



SINGLE ELECTRICITY MARKET COMMITTEE

Procurement of Low Carbon Inertia Services (LCIS)

Decision Paper

SEM-23-002

11 January 2023

1 EXECUTIVE SUMMARY

In the Single Electricity Market Committee (SEMC) Decision Paper, on System Services Future Arrangements¹, the SEMC requested that the TSOs carry out an assessment on whether or not to initiate a fixed contract procurement process for zero carbon inertia sources and that the TSOs publish a detailed proposal for public consultation. Following this public consultation, the SEMC requested that the TSOs submit a Recommendation Paper to the SEMC. The TSOs have completed this process for Low Carbon Inertia Services (LCIS) and have issued the Regulatory Authorities (RAs) with a 'Recommendation on the procurement of LCIS' (Annex 1). The RAs have reviewed the TSOs' consultation paper², the responses received to this consultation paper³, and have engaged with the TSOs and industry members in order to ensure a comprehensive consideration of all the issues raised in the development of this decision. Based on this review the SEMC has decided to largely approve the TSOs' recommendations, subject to certain caveats.

The SEMC's decisions in relation to the TSOs' recommendations are summarised as follows:

- Phased approach – with the procurement of a targeted volume of 10,000 MVA.s in Phase 1 to meet LCIS requirements for 2026. Phase 2 (and further phases if required) will be subject to a later, separate consultation and procurement process (subject to RA decisions) to meet LCIS requirements for 2030. Phase 2 will commence as soon as possible in order to ensure 2030 targets are met.
- Volume and location - A targeted volume of 4000 MVA.s in Northern Ireland and 6000 MVA.s in Ireland shall be procured in Phase 1. Three zones have been defined in which the placement of LCIS shall be incentivised. Potential LCIS providers located outside of the three incentivised zones can still participate in the procurement process.
- Firm Access - Service providers with non-firm connections will take on the risk of network unavailability due to network limitations and will not be remunerated if unavailable due to network limitations.
- LCIS definition - LCIS comprises the provision of Synchronous Inertia, Reactive Power support and Short-Circuit contribution. The potential to include non-synchronous sources of inertia and providers of inertia that do not meet the zero Maximum Export Capacity (MEC) requirement should be considered for any further procurement phases.
- Technical requirements - A range of requirements is defined for the inertia constant, short-circuit contribution and steady state reactive power capability.
- Grid Code compliance - Grid Code requirements for LCIS providers will be largely based on synchronous generator requirements such as frequency and voltage operating ranges

¹ SEM-21-021

² Eirgrid and SONI websites – Consultation on Low Carbon Inertia Service (LCIS) Competitive Procurement – 22/06/22

³ Eirgrid and SONI websites - Consultation on Low Carbon Inertia Service (LCIS) Competitive Procurement – Submissions (4 confidential responses were also received).

and fault ride through requirements. A separate Synchronous Condenser Grid Code Implementation Note has been developed and published by the TSOs.

- Inertia capability requirements - Minimum inertia capability contracted is 900 MVA.s and maximum contracted is 2000 MVA.s at an individual connection point. Additionally, no more than 2000 MVA.s at a single transmission station will be contracted.
- Connection requirements - The LCIS provider shall connect directly to the transmission system or share a connection provided they can meet the technical requirements at the connection point and respect the contractual, regulatory and legal frameworks in place at the time of the procurement. A LCIS provider can only be connected at a transmission station controlled by the TSO⁴ at 110kV or above. The potential to include providers of inertia connected at a distribution level should be considered for any future procurement phases.
- Contract start date and duration - The earliest contract go-live date shall be the 01 October 2024 and the latest targeted go-live date shall be 33 months after the award of contract. All contracts will end 6 years after the latest targeted go-live date.
- Performance bond and milestones – A performance bond of 500 €/MVA.s or equivalent in £ will be required. Indicative performance milestones are provided and will be further detailed in the consultation on the contractual arrangements.
- Availability - Payment based on 97% annual availability requirement, exclusive of 15 days of planned outages allowed annually following notification to the TSOs.
- Application of scalars - A performance scalar will apply to incentivise the availability of LCIS and a product scalar will apply for LCIS providers with better reactive power and short circuit contribution capability. A locational scalar will also apply to incentivise the delivery of LCIS in the three zones identified by the TSOs. The scalars to apply are set out in the recommendations paper.
- Transmission network availability - The same Grid Code Outturn Availability arrangements applicable to conventional generation will apply to LCIS providers. If the Connection Offer identifies particular scenarios where the synchronisation of the LCIS unit is restricted, the LCIS provider shall be considered unavailable when the restriction is active.
- Network charges and licensing - The Transmission Use of System Charges applicable to a LCIS provider will be progressed independently of this procurement.
- Overall procurement process - Tenderers will go through a pre-qualification stage. Tenderers that make it through the pre-qualification stage will then receive a Request for Proposal and successful tenderers will be selected based on the cost per MVA.s / h.
- Grid connection/planning permission requirements - Full planning permission is required for tender submission (after pre-qualification) in both jurisdictions. In Ireland, successful LCIS tenderers who do not have a connection offer will need to be prioritised outside of the Enduring Connection Policy (ECP) process by direction from the Commission for

⁴ Where TSOs have operational control of the LCIS unit, meaning the possibility to instruct the unit to come on and off and to produce/consume reactive power

Regulation of Utilities (CRU). In Northern Ireland, the standard connection offer process arrangements will apply.

- Bid format - Bidding a price for LCIS in €/MVA.s per hour or £/MVA.s per hour. When developing the contractual arrangements, the TSOs will develop proposals for bid caps on providers' potential bids.
- Cost of energy - Cost of imported energy will be factored into the evaluation. It will be converted to a cost per MVA.s per hour and added to the bid received. When developing contractual arrangements, the TSOs, subject to RA approval, will develop a mechanism to penalise under-performance on declared energy consumption such that consumers are not exposed financially to the risk of higher consumption than what is declared at tender stage. When developing the contractual arrangements, the TSOs should include a requirement that providers bid into available competitive system services markets on the basis of cost-based bids. Furthermore, whilst the SEMC understands the reasons to include LCIS in transmission losses the SEMC requires that each TSO separately account for and report these costs as specific costs of dispatching the units. The TSOs should include proposals for this as part of the next stage in developing these arrangements.
- Price determination - Pay-as-bid pricing will be used.
- Funding Arrangements - the funding for the procurement of LCIS will be considered as part of the wider tariff review process.

This SEMC Decision Paper should be read in conjunction with the TSOs' Recommendation Paper. Following the publication of this Decision Paper the TSOs will conduct a separate consultation process in relation to the contractual arrangements surrounding low carbon inertia services, with SEMC approval required for any recommendations. Furthermore, a number of respondents cited the importance of having sight of the inertia volume requirements for any phase 2 procurement and out to 2030 on a year-on-year basis. In line with the High Level Design Decision Paper⁵ the SEMC requests the necessary volume analysis from the TSOs.

⁵ SEM-22-012 14 April 2022

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2 INTRODUCTION

DS3 stands for Delivering a Secure, Sustainable Electricity System. The aim of the DS3 programme is to meet the challenges of operating the electricity system in a secure manner while achieving the 2030 renewable electricity targets. With increasing amounts of variable renewable generation there is a need to ensure that the power system can be operated securely and sustainably. In order to reach these renewable targets and enable a greater amount of non-synchronous generation onto the system at any given time, services traditionally provided by thermal units, such as inertia, will need to come from new low carbon sources.

In the SEMC Decision Paper, on System Services Future Arrangements, the SEMC requested that the TSOs carry out an assessment on whether or not to initiate a fixed contract procurement process for zero carbon inertia sources and that the TSOs publish a detailed proposal for public consultation. Following this public consultation, the SEMC requested that the TSOs submit a Recommendation Paper to the SEMC. The TSOs have completed this process for Low Carbon Inertia Services (LCIS) and have issued the RAs with a 'Recommendation on the procurement of LCIS' (Annex 1). The RAs have reviewed the TSOs' consultation paper, the responses received to this consultation paper, and have engaged with the TSOs and industry members in order to ensure a comprehensive consideration of all the issues raised in the development of this decision.

Based on this review the SEMC has decided to largely approve the TSOs' recommendations, with some additional caveats. Outlined below are some of the areas that received the most critique from respondents to the TSOs' consultation and that the RAs sought additional information on prior to endorsing the TSOs' Recommendation Paper.

This SEMC Decision Paper should be read in conjunction with the TSOs' Recommendation Paper. The TSOs will conduct a separate consultation process in relation to the contractual arrangements surrounding low carbon inertia services, with SEMC approval required for any recommendations. Furthermore, a number of respondents cited the importance of having sight of the inertia volume requirements for any phase 2 procurement and out to 2030 on a year-on-year basis. In line with the High Level Design Decision Paper⁶ the SEMC requests the necessary volume analysis from the TSOs.

⁶ SEM-22-012 14 April 2022

3 KEY AREAS

The RAs questioned all aspects of the TSOs' Recommendation Paper and considered all the responses to the TSOs' consultation paper. Nevertheless, there were certain aspects of the TSOs' Recommendation Paper and the associated consultation responses that were of particular concern to the RAs and required some engagement with the TSOs to resolve. These areas are detailed in the sections below.

3.1 Distribution Connected Providers

Given the potential discriminatory impacts, the RAs were concerned about the fact that the TSO proposal ruled out providers of inertia connected to the Distribution system.

The TSOs' justification for the exclusion of distribution connected plant is that LCIS is less effective when connected at low voltages. While this may be the case, the RAs were cognisant of the fact that the TSOs had not explained why this difference in effectiveness cannot be factored into the procurement. For example, the same is true for the energy provision from distribution connected generation – leading to the application of "Distribution Loss Adjustment Factors". At this point, the TSOs had not explained:

- Why an approach similar to Distribution Loss Factors could not be used for LCIS; or
- Provided any consideration of the impact on the cost to consumers of excluding distribution connected providers.

The RAs required that the TSOs reconsider this area with a view to either:

- Allowing distribution connected providers; or
- Providing evidence against inclusion of distribution connected providers.

3.1.1 TSO Response

Regarding the Distribution Connected Providers, the TSOs highlighted two important requirements, LCIS Providers should be:

- connected at 110 kV and above, and
- connected to a station controlled by the Transmission System Operator.

The TSOs asserted that a connection at 110 kV or above is an important requirement as connections of LCIS to voltages below 110 kV will significantly reduce their reactive power support and limit the short circuit contribution to the transmission system. The TSOs stated that this is due to the additional impedance of the transformer between 110 KV and lower voltage levels. The TSOs further noted that that all the capabilities that will be displaced when reducing the minimum

number of large synchronous units are connected at transmission voltage levels. With the LCIS procurement the TSOs state they are looking at replacing these capabilities. The TSOs further went on to provide an example noting that, National Grid ESO who launched similar procurement exercises required a connection at 132 kV or above in Phase 1 and 2, and a connection at 275 kV or above for Phase 3.

Additionally, the TSOs argued that a connection to the distribution network, which is managed by the Distribution System Operator, could introduce challenges in terms of the control of the LCIS unit to synchronise/desynchronise, send reactive power instructions and manage outages. Given the above and the timeline to get these capabilities delivered, the TSOs strongly believe that these are important requirements.

3.1.2 SEMC Decision

Based on discussions with the TSOs and the above response the SEMC endorses the position in the TSOs' Recommendation Paper, in that, a LCIS provider can only be connected at a transmission station controlled by the TSO at 110kV or above. Nevertheless, the potential to include providers of inertia connected at a distribution level should be considered for any future procurement phases.

3.2 Inclusion of Reactive Power

The TSOs' recommendations paper makes it clear that the LCIS service will bundle together three different services:

- Inertia
- Reactive Power and
- Short circuit contribution.

Responses to the TSOs' consultation have highlighted issues with this, notably related to the inclusion of reactive power:

- Respondents have highlighted that not all plant that provides inertia can meet the TSO specified requirements for reactive power.
- The TSOs' proposal acknowledges that it may not be possible to access all the reactive power they require to be provided by LCIS plant – due to limits on the transmission system.

The TSOs have now modified their proposals to reduce the risks faced by LCIS providers, should those providers be required to build reactive power capability which cannot be used, due to transmission limitations. In practice, this transfers that risk to consumers, who could end up (over) paying for reactive power capability where:

- That capability cannot be used on the system.
- The costs of providing that capability could have been avoided in the design and construction of the relevant plant.

Based on the above the RAs requested that the bundling of reactive power with inertia be removed from the LCIS procurement requirements. The RAs asserted that any units providing reactive power could avail of the regulated tariff arrangements to be compensated for any reactive power provided.

3.2.1 TSO Response

The TSOs had concerns regarding the request to remove reactive power from the LCIS service. The TSOs stated that their intent is that LCIS will enable the TSOs to reduce the dependency on running large synchronous units and accommodate more RES on the power system.

In the TSOs' view, removing reactive power from the LCIS service is not economically efficient and risks not being able to fully realise the benefits of LCIS as:

- Reactive power capability is inherently provided by the synchronous LCIS technology the TSOs are proposing to procure in this procurement phase. From their discussions with an OEM, the TSOs' understanding is that additional cooling systems are required to obtain reactive power capabilities equivalent to a synchronous generator, but these represent less than 5% of the overall capital cost of the device.
- A lack of reactive power capability from LCIS devices would require alternative sources of reactive power to be procured. This could increase the risk of requiring continued running of conventional synchronous generation and/or the need to develop additional reactive power support devices, including additional network connections, at higher overall cost.

Regarding the potential risk that the full reactive power capability range of an LCIS device could not be used, in response to the consultation feedback, the TSOs have introduced transformer rating limits which reduce any potential for significant oversizing of LCIS reactive power capability, relative to network capability. The TSOs note that the reactive power requirements of the power system will increase as more generation and demand connects. The TSOs assert that ensuring that new capability connecting to the power system brings reactive power capability is a prudent future proofing approach.

Finally, the minimum reactive power requirements specified in the consultation have been reduced slightly in the TSOs recommendation paper following stakeholder feedback and reflect synchronous condensers capability. The TSOs had discussions with OEMs on how to define these requirements relative to the rating of the generator and have since clarified this in their recommendation paper. The TSOs stated that no OEM has flagged any issue with the achievability of these requirements.

3.2.2 SEMC Decision

Based on discussions with the TSO and the above response the SEMC endorses the position in the TSOs' Recommendation Paper, so that LCIS comprises the provision of Synchronous Inertia, Reactive Power support and Short-Circuit contribution.

3.3 Cost of Energy

The TSOs' recommendations paper makes a number of points relating to the costs of energy associated with LCIS provision:

- That the selection of plant that wins an LCIS contract should include a consideration of the cost of energy.
- That for the SEM, the metering of an LCIS unit will be set to zero when they are dispatched. This means that the net energy consumption by LCIS plant will form part of transmission losses.

The RAs agree with the TSOs that the true estimated costs of energy consumed by an LCIS plant should be considered at the time that plant is awarded a contract. However, the RAs also note the comments of others that:

- The TSOs' assessment of these energy costs will rely on statements made by the developers of plant that are competing for the contract.
- That those developers face limited (or no) incentives to provide an honest statement of those costs.
- Compatibility with future system services markets and reducing market distortions needs to be considered.

With this in mind the RAs were concerned at the concept of allowing outturn energy costs to fall into losses as a policy and considered that they would prefer that the LCIS providers simply pay for their energy usage via whatever vehicle (supplier, SEM registration etc.) seems best to them. To the extent that energy consumption may be higher for some bidders, they can factor this into the remuneration they ask for in the bid.

3.3.1 TSO Response

The TSOs agree that only relying on energy consumption statements made by the developers is not sufficient and propose to develop a mechanism to incentivise the tenderers to provide accurate data as referenced in their recommendation paper. The TSOs have proposed that this mechanism (or options) is set out in the contractual arrangements which the TSOs will subsequently be consulting on.

The TSOs asserted that the RAs' proposal to bundle the energy cost with the service cost is not consistent with how the TSOs treat payment for system services which are exclusively service only payments (e.g. market mod 13_19 related to service provision at zero MW output). Bundling energy costs into the service cost would fundamentally change the approach to, and funding of, these services.

The TSOs argued that as they are proposing a long term, fixed price, contract for the provision of the LCIS service, if the TSOs were to adopt the approach proposed by the RAs, the service provider would need to estimate energy usage and energy price over a multi-year period in order to factor this into their offer. Given the uncertainty in both usage and price, providers could potentially build in a high-risk factor into their bid, leading to a higher total overall cost for the provision of the service.

The TSO commented that the proposed tender evaluation approach does factor in the energy consumption of each LCIS unit based on a common energy price. The TSOs acknowledge that the actual evaluation will require careful consideration of this energy price and that this should be communicated as part of the tendering process.

3.3.2 SEMC Decision

Based on discussions with the TSO and the above response the SEMC endorses the position in the TSOs' Recommendation Paper, in that the cost of imported energy will be factored into the evaluation. It will be converted to a cost per MVA.s per hour and added to the bid received. This decision is made on the basis that a mechanism to penalise under-performance on declared energy consumption such that consumers are not exposed financially to the risk of higher consumption than what is declared at tender stage will be developed by the TSOs when developing the contractual arrangements, subject to RA approval. Additionally, the TSOs will develop contractual requirements for the providers bidding of costs into the system services markets to ensure costs are transparently factored into market outcomes and avoid market distortions.

Furthermore, whilst the SEMC understands the reasons to include LCIS in transmission losses the SEMC requires that each TSO separately account for and report these costs as specific costs of dispatching the units. The TSOs should include proposals for this as part of the next stage in developing these arrangements.

3.4 Non-synchronous sources of inertia

The RAs, along with a number of respondents, were concerned that the LCIS provider requirements, proposed by the TSOs, rule out any non-synchronous technology from partaking in the competition. The TSOs state that it is their intention to consider including inverter-based

technologies for future procurement phases. Given the timeframe associated with this procurement and the fact that other jurisdictions currently use such technology for inertia services, the RAs required that the TSOs reconsider the exclusion of non-synchronous providers from the LCIS procurement framework. The RAs suggested the following as options for inclusion of non-synchronous technology:

- An approach similar to that suggested for distribution connected technology is applied in that non-synchronous LCIS providers have their offerings discounted to reflect their slower response times.
- Setting the competition so that only a fixed percentage of the total LCIS cleared can be from non-synchronous sources, for example 20% (and clearly calling this out in the call for tenders)

The RAs asked that the TSOs consider the above options and either implement them or provide evidence demonstrating why neither is appropriate.

3.4.1 TSO Response

The TSOs responded that a small number of other jurisdictions have procured a small amount of inertia from non-synchronous sources. However, the TSOs argued that the characteristics of these power systems are different (e.g. in GB, nuclear power plants will continue to provide a significant amount of synchronous inertia).

The TSOs commented that they are still at the early stages of development and that before awarding contracts to such technology, the TSOs would need to review what has been done in other jurisdictions, develop grid forming models, study the impact and benefits of such technology on the Ireland and Northern Ireland power system and trial this technology.

The TSOs also noted that they have always followed a prudent approach by asking any new technology to go through the Qualification Trial Process (QTP) before providing any DS3 System Service. The TSOs strongly believe that this process should also be followed by Grid Forming technology, allowing them to prove their capability before qualifying them to provide LCIS.

3.4.2 SEMC Decision

Based on discussions with the TSO and the above response the SEMC endorses the position in the TSOs' Recommendation Paper, in that LCIS comprises the provision of Synchronous Inertia. Nevertheless, the potential inclusion of non-synchronous sources of inertia should continue to be tested and assessed to enable the inclusion of such at any future procurement phases.

4 SEMC DECISIONS

This SEMC Decision Paper largely endorses, subject to certain caveats, and should be read in conjunction with the TSOs' Recommendation Paper (Annex 1). The SEMC decisions are listed below and should be implemented by the TSOs.

4.1 Phased approach

SEM Committee Decision: Phased approach - the procurement of a targeted volume of 10,000 MVA.s in Phase 1 to meet LCIS requirements for 2026. Phase 2 (and further phases if required) will be subject to a later, separate consultation and procurement process (subject to RA decisions) to meet LCIS requirements for 2030. Phase 2 will commence as soon as possible in order to ensure 2030 targets are met.

4.2 Volume and location

SEM Committee Decision: Volume and location - A targeted volume of 4000 MVA.s in Northern Ireland and 6000 MVA.s in Ireland shall be procured in Phase 1. Three zones have been defined in which the placement of LCIS shall be incentivised. Potential LCIS providers located outside of the three incentivised zones can still participate in the procurement process.

4.3 LCIS definition

SEM Committee Decision: LCIS definition - LCIS comprises the provision of Synchronous Inertia, Reactive Power support and Short-Circuit contribution. The potential to include non-synchronous sources of inertia and providers of inertia that do not meet the zero Maximum Export Capacity (MEC) requirement should be considered for any further procurement phases.

4.4 Technical requirements

SEM Committee Decision: Technical requirements - A range of requirements is defined for the inertia constant, short-circuit contribution and steady state reactive power capability.

4.5 Grid Code compliance

SEM Committee Decision: Grid Code compliance - Grid Code requirements for LCIS providers will be largely based on synchronous generator requirements such as frequency and voltage operating ranges and fault ride through requirements. A separate Synchronous Condenser Grid Code Implementation Note has been developed and published by the TSOs.

4.6 Inertia capability requirements

SEM Committee Decision: Inertia capability requirements - Minimum inertia capability contracted is 900 MVA.s and maximum contracted is 2000 MVA.s at an individual connection point. Additionally, no more than 2000 MVA.s at a single transmission station will be contracted.

4.7 Connection requirements

SEM Committee Decision: Connection requirements -The LCIS provider shall connect directly to the transmission system or share a connection provided they can meet the technical requirements at the connection point and respect the contractual, regulatory and legal frameworks in place at the time of the procurement. A LCIS provider can only be connected at a transmission station controlled by the TSO⁷ at 110kV or above. The potential to include providers of inertia connected at a distribution level should be considered for any future procurement phases.

4.8 Contract start date and duration

SEM Committee Decision: Contract start date and duration - The earliest contract go-live date shall be the 01 October 2024 and the latest targeted go-live date shall be 33 months after the award of contract. All contracts will end 6 years after the latest targeted go-live date.

4.9 Performance bond and milestones

SEM Committee Decision: Performance bond and milestones – A performance bond of 500 €/MVA.s or equivalent in £ will be required. Indicative performance milestones are provided and will be further detailed in the consultation on the contractual arrangements.

4.10 Availability

SEM Committee Decision: Availability - Payment based on 97% annual availability requirement, exclusive of 15 days of planned outages allowed annually following notification to the TSOs.

⁷ Where TSOs have operational control of the LCIS unit, meaning the possibility to instruct the unit to come on and off and to produce/consume reactive power

4.11 Application of scalars

SEM Committee Decision: Application of scalars - A performance scalar will apply to incentivise the availability of LCIS and a product scalar will apply for LCIS providers with better reactive power and short circuit contribution capability. A locational scalar will also apply to incentivise the delivery of LCIS in the three zones identified by the TSOs. The scalars to apply are set out in the recommendations paper.

4.12 Firm Access

SEM Committee Decision: Service providers with non-firm connections will take on the risk of network unavailability due to network limitations and will not be remunerated if unavailable due to network limitations.

4.13 Transmission network availability

SEM Committee Decision: Transmission network availability - The same Grid Code Outturn Availability arrangements applicable to conventional generation will apply to LCIS providers. If the Connection Offer identifies particular scenarios where the synchronisation of the LCIS unit is restricted, the LCIS provider shall be considered unavailable when the restriction is active. .

4.14 Network charges and licensing

SEM Committee Decision: Network charges and licensing - The Transmission Use of System Charges applicable to a LCIS provider will be progressed independently of this procurement.

4.15 Overall procurement process

SEM Committee Decision: Overall procurement process - Tenderers will go through a pre-qualification stage. Tenderers that make it through the pre-qualification stage will then receive a Request for Proposal and successful tenderers will be selected based on the cost per MVA.s / h.

4.16 Grid connection/planning permission requirements

SEM Committee Decision: Grid connection/Planning permission requirements - Full planning permission is required for tender submission (after pre-qualification) in both jurisdictions. In Ireland, successful LCIS tenderers who do not have a connection offer will need to be prioritised outside of the Enduring Connection Policy (ECP) process by direction from the Commission for Regulation of Utilities (CRU). In Northern Ireland, the standard connection offer process arrangements will apply.

4.17 Bid format

SEM Committee Decision: Bid format - Bidding a price for LCIS in €/MVA.s per hour or £/MVA.s per hour. When developing the contractual arrangements, the TSOs will develop proposals for bid caps on providers' potential bids.

4.18 Cost of energy

SEM Committee Decision: Cost of energy - Cost of imported energy will be factored into the evaluation. It will be converted to a cost per MVA.s per hour and added to the bid received. When developing contractual arrangements, the TSOs, subject to RA approval, will develop a mechanism to penalise under-performance on declared energy consumption such that consumers are not exposed financially to the risk of higher consumption than what is declared at tender stage. Whilst the SEMC understands the reasons to include LCIS in transmission losses the SEMC requires that each TSO separately account for and report these costs as a specific cost of dispatching the unit. The TSOs should include proposals for this as part of the next stage in developing these arrangements. Additionally, when developing the contractual arrangements, the TSOs shall include a requirement that providers bid into available competitive system services markets on the basis of cost-based bids reflecting the providers energy costs.

4.19 Price determination

SEM Committee Decision: Price determination - Pay-as-bid pricing will be used.

4.20 Funding arrangements

SEM Committee Decision: Funding arrangements – the funding for the procurement of LCIS will be considered as part of the wider tariff review process.

5 NEXT STEPS

Following this SEMC Decision Paper the TSOs and RAs will work together to implement the decided upon arrangements in as timely a manner as possible. Subsequent to this Decision, a consultation on the contractual arrangements will be conducted by the TSOs, providing stakeholders with the opportunity to comment on the proposed contract for LCIS.

5.1 Next Steps

Should stakeholders have any queries or comments please contact Dylan Ashe (dashe@cru.ie) or Bronagh McKeown (bronagh.mckeown@uregni.gov.uk).