. In an area that had excess demand, the cost of connecting generation would be lower than the cost of connecting new demand.

BGE also regrets the risk of diluting the grid investment/ solution signals that are determined via DBCs, which signals would be lost or at least materially reduced, through the introduction of a concept of 'firmness before payment' under SSFA. The TSO PR5 incentives around reducing DBCs and improving constraints would also be greatly undermined by the concept. Unless evidence to the contrary is shown as to how such an approach would not undermine transparency in the performance of the grid (via DBC signals) and would not deter much needed flexible capacity investment, BGE does not believe the concept merits further consideration.

We understand that there may be a concern with the cost of making system services payments to units that in real time cannot provide the service due to constraints. This is a function of the highly constrained nature of our grid. Unless the risk of a constraint or a unit's location, having a negative impact on SSFA participation and payments, sits with the TSO the investment needed in flexible capacity to meet 2030 targets will not materialise in our view. As outlined in our cover letter we must necessarily prioritise the need to achieve 2030 decarbonisation targets, which in our view must necessarily see "investor clarity" being achieved while balancing it with the other criteria being used to assess SSFA design. There will be a cost to decarbonisation, but we are in favour of practical minimisation of that cost where appropriate. One area where potentially 100s of millions of spend could be avoided for example, without hindering RES roll-out or without undermining business cases for investment in flexible capacity needed to meet 2030 targets, is BGE's proposed interpretation of articles 12 and 13 of the CEP around curtailment compensation.⁷ The RAs are yet to issue a decision on this matter and we urge the RAs to consider BGE's proposed holistic interpretation of the EU legislation.

Q17: Do stakeholders have views on layered procurement of System Services? What approach could be taken to support this?

We welcome the RAs' recognition that procurement over a longer timeframe than daily (weeks to months or months to years) may be needed for investor clarity. SEMC recognise too that to provide the SS needed, optimisation of existing technologies as well as investment in new technologies will be required. We note too the RAs' view that investment will need to be targeted and linked to increased operational capability and that an approach of procuring some services across several time-periods may also be taken to promote a mix of technology solutions, mitigate market power and facilitate transition to daily auctions. BGE believes its proposed two-auction solution can achieve the right balance in terms of providing the price signals over longer timeframes for all system services as well as achieving EU compliance in consumers' interests.

The RAs' view presented in the consultation correctly in our view hinges on the information from the TSO on system services needs to 2030 that we have addressed in our cover letter and in answer to question 13 above. These insights from the TSOs are central for example to determining a suitable range of price floors for the daily utilisation auction depending on the level of volumes needed in the product and renewables output (high/ medium/ low) at different points in time. We urge the RAs to avoid bilateral and fixed term contracts targeted at

⁷ Bord Gáis Energy response to Implementation of Articles 12 and 13 of Regulation 2019/943 in relation to Dispatch and Redispatch, SEM-20-028 Consultation <https://www.semcommittee.com/sites/semc/files/media-files/SEM-20-059%283%29%20BGE%20Response%20to%20SEM-20-028.PDF>

a small number of providers or for certain services given that an alternative competition-based approach to procurement of all services for an array of technologies is possible in our view (BGE's two-auction proposal). Grid devices and reinforcements alongside alternative competitive procurement options should be considered where competition for a product is low.

We ask the RAs to consider our proposed solution outlined in Sections A and B of our cover letter and our view on how it could be adapted over time. We believe the proposed solution could become enduring and also apply when there are sufficient volumes across all services and a sufficient array of technologies in services needed when SNSP is at 100% as well as when renewables output is low. We believe however that applying standalone auctions at this point in time, without a long-term availability market/ auction, will not work given today's investment environment.

Q18: Are there any further considerations in terms of Market Design?

Between our cover letter and answers to questions 12-18 above in particular, BGE believes that the majority of the challenges in terms of SSFA design have been addressed.

Our main contention is that the discussion on the SSFA HLD must necessarily start with today's investment environment. There is an investment hiatus and the gap will only widen if price forecast-ability does not start materialising very soon in the system services market. The RAs acknowledge in the consultation that there is an increasingly central role for system services in the market including a need for clear economic signals so overall efficient outcomes across, energy, system services and capacity markets are achieved. However, from what is outlined in the consultation, if standalone auctions for any products are pursued we believe we risk the investment gap widening and are at high risk of missing 2030+ targets.

We outlined in our cover letter the approach investors take to building investment cases. With declining energy market revenues being a factor of a high-RES market, stronger investment signals must come through the capacity and system services markets. Capacity market auctions are failing to deliver capacity. Investors are no longer building reasonable SS revenues into business cases from the early to mid-2020s. While changes in the capacity market need to occur, we have focused in this response on what changes need to and can occur under the system service design. Our proposed solution, a combined availability + utilisation payment (two auctions) approach, assessed in real time on capability akin to DS3 in our view can achieve the objectives of investor clarity, EU compliance and competitiveness for consumers as well as being simple, transparent, accurate, aligned and adaptable to system needs over time. The TSOs' insights on product requirements for 2030 will help achieve the system needs criterion and overall we urge the RAs to consider our proposal with a view to enabling the energy transition and bring forward the flexibility we need to cater for 100% SNSP while simultaneously influencing the flexible nature of capacity being procured in upcoming capacity auctions.