SEM committee

SINGLE ELECTRICITY MARKET COMMITTEE

DS3 System Services Qualification Process and Contract Design

Consultation Paper

SEM-15-091

3rd November 2015

SEM committee

CONTENTS

1 INTRODUCTION

The DS3 Programme envisages the procurement of new System Services by the TSOs to ensure a safe and secure energy system while facilitating increased levels of non-synchronous generation (primarily renewables). These new System Services will offer an enhanced portfolio of options available to the TSO, and is expected to encourage new entrants to the energy market. The procurement of such System Services is an important factor in the overall design of the System Services programme. On 9th July 2014 the SEM Committee published a Consultation Paper (SEM-14-059) setting out the results of an economic analysis and five options for the design of the System Services procurement mechanism. On 19th December 2014 the SEM Committee published its decision on DS3 System Services Procurement Design and Emerging Thinking (SEM-14-108), outlining fourteen new System Services that are to be procured by the TSO beginning in 2016/2017. The TSOs published a draft DS3 Procurement Strategy document on 4th June 2015,[1] which outlined at a high level some of the key principles that the TSOs will use in their procurement of System Services.

As outlined in the DS3 System Services Project Plan Detailed Design and Implementation Phase[2], two of the workstreams in the DS3 design and development phase focused on developing the procurement stages in further detail are:

- Workstream 3 Qualification Process Design; and
- Workstream 5 Contract Design.

It was initially intended that separate consultations would be conducted on the Contractual design and the Qualification process. During the development of these workstreams it became apparent that a significant overlap exists between the two workstreams. This has provided an opportunity to present a fuller illustration of the DS3 procurement process to industry by merging the consultation papers. The DS3 Project Board has therefore decided that this paper should detail, at a high level:

- Current proposals for the qualification of potential DS3 System Service providers; and
- The subsequent contractual arrangements that would be established between the TSO and a successful DS3 System Service provider.

[1] http://www.eirgrid.com/media/Draft%20TSO%20Procurement%20Strategy%20-%20Published%2004062014.pdf

[2] http://www.eirgrid.com/media/DS3_System_Services_Project_Plan.pdf

1.1 DS3 AND INTERACTIONS WITH I-SEM CAPACITY REMUNERATION MECHANISM

In its Decision Paper, the SEM Committee acknowledged that there will be interdependency between the procurement processes (including potential auction platforms) for DS3 System Services and Capacity (under the development of the Capacity Remuneration Mechanism (CRM) in the I-SEM). The Regulatory Authorities and TSOs will continue to consider such interactions during the design phase, including the potential to harmonise criteria for qualification, bonding arrangements and contract principles. We have therefore posed consultation questions to cover both DS3 System Services and Capacity qualification processes and Contractual Design. Industry participants are asked to consider:

- The extent to which the proposals and options set out in this paper would also be appropriate for the qualification of Capacity providers within the I-SEM Capacity Remuneration Mechanism; and
- Any other observations on the interactions between the procurement of DS3 System Services and Capacity

Participants are requested to include their views and comments on the above in their response to this consultation.

1.2 BACKGROUND

The TSOs formally commenced the DS3 Project in September 2011, following a review by the Regulatory Authorities (RAs) of the TSOs' Report on Ensuring a Secure, Reliable and Efficient Power System in July 2011. This followed a request by the SEM Committee for the TSOs to put in place a programme of work to solve the challenges which would occur with operating the electricity system in a secure manner as levels of wind penetration increase. These issues had been identified by the TSOs in the Facilitation of Renewables Studies, a large body of work which concluded in 2010.

One of the key work streams in the DS3 programme is the Review of System Services (or Ancillary Services). The aim of the System Services review is to put in place the correct structure, level and type of service in order to ensure that the system can operate securely with higher levels of intermittent wind penetration (up to 75% instantaneous penetration).

The SEM Committee's Decision Paper published in December 2014 followed a number of consultative processes run separately by the TSOs and the SEM Committee between 2011 and 2014 as well as a number of independent reports.

The SEM Committee's decision framework aims to achieve the following:

- Provide a framework for the introduction of a competitive mechanism for procurement of System Services;

- Provide certainty for the renewables industry that the regulatory structures and regulatory decisions are in place to secure the procurement of the required volumes of System Services;
- Provide certainty to new providers of System Services that the procurement framework provides a mechanism against which significant investments can be financed;
- Provide clarity to existing providers of System Services that they will receive appropriate remuneration for the services which they provide;
- Provide clarity to the TSOs that the required System Services can be procured from 2016 onwards in order to maintain the secure operation of the system as levels of wind increase;
- Provide clarity to the Governments in Ireland and Northern Ireland (and indeed the European Commission) that appropriate structures are in place to assist in the delivery of the 2020 renewables targets;
- Ensure that Article 16 of Directive 2009/EC/28 is being effectively implemented (duty to minimise curtailment of renewable electricity);
- Provide assurance to consumers that savings in the cost of wholesale electricity which can be delivered through higher levels of wind on the electricity system, can be harnessed for the benefit of consumers; and
- Provides assurance to consumers that they will not pay more through System Services than the benefit in terms of SMP savings which higher levels of wind can deliver.

The fully revised arrangements for the procurement of DS3 System Services will come in for delivery of those services in 2017. In advance of this, systems services will be procured using interim tariffs, and contracts derived from existing HAS contracts.

Arrangements for the procurement of DS3 System Services will continue to evolve, reflecting the need to align with the requirements of new European Electricity Network Codes. The key Codes have not yet been formally been adopted by the European Commission and are still in the final stages of development. These codes are:

- The Network Codes on Electricity Balancing; and
- The newly merged System Operation Guidelines (which has incorporated the Operational Security Network Code, Operational Planning and Scheduling and Load Frequency Control and Reserves Network Code).

1.3 RELATED DOCUMENTS

SEMC Decision Paper	(December 2014)	SEMC Consultation Paper	(September 2013)
SEMC Information Paper	(August 2014)	TSO Recommendations paper	(May 2013)
SEMC Consultation Paper	(July 2014)	Third TSO Consultation paper	(December 2012)
IPA Report	(July 2014)	Second TSO Consultation paper	(June 2012)
TSO Report	(July 2014)	First TSO Consultation paper	(December 2011)
Pöyry Advice on Procurement Options	(January 2014)	Secure, Reliable and Efficient Power System	(July 2011)
SEMC Decision Paper	(December 2013)	Facilitation of Renewables Study	(June 2010)

1.4 STRUCTURE OF THIS PAPER

The SEM Committee proposed that work to deliver the DS3 System Services arrangements be undertaken across six workstreams. This paper will outline proposed thinking on two of these Workstreams; 3 (Qualification Process Design) and 5 (Contract Principles). Chapter 2 starts with an outline of the anticipated procurement process that will be used to select eligible DS3 System Service supply providers, and enable such providers to secure DS3 service supply contracts with the TSO.

The SEM Committee's Decision in December 2014 committed that:

- The Regulatory Authorities would conduct a full consultation on proposed requirements of the qualification phase (Workstream 3); and
- Through Workstream 5 (Contract Design), the Regulatory Authorities would issue guidelines to the TSOs on the development of the contractual principles to be used when contracting for DS3 System Services provision.

This paper covers both of the above areas. Specifically it:

- Outlines the high level principles, processes and criteria that will be used to determine eligible providers of DS3 System Services;
- Details some of the key concepts and principles the TSO should utilise when developing contractual terms and arrangements for DS3 System Service provision and performance of supply;
- Outlines the different phases envisaged in the contracting of DS3 System Services by the TSO; and
- Outlines the contract requirements that might be necessary for services procured by regulated tariff, and those procured through a DS3 System Service Auction.

The remainder of this consultation paper is set out as follows:

- Section 2 sets out an overview of the Procurement process as currently envisaged;
- Section 3 sets out potential qualification principles and the implications of these principles;
- Section 4 sets out important features of the qualification approach for new plants and existing plant;
- Section 5 and Appendix 2 outline possible qualification criteria and summarises the necessary supporting evidence and data; and
- Section 6 sets out potential contractual processes and key principles.

Unless the context indicates otherwise, the term:

- “plant” includes generation plants, transmission and distribution devices and demand-side measures; and
- “new” when referring to a project includes both new construction and refurbishment.

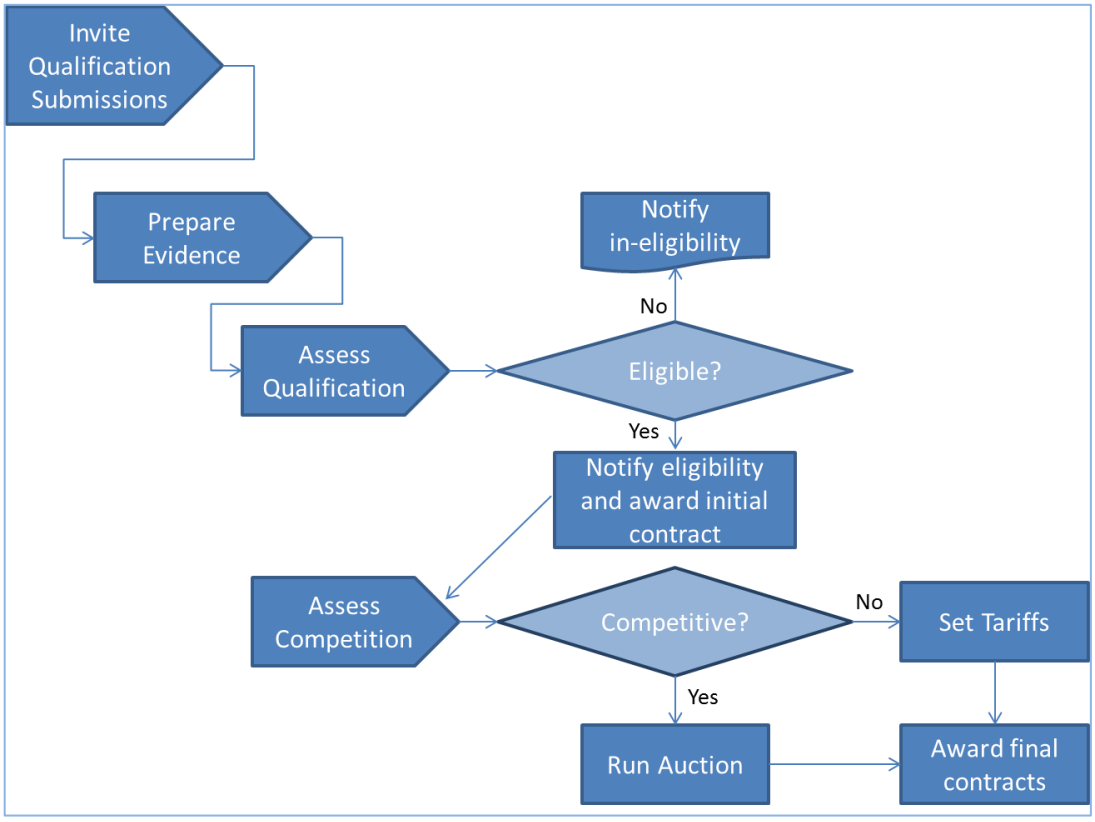
2 PROCUREMENT PROCESS OVERVIEW

2.1 INTRODUCTION

The procurement of Systems Services is likely to be governed by the Utilities Procurement Directive, and how this has been transposed into the legislation of Ireland and Northern Ireland. This legislation will impact on the overall procurement process, and the roll of qualification within that process. System Services will also be procured in a manner that ensures value for consumers, and will be structured to ensure the allocated budget is adhered to as outlined in the SEM Committee Decision paper (SEM 14-108).

The current view of the process is set out in figure 2.1 below, and discussed further in the following paragraphs.

Figure 2-1: Overview of System Service Procurement Process



The key steps in this process are suggested as follows:

- **Invite submissions:** This is the start of the qualification process. The requirement for Systems Services will be advertised in the Official Journal of the European Union. This notice will include details of the timing for the qualification process, and identify where bidders can get more detail on the

information they are required to provide. In line with the requirements of the Directive, the OJEU notice will need to be published in line with advertising requirements of EU procurement directives.

- **Preparation of submissions**: Providers will prepare a submission to the TSOs containing required information which will allow the TSOS to establish
  - whether the provider is eligible to provide one or more of the Systems Services; and
  - the level of competition for the provision of each Systems Service.
- **Assessment of eligibility**: The TSOs will assess each party's submission to determine which (if any) of the Systems Services the party qualifies to provide. The parties will then be notified of the result of this assessment. It is possible that those providers that qualify will be awarded a contract at this stage; albeit the key commercial details of such a contract will not be determined until later in the process (either through competitive auctions or the formation of regulated tariffs).
- **Assessment of Competition:** Parties submissions will also be assessed to determine whether the market for each service is sufficiently competitive to allow that service to be procured through an auction. This is covered further in the Consultation paper on Competition Metrics[3].
- **Competitive Auction:** For markets that are judged to be competitive, an auction will be held for eligible parties to compete to provide the volume of required service. Those that are successful in the auction will contract with the TSO to that service as determined by the auction outcome. The detail of this will be further developed.
- **Regulated tariffs:** For markets that are not judged to be competitive, regulated tariffs will be determined leading to the award of Systems Service contracts for those providers that qualified.

Question 1: Do you agree with the proposed procurement steps or have any concerns regarding the implementation of such a process? Do you consider there is a need for fewer or more steps in the procurement process? Please provide detail to support your views.

Question 2: To what extent are the proposed steps also appropriate for Capacity? Do you consider there are benefits in running this process jointly for both Capacity and DS System Services? Please provide detail to support your views.

[3] http://www.allislandproject.org/GetAttachment.aspx?id=0366907f-5ca3-4da7-ac3a-6d6aadf5ea91

3 QUALIFICATION PRINCIPLES

3.1 INTRODUCTION

The December 2014 SEM Committee Decision Paper envisages the need for a qualification process ahead of each auction for the procurement of System Services[4] for the following purposes:

- To provide information as to the likely level of competition for each of the System Service providers, to inform a decision as to whether the relevant System Service can be procured via auction;
- To establish the current System Services capability, the potential System Services capability after proposed investments and the technical characteristics which bidders would offer into any auction; and
- To filter out speculative developers of new technologies for the provision of System Services, without those developers having to incur the full costs of preparing a bid for the relevant auction.

In line with these purposes, the principles to be adopted in developing the qualification approach and the implications of these principles are set out below.

It is recognised that qualification principles and criteria are also being developed as part of the I-SEM Capacity Remuneration Mechanism (CRM) Workstream in relation to the procurement of capacity. The Regulatory Authorities and TSOs will continue to work collaboratively to ensure the two processes work efficiently and effectively.

3.2 PRINCIPLES

The overall approach to qualification should encourage participation, and hence competitive markets, but not place unnecessary burdens on either the TSOs or the potential System Service providers. Accordingly, in developing the qualification process, the SEM Committee is minded to adopt the following principles :

- The qualification process and criteria should be the minimum necessary to meet the purposes set out above;
- The assessment criteria should be objective to the maximum extent possible to reduce potential for dispute;
- The criteria should be sufficiently generic to apply across a range of technologies;
- The criteria should be transparent; and

[4] The System Services are listed and briefly defined in Appendix 1.

- The administrative costs incurred in the qualification process should be reasonable in relation to the System Service costs.

The main implications of these principles are:

- The qualification should be based on self-certification and supporting evidence provided by the potential System Service provider rather than on physical inspections and more intrusive scrutiny of technical and financial data. However, where necessary, the TSO should retain the right to review and question technical and financial data submitted by the potential System Service provider.
- The qualification should rely on financial incentives and penalties (bid bond) to ensure performance rather than more detailed and intrusive tests.
- The qualification criteria for eligibility will need to be adjusted depending on whether it is an existing proven provider, a provider that requires limited investment to provide services, or a new provider of the service. The criteria will be developed to ensure certainty of efficient service delivery.
- The levels of financial incentives and penalties should be standardised rather than tailored to the opportunity costs associated with providing or failing to provide the System Service. By way of precedent, incentives and penalties are standardised in the GB capacity auctions.
- The qualification submission and administration is likely to be conducted through electronic communications.

Question 3: Do you agree with the above outlined principles for qualification? Please provide detail to support your views.

Question 4: Do you believe that the above outlined principles for qualification should also apply for the procurement of Capacity in the I-SEM? Please provide detail to support your views.

4 QUALIFICATION FEATURES

4.1 QUALIFICATION CONCEPTS

Typically, a qualification process comprises an assessment by the procuring party of the capability of the applicant to provide the relevant good or service to the required specification.

In procurement processes for high value goods and services, qualification is often accompanied by further measures aimed at securing the provision of the good or service and avoiding speculative bids. This typically includes "bid bond" at the qualification stage, and could include performance bonds and implementation agreements once the provider has become a contracted DS3 System Service provider (i.e. after a provider has been successfully procured through the DS3 System Services Auction or tariff procurement process). Interactions with the CRM bonding arrangements will be considered to ensure the bonding requirements are clear and appropriately structured to ensure there is adequate coverage of the TSO's risk exposure.

A bid bond[5] is a financial security provided by the potential bidder to the procuring party which may be called by the procuring party if:

- The potential provider fails to submit a compliant bid by the due date; or
- The potential provider is successful in the auction but then fails to sign the contract and submit a performance bond by the due date.

The bid bond expires if the potential bidder fails to pre-qualify, the bidder is not awarded a contract or the bidder is awarded a contract and provides a performance bond.

A bid bond can take a number of forms; however, a key requirement is that the procuring party can draw it down on demand - without any reference to the potential bidder. For example, they typically take the form of an unconditional and irrevocable letter of credit for a fixed amount issued by an independent financial institution acceptable to the procuring party.

The bid bond amount should compensate the system for the indirect cost expected to be incurred if the potential System Services provider fails to bid (as the qualification fee would cover the direct costs of assessment). However, the indirect cost may be relatively low and provide insufficient control of gaming. A pragmatic approach would be to base the bid bond amount on a unit penalty level in €/MW or

[5] For convenience, here and elsewhere in this paper, the terms bid and performance bonds are used but these could include any financial security cover equivalent to bid and performance bonds.

€/MVAr that is deemed sufficient to control gaming, or to fix the amount as a fraction [e.g.10%] of any performance bond amount.

Bid bonds may be less effective in situations where potential bidders face incentives to offer artificially high bids which are difficult to distinguish from genuine high bids reflecting higher costs of provision. While they provide some comfort, they do not fully mitigate gaming opportunities and further measures are required to avoid artificially high bids. In the case of System Services, further mitigation measures might include cost-based bidding and intrusive cost scrutiny and, ultimately, capping bids at the tariff which would otherwise apply.

Question 5: Do you agree with the use of a bid bond as part of qualification for DS3 System Services?

Question 6: Do you have views on an appropriate level for the bid bond for DS3 System Services?

Question 7: Do your views on the level and usage of bid bonds differ for Capacity procured in the I-SEM?

Question 8: Do you see benefits in having a combined bid bond, covering both DS3 System Services and I-SEM capacity ?

4.2 IDENTIFICATION OF NEW PLANT AND NEW INVESTMENT

Qualification and contracting processes should differ between new plants and existing plants because there are greater risks associated with System Services to be delivered from new plants. In particular, investors in new plants will want long-term contracts to allow recovery of investment costs and will want to know that they have such contracts before committing to build plant; the TSO will want assurance that the investment will be made and the System Service delivered. Accordingly, the December 2014 SEM Committee Decision Paper determined that a new plant will be able to participate in auctions for long-term System Service contracts prior to construction and, thus, it must pre-qualify with the condition that the plant (whether new or a refurbished/retrofitted existing plant) is completed and demonstrates its ability to deliver the relevant System Service at a performance test before the first delivery year.

It may be helpful to separate for qualification purposes, the “new plant” from refurbished or retrofitted existing plant. It is anticipated that “new plant” will be starting development post 2016 or may have started development in the years preceding 2016. It is therefore proposed that a plant is identified and designated as a

new plant where it has not previously held a HAS contract prior to 19th December 2014. It is possible that existing plant which already provides some System Services could provide a greater level or range of System Service with further investment and/or refurbishment. It is the intention of the SEM Committee that existing plants can only access long term contracts when material new investment has occurred to provide enhanced or additional services. To ensure that such plant is properly identified and that the long term contracts are only awarded to those who have made a material new investment in existing plant it will be important for the TSO to evaluate the technical capability of proposed refurbishments/investments to existing plant. We have outlined two approaches below and welcome comments from industry on these.

- **Approach 1 – Identification of New Service Capability – threshold based review:** As new technology emerges that existing plant can utilise, it is possible that such technology will be able to provide a sub-set of the System Services. This would set a threshold based on:
  - The level of additional service provision the plant can technically provide compared to pre-refurbishment/investment; and
  - The observed "per unit" cost of entry for that service. This would need to be adjusted over time for learning curve effects. Learning curve effects mean that the cost of new technologies or refurbishments tends to fall in real terms as the technology matures.
- **Approach 2 – Case by Case:** The intent of DS3 services is to encourage innovation, and hence novel technologies that can provide some System Services. As these technologies are first introduced, there will not be existing data on their capabilities and costs to set thresholds. In this case, there would need to be an assessment of whether the proposed project genuinely represents additional investment to provide new or enhanced capabilities.

In practice, it is likely that a combination of the approaches would be required.

Question 9: Are there any approaches, in addition to those identified above, for identifying whether providers are new or existing?

Question 10: Do you have views on an appropriateness of each of the proposed approaches?

Question 11: Do you have a view on whether and how the above approaches could and should be applied for the procurement of Capacity in the I-SEM ?

4.2.1 Existing plants - assessment of eligibility

To reduce concerns about possible exercise of market power, the December 2014 SEM Committee Decision Document determined that the TSO will recommend which System Services should be procured competitively, after assessing the competitive conditions in the relevant System Service market based on responses to the qualification process.

The December 2014 SEM Committee Decision Document also notes that:

- All existing plants should be required to submit their current technical capability for provision of each System Service to the TSO if they wish to be eligible for payment for System Services in 2016/17 under the interim tariff arrangements.
- The TSO would verify performance against the technical capability submitted during 2016/17.
- All existing System Service providers will be mandated to provide services going forward. A mechanism to facilitate this is under review by the Regulatory Authorities. Thus an existing System Service provider will be required to offer to provide:
    - All the System Services that it is currently providing and any others that it is technically capable of providing; and
    - The maximum volumes of these System Services that it can provide under normal operating conditions[6].

[6] This means at least the existing capability and may include an enhanced capability. For a system service that will be called to operate post-event, this is the maximum volume that can be provided post-event.

- All plant (including new and refurbished plant once they have completed a defined period of service), once entered into a contract, will be required to meet the conditions of eligibility.

For existing System Services and most new System Services, the TSOs should be able to monitor compliance with these requirements based on the registered technical characteristics used for plant dispatch.

Question 12: Do you have a view on the proposals relating to existing plant as outlined above? Please outline any changes you would like to see to the above processes.

5 QUALIFICATION CRITERIA, EVIDENCE AND DATA

5.1 CRITERIA

There are clear benefits in aligning the criteria used in the qualification of System Service providers, with those to be used for providers of capacity. This alignment will need to take account of differences between the services being provided. One such difference is that System Services are procured directly by the TSOs, whilst it proposed that Capacity will be procured by the market as a whole (through rules).

The fact that System Services will be procured by the TSOs mean the procurement is likely to be subject to the provisions of the Utilities Procurement Directive. The final qualification criteria and evidence and data will need to comply with this Directive, and how it has been transposed into legislation for Ireland and Northern Ireland. The criteria, evidence and data requirements set out in the following paragraphs are broadly in line with the Directive requirements, but may need to be refined with the implementation of the Directive, and in light of legal advice.

In general procurement terms, qualification criteria are used to assess legal, financial technical and other capabilities required to provide the service. A set of criteria could be used which would apply equally to DS3 System Services and I-SEM Capacity.

- **Legal**: The potential System Service provider has appropriate legal status and authority to provide the service and has or, in respect of a new plant, will have, all necessary licences and permits to operate.
- **Financial**: The potential System Service provider has the financial capability to provide the service through to the end of the delivery period and, in respect of

a new plant, has, or has access to, the financial experience, financial strength and creditworthiness required to successfully finance the investment in the new plant.

- **Technical**: The potential System Service provider has the technical capability to provide the service reliably through to the end of the delivery period and, in respect of a new plant, has, or has access to, the technical experience and capability required to successfully implement the investment in the new plant.
- **Health and Safety**: The potential System Service provider has an acceptable track record for Health and Safety, as well as evidence of process and procedures (including accountability to board level) for ensuring health and safety is appropriately managed and embedded in the corporate culture on an on-going basis.
- **Environmental**: The potential System Service provider has an acceptable environmental track record, as well as policies and procedures to identify and manage its environmental impact.
- **Employment**: The potential System Service provider has an acceptable employment track record, as well as policies and procedures covering such matters as non-discrimination.

The supporting evidence and data for new and existing plants will differ, reflecting the need for the TSOS to have a similar understanding of the financial and technical capabilities of the owners of new plant as it does for existing plant.

The SEM Committee also recognise that to allow the development of new projects and utilisation of existing infrastructure several key attributes (e.g. connection to electricity network, planning consent, environmental and licence to construct permits) are required before a plant can become a viable System Service provider. We would welcome stakeholder views on whether it is appropriate to utilise the following criteria when assessing a potential provider's eligibility to qualify and contract with the TSO.

5.1.1 Connection to an Electricity Network

It is clear that for a party to viably provide DS3 System Services a fully operational connection to the electricity network will be required. It is likely that some newer or still developing plant may not yet have secured a grid connection. In essence this requires that the assessment of potential providers as to their eligibility to provide services review each applicant's status in this regard. The SEM Committee would like to gather views on which of the below options should be used as minimum criteria for assessing grid connection details during the qualification phase.

a. Evidence of a secure, firm, grid connection at the plant location of sufficient capacity to allow the full provision of the System Services.
b. Evidence of a signed connection agreement with the relevant (transmission or distribution) network operator with a completion/energisation date that will allow the full provision of the System Services proposed by the individual applicant.
c. Evidence of a grid connection offer issued by the relevant (transmission or distribution) network operator of sufficient capacity to allow the full provision of the System Services proposed by the individual applicant.

5.1.2 Planning consent

Similarly, it is recognised that for DS3 System Service providers to be considered viable it is essential that the correct planning consents have been acquired that allow full construction/refurbishment of proposed plant.

We welcome stakeholders' views of the following options which could be used as minimum qualification for assessing planning consent details during the qualification phase.

a. Evidence of full planning consent approval by the relevant planning authority in Ireland or Northern Ireland.). For clarity, where appeals can be raised against a project this is not considered full planning consent approval;
b. Evidence of planning consent by an appropriate authority (where appeals can still be raised); and
c. Evidence of initial preparatory planning discussions/agreements (e.g. planning scoping meetings).

5.1.3 Environmental and construction permitting/licensing

Where a plant requires certain environmental assessments, permits or licences it may be useful to assess compliance with these requirements to ensure eligibility assessments are conducted in a manner that provides a reasonable assessment of viability. The SEM Committee would like to gather stakeholders' views on which of the below options should be used as minimum criteria for assessing compliance with environmental and sector permitting and licensing requirements.

Environmental

a. Evidence of environmental permit approval by an appropriate Authority.
b. Evidence of progress towards environmental assessment/mitigation of environmental risks likely to be required by appropriate Authorities.

Construction

a. Evidence of authorisation to generate (where applicable) as supplied by the CER.
b. Evidence of authorisation to construct as supplied by the CER or DETI.

Question 13: Please can you outline your views on the proposed general criteria outlined in 5.1 and provide suggestions/comments on how appropriate these are for technology providers and potential System service providers.

Question 14: Please detail your views on the options outlined for assessment of grid connection, planning consent, and environmental and other permits/licenses – what are the options you consider to be most appropriate in ensuring sufficient Systems Services are procured to enable SNSP levels to be accommodated as envisaged under the DS3 programme.

Question 15: Would your responses to Questions 13 and 14 differ with regard to Capacity plant? If so, please explain why.

5.2 OBJECTIVE ASSESSMENT OF QUALIFICATION CRITERIA

In choosing the criteria, the SEM Committee consider the most important principles are that the criteria should be the minimum necessary to meet the purposes and that the assessment of whether a criterion has been met should be objective where possible.

To make an objective assessment of whether the qualification criteria have been met, the evidence should allow assessment against questions with yes/no answers where possible. As examples, in the case of an existing plant, a question might be has the potential System Service provider provided the System Service in a sufficient number of trading periods in the previous delivery year? And, in the case of a new plant, a question might be has the potential System Service provider provided a financing plan to cover all investment needs through to the first delivery year).

However, a subjective assessment of certain qualification criteria is still likely to be required. In particular, it will always be difficult to establish objectively whether the potential System Service provider has, or has access to, the experience, resources and skills necessary to develop a new plant and to determine whether new plants will commission on time and perform as expected. This will be exacerbated in the case of:

- **Associations such as consortia, joint ventures, special purpose vehicles** or the like established, or to be established, to develop new plant. To deal with this, requirements and rules for treatment of such arrangements are necessary. The requirements may include that an acceptable legal vehicle is established before the date at which the System Service Contract becomes effective and that the members of the association appoint a managing member, with a significant stake in the association [e.g. 30%], that has the authority to act in their name. The rules will cover the manner in which experience, resources and skills of the members of the association will be aggregated to determine whether the association is suitably qualified. Typically, for a particular qualification question, experience from a single member or the weighted experience of several members, each with a reasonable stake in the association, would be considered. Experience of members with smaller stakes [e.g. 15%] in the association would not be considered.

- **Sub-contracting to construct or operate plant.** Typically, a potential System Service provider will be deemed to have access to appropriate experience if it:

  - Identifies the sub-contractor and its experience at the qualification stage; or
  - Commits to use a prime contractor from an approved list to install the relevant plant component.

- **Emerging technologies**. To deal with this, there may be a need to place limits on the proportions of emerging and, thus, unproven technologies that can pre-qualify. This is similar to the approach adopted in the GB auctions for renewable plant where part of the market is reserved for emerging technologies. For example:

  - **Classify as emerging:** A technology could be judged to be "emerging" if it had been deployed commercially at the scale proposed less than three times previously – not including deployment for "demonstration" projects
  - **Capped share:** Emerging technologies compete with existing technologies for the provision of System Services. The quantity of each System Service that can be procured from emerging technologies is capped at a specified percentage;
  - **Reserved share:** A specified percentage of the requirement for each Systems Service is reserved for emerging technologies.
  - **Setting the percentage:** The "specified percentages" in the above two sub-bullets may differ by System Service. They will need to be set at a level that balances the potential benefits of new technologies, with the risks that those technologies fail to deliver the required services.

Question 16: Do you agree with the example given above to identify emerging technologies?

Question 17: Should the inclusion of emerging technologies be on a capped share, or reserved share basis?

Question 18: Is it appropriate to have similar limits on emerging technologies for the procurement of Capacity under the I-SEM. If so, is the above approach also appropriate for that procurement process?

5.3 QUALIFICATION EVIDENCE AND DATA

While the qualification criteria should be the minimum necessary to fit the purposes, there is a spectrum of options for the supporting evidence and data. Outlines of the supporting evidence and data for the options at either end of the spectrum are set out later. In summary, these options are:

- **Option A – Extensive evidence and data.** This option would require the collation of extensive evidence and data, particularly in respect of new plant. The TSO might review and challenge evidence with corresponding resource and administrative cost implications both for the potential System Service provider and the TSO.
- **Option B - Minimum evidence and data.** This option would be the absolute minimum necessary to establish technical capability and characteristics for dispatch and to assess whether each System Service may be procured competitively. This option would rely on the effectiveness of financial incentives and penalties (bid and performance bonds) to ensure only credible System Service providers applied for pre-qualification. The TSO would check for completeness but would not challenge evidence or data.

Both options would require the potential System Service provider to provide evidence and data. Where possible, this data should be assured by an appropriate and reputable firm appointed by the bidder. For example, both options are likely to require historic accounts that have been audited, and where the auditor has confirmed that (at the audit date) the relevant companies were going concerns.

The need for effective qualification is evidenced by recent experience in the GB electricity capacity market. A number of bidders qualified, and were successful in the following capacity auction; however they have subsequently failed to achieve financial close and abandoned the relevant projects.

An illustration of the potential supporting evidence and data are set out in the tables in Appendix 2. The tables also include outlines of the data needed to establish the maximum volumes of the relevant System Services that the potential System Service provider can deliver and the technical parameters required for dispatch of the System Services.

The legal evidence would be fairly similar under both options but, under Option B, financial and technical supporting evidence might be reduced considerably by relying on receipt of the performance bond.

Noteworthy points for new plant are as follows:

- **Reference project eligibility:** rules are needed to establish which reference projects may be used as evidence of ability to deliver. The rules need to take account of the various possible ownership structure and the use of sub-contractors.
- **Technology classification:** allows for weighting when estimating system capability and allows limits to proportions of unproven technologies that can pre-qualify. As an indication, for discussion purposes, weightings used to estimate system capability might be [100%], [95%], [75%] and [0%] for proven, demonstrated, concept and unproven technology respectively.
- **Lead time:** is required to ensure that potential System Service providers do not attempt to pre-qualify earlier than necessary to be ready to deliver the System Service by the first delivery year. In line with the December 2014 Decision Paper, the qualification will require that the maximum lead time does not exceed five years[7]. The time window for achieving the minimum functional specification at a performance test will provide a contingency allowance above the maximum lead time for pre-construction and construction delay.

Noteworthy points for new plant are as follows:

- **Assessment requires significantly less detail:** than for new plants and potential System Service providers might roll over the previous qualification evidence

[7] As potential providers may prefer to know the results of both capacity and System Service auctions before proceeding, in the worst case, when the annual System Service auction is six months after the annual capacity auction, this would result in an effective maximum lead time of four years and six months. The maximum lead time would be five years if both auctions were held simultaneously.

and data with commentary justifying any changes. Particular scrutiny would be given to any reductions in capability to avoid potential abuse of market power. Accordingly, the justification would need to demonstrate that refurbishment investment to restore the capability would not be cost-effective.

- **Reliability indicators:** based on historical performance in System Service provision should be used to assess system capability. For post-event System Services, this could take the form of a ratio based on the actual volume of post-fault support compared to the contracted volume of post-fault support over the previous delivery year.

The SEM Committee are considering the application of Option B along with an associated bid-bond. The bid bond, along with sign-offs by professional service firms, reduce the need for scrutiny and the likelihood of omission or mistakes. This, in turn, reduces the administrative burden on the TSOs.

In the case of existing plant, the SEM Committee are considering to allow roll-over of previous qualification evidence and data with commentary justifying any changes.

Question 19: Do you favour a highly detailed assessment (Option A) above, or a lighter assessment with an increased reliance bid bonds, and on 3rd party assurance of bidder's data.

Question 13: Do you agree with the above outline of evidence and data?

Question 13: If you consider that Option B outlined above is a preferred assessment process do you believe that some of the criteria outlined in 5.11-5.13 should be utilised as the minimum criteria in this assessment?

Question 14: Do you consider the above qualification processes to be applicable for the CRM qualification process? What do you consider to be the main differences (if any) between DS3 System Service qualification and procurement and CRM qualification and procurement and how should these be addressed?

6 CONTRACT PRINCIPLES

The TSOs will contract with providers of System Services under direct bilateral contracts, using template contractual terms and conditions specific to System Services provision. This could contrast with the I-SEM Capacity market , where reliability Options may be enabled through rules.[8] Currently the TSOs contract with providers of Harmonised Ancillary Services (HAS) on an All-Island basis under an Ancillary Services Agreement (Harmonised Version). Moving from the current obligatory HAS service provision by generators to a process whereby potential System Service providers will have to qualify to contract to supply DS3 System Services to the TSO is a significant change. The procurement of DS3 System Services will be conducted by the TSOs based on EU and National legislation and procedures. The SEM Committee wish therefore to ensure that the TSOs adhere to some key principles when developing contracts for System Services supply, and welcome comments from industry on our proposals outlined in this paper. It is envisaged that the initial period of System Service procurement during 2016-2017 will be based on Interim Tariffs, and contracts will need to reflect this accordingly.

6.1 BASIS FOR DEFINITIONS

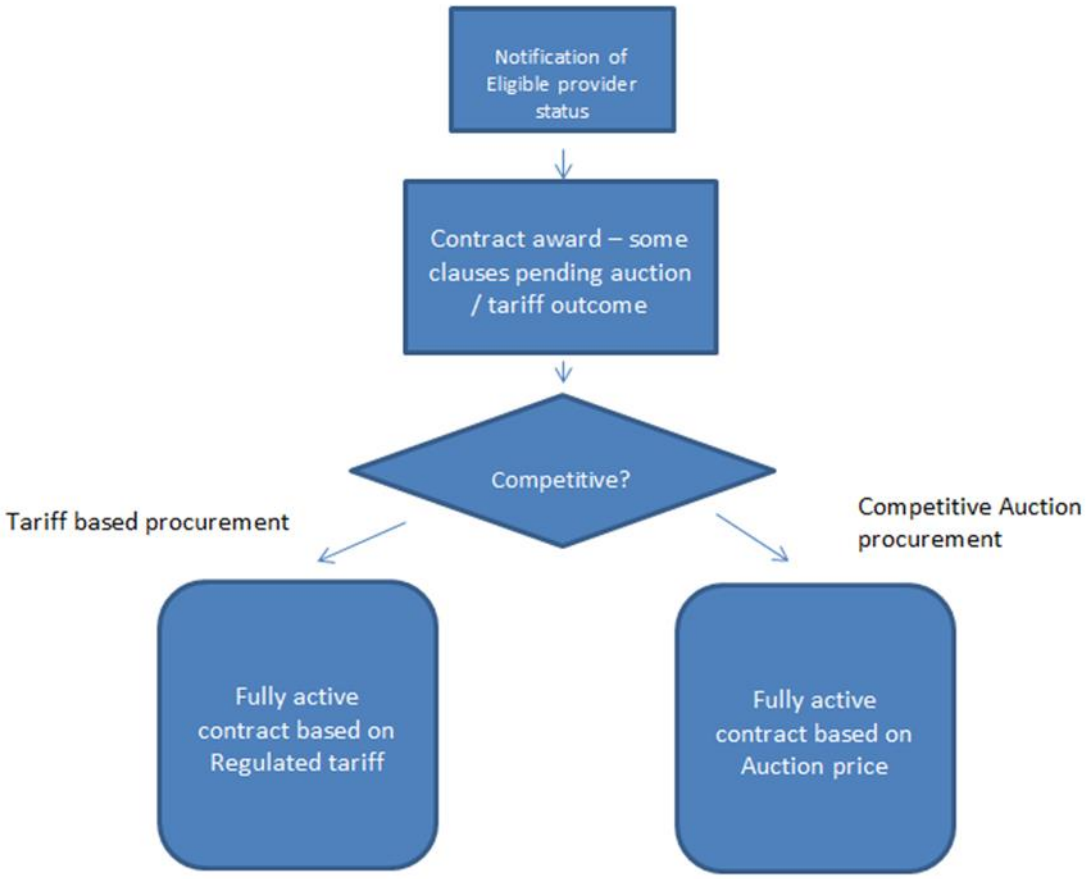
Definitions used in DS3 System Services contracts should utilise terminology that is common-place in existing TSO contractual documents e.g. Connection Agreements, HAS Ancillary Agreements, Trading and Settlement Code. It is also anticipated that terminology currently used in such documents may have to align with EU Network Codes terminology (e.g. in Standard Product Definition), therefore it is proposed that the TSOS utilise standard and European aligned terminology when developing System Service contracts.

6.2 CONTRACT TIMING

It is envisaged that upon successful qualification of an eligible System Service provider, that party would be obliged to enter a System Services contract with the TSO. This contract could potentially be structured to encompass all contractual obligations and liabilities of both the TSO and the System Service provider for the length of System Service provision (1-15 years), but may have certain conditions switched off and details on price for System Service provision kept at zero, pending the outcome of System Service Auctions and Tariff procurement decisions. Once the competitive assessment has determined whether certain System Services markets are sufficiently competitive and can be procured through Auction, or require

[8] This is one of the options being considered in response to the first I-SEM Capacity Consultation paper – I-SEM 15-044.

procurement through Regulated Tariffs (tariffs will be fixed for five year periods), then the relevant clauses in the TSO/System Service provider contract would be activated. Regulated Tariffs associated with specific services will require contract lengths of one year in length as a review will be done annually to assess whether it is feasible to procure by competitive auction in the following year.



6.3 LONG TERM CONTRACTS

Long term contracts are envisaged only where there is a new plant (or refurbishment) which is eligible to provide services in future years. The SEM Committee recognise that to provide certainty to potential investors there is a need to ensure a longer term revenue stream that an annual auction would allow for. As outlined in the SEM Committee's Decision Paper, it is proposed that contract length for new plant investment will be set between 1-15 years (or up to 20 where it has been demonstrated there would be significant public benefit). There will therefore be a need for the TSO to develop contracts of different length for individual

contracted System Service providers. For established plant a standard one-year System Service supply contract will apply.

Long term contracts (greater than one year in length) should set out the obligations on the provider for the length of the contract and also the guarantees given to the provider. There may in the future arise instances whereby an existing plant could qualify for a standard one year contract of for provision of certain System Services and through refurbishment could also qualify for future System Service provision under a longer term contract. The interaction between the services for which the provider has long-term contracts and services with annual contracts should be provided for in contract development. The possibility of different services having different contract periods should be provided for.

Obligations regarding existing capability and services not covered by the long term contract will also need to be covered. This should include obligations to enter into auctions with existing capability after the contractual period is over for those services under long term contract.

6.4 LEAD TIME AND KEY MILESTONES

The contracts should provide for lead times and key milestones, e.g. anticipated construction start date; anticipated operational date for new System Service providers. This principle is already used in Connection Agreements for new Generation by the TSOs. Providers should be contractually bound to the lead times they submitted as part of the qualification process and in their bids. Penalty mechanisms should be in place where lead times and key milestones are exceeded (which could be facilitated by bonding arrangements see Section 6.11 for more detail). It is also imperative that the TSO receives regular updates from a future provider as to progress, so we would expect the contract documents to require regular reporting of progress as well as critical milestone dates. Recent developments in other EU member states related to auction based procurement of services have highlighted the need to look at requiring milestones centred around securing project finance for new entrants.

In the event that a provider is operational in advance of their lead time, the contract should have the flexibility to allow the TSO to make use of the provider ahead of the official start of the period contracted for or to start the contract early (therefore concluding it early). However, the TSO should not necessarily be obliged to begin payments until the contract had been due to start as this could lead to the TSO being over contracted for one or more years.

Longstop dates should be included around key milestones to ensure that projects are progressing as expected and that the TSO has sufficient time to enter into new contracts where projects are not likely to become operational. Such longstop dates

should be set at an appropriate length taking into account the need for additional DS3 System Service provision to ensure system stability.

6.5 MINIMUM ANNUAL REVENUE REQUIREMENT

The SEM Committee's Decision Paper (SEM-14-108) outlined that consideration would be given to providing a minimum level of revenue surety to new entrants to the System Services market. Such minimum acceptable revenue requirements will need to be highlighted in prequalification applications by new entrants, and subsequently included in contracts. These should ensure that providers receive a minimum level of annual revenue from System Services, and will receive a payment where their System Services revenues in that year were lower than the contractual minimum. The SEM Committee propose a flat per annum minimum revenue stream over the contract length. It is not the intended position of the SEM Committee that the Minimum Annual Revenue Requirement (MARR) should provide a stable revenue stream, but rather a minimum floor of revenue which should limit but not eliminate the risk to new market entrants of under-recovery.

The SEM Committee also believe there should also be provision for deferrals or claw backs of MARR payments. The minimum revenue is considered with respect to all System Service revenue over the contract period. For example if a provider had secured a contract for five years and subsequently had four years of high revenues followed by a year of below-minimum revenues the provider should only receive a payment if over the full five years total revenue was below the total minimum revenue condition. Where the year(s) of low revenue is followed by years of high revenue the additional payments made for the initial years should be capable of being clawed back, if total revenue over the period exceeded the total minimum revenue condition. Given the likely variation in revenue for individual System Service providers year on year, it is important that the contracts should allow for some flexibility around partial or deferred payments to providers, while (where possible) respecting any cash flow or financing obligations a provider may have.

6.6 QUALIFICATION CRITERIA AND OBLIGATIONS

The contracts should ensure that any criteria that were required as a condition of qualifying for the auction are enforced. The contracts should also specify the provider's obligations to comply with defined performance standards and Grid Code requirements etc.

6.7 PAYMENT BASIS & SCALARS

The contracts should provide for payment rates to be adjusted based on changes to various proposed scalars. The SEM Committee's Decision Paper outlined proposals to introduce scalars to incentivise high performance levels, greater levels of availability for required units, reward enhanced capability and protect the consumer from high prices. The proposed four scalars will focus on Product, Performance, Scarcity, and Volume. Such changes may apply generally to the market, to a subset of providers, or to an individual provider. Current developments in ISEM and DS3 design will allow market players to have control over the market and dispatch positions therefore the distinction made in the SEM Committee's Decision Paper regarding payment adjustment between market and dispatch schedules must be considered in the context of recent I-SEM Decisions, in particular, the Energy Trading Arrangements Markets Decision Paper, September 2015, (SEM-15-065). There will be a further consultation on Scalars published this year.

6.8 AUCTIONS, BIDDING CONDITIONS AND MARKET POWER PROVISIONS

Conditions ensuring that providers participate appropriately in the auction and the balancing market, follow bidding rules and do not exercise market power may need to be included. Provisions relating to a Failed Auction should be made and the potential for interactions with the CRM auction should be included.

6.9 TESTING PROCEDURES AND APPROVAL OF PLANT TO PROVIDE SERVICES

The contracts will need to detail the procedures the TSO will apply when testing for service provision capability, and the obligations of System Service providers with regard to facilitating such procedures. The TSO should endeavour to align new plant connection /commissioning and testing procedures where possible to minimise resource requirements and timing required to achieve plant approval.

6.10 TSO OBLIGATIONS

Any obligations on the TSO should also be included in the contracts.

Question 23: Do you agree with the key principles to be considered by the TSOS when developing contracts for DS3 System Service procurement as outlined above?

Question 24: Do you believe there are other key criteria that should be included in contractual agreement between the TSOs and System Service providers.

Question 25: Which (if any) elements of the above discussion should also apply to the procurement of Capacity under the I-SEM?

6.11 CONTRACT BONDING ARRANGEMENTS

6.11.1 Introduction

DS3 Systems Services are required to support system operation and security as increased levels of SNSP enter the system. It is envisaged that new providers will enter the DS3 service supply market and it is therefore essential that where providers have contracted to provide services from a certain date that they meet their contractual obligations. . The failure of a party to provide its contracted service provision would lead to a sub-optimal outcome for the customer such that either:

- Costs are increased; or
- Reliability is reduced.

The risk of such adverse outcomes is arguably greatest for new-build providers, reflecting:

- That the need to construct new plant brings construction risks – not observed for existing plant;
- New plant may still need to secure its financing; and
- Existing plant should already have a track record of producing the given service.

The increased risk from new-build plant is evidenced through recent experience in the GB electricity capacity market. A number of new power plants were contracted through the capacity auction with the aim of maintaining security of supply for the GB system. For various reasons some of the plants have not been progressed by the developers involved. The GB capacity procurement process clearly failed to filter out these projects – despite the use of prequalification criteria similar to those

suggested in this paper, and the additional usage of performance bonds. This would argue that performance bonds should also be required for the DS3 System Service procurement. The following paragraphs set out:

- How bonds can fit into the overall contracting and procurement framework;
- The level of detail to be used in setting milestones against which progress is measured during the build phase; and
- The level at which the bonds are set.

6.11.2 Types of bond

As discussed in 4.1 above, it is possible to ask for a "bid bond" at the qualification stage. How this would work with EU Procurement legislation is still being confirmed, with one option being that potential providers have to furnish their bid bond when it is confirmed that they have qualified to bid in an auction.

A bid bond[9] is a financial security provided by the potential bidder to the procuring party which may be called by the procuring party if:

- The potential provider fails to submit a compliant bid in the relevant auction by the due date; or
- The potential provider is successful in the auction but then fails to sign the contract and submit a performance bond by the due date.

As noted above, bid bonds are typically complemented by "Performance Bonds" that cover the build phase of a project. A performance bond is typically associated with an "Implementation Agreement" which sets out the key milestones during the build phase. The key features of performance bonds and implementation agreements are set out below.

- **Performance bond:** This is a financial security provided by a successful bidder to the procuring party which may be called by the procuring party if the successful bidder fails to deliver against key project milestones by the due dates. Usually the procurement contract is not effective until a performance bond has been provided. Again, typically, the bond takes the form of an unconditional and irrevocable letter of credit for a fixed amount issued by an independent financial institution acceptable to the procuring party. If significant investment is required, the performance bond amount may be reduced after successful completion of a performance test (the performance test would check that the good or service met the minimum functional

[9] For convenience, here and elsewhere in this paper, the terms bid and performance bonds are used but these could include any financial security cover equivalent to bid and performance bonds.

specification) or the performance bond may be replaced by another financial security for the operating phase. The performance bond would be called if the performance test were not completed successfully by the due date.

- **Implementation Agreement (IA):** This is a contract used typically when significant investment is required and when a third party has significant impact on the ability to deliver (such as with public private partnerships). It defines the rights and obligations of the parties with respect to implementation of the investment, including those related to progress monitoring. It includes obligations to provide regular detailed progress reports and to pay liquidated damages and, ultimately, to face contract termination in the event that key project milestones are not achieved by the due dates. These requirements are tailored to the project. The IA might be terminated and the associated performance bond called if any key milestone was not achieved within a time window following the due date[10].

Question 26: Do you agree that bid bonds and performance bonds are required, and the performance bonds should be at risk on the delivery of specific milestones?

Question 27: What are your views on the compatibility of existing bonding arrangements and those proposed for DS3 System services? Do you consider there is the possibility to align some of these to reduce the financial burden to market players?

Question 28: To what extent would your responses to the above questions also apply (or differ) for the procurement of Capacity under the I-SEM)

6.11.3 Approaches to monitoring of the build phase

The SEM Committee have already consulted on the high level arrangements for monitoring the build phase for new-build under the I-SEM Capacity Remuneration Mechanism. The decision relating to this consultation is due to be published in November with further detail of those arrangements forming part of a subsequent

[10] The IA could also be terminated in other circumstances with penalties payable if the potential System Service provider were at fault, for example, if the potential System Service provider decided to abandon the project or became bankrupt. The IA could also impose other rights, potentially allowing the TSOs to step-in to complete the project in some circumstances.

consultation. Given this context, the following paragraphs are primarily focused on DS3.

There are a number of options for how the build phase is monitored from a risk perspective and how progress is reported to the TSOs. These have implications for the level of detail contained in any implementation agreement, as well as for the TSO costs and capabilities required to administer those implementation agreements. To illustrate this, the following three options show how the level of monitoring we require the TSOs to perform can vary.

- **Option 1 – Detailed monitoring – Tailored IA, bid and performance bonds.** Under this option, the potential System Service provider would be required to provide a bid bond which could be called in the event it either failed to bid or failed to enter an IA with the relevant TSO by the due date if selected[11] to provide a System Service. In turn, the IA would oblige the potential System Service provider to:

  – Provide a performance bond;
  – Provide regular monthly detailed progress reports approved by an independent engineer;
  – Report any substantial slippage expected against key project milestones as it became aware of that slippage;
  – Take remedial action if requested by the TSO;
  – Maintain records and to allow the TSO to access the records; and
  – Pay liquidated damages in the event that it did not meet key project milestones by the due dates.

  The IA might be terminated (and the performance bond called) if any key milestone was not achieved within a time window following the due date. The IA, key project milestones and amounts of the bid and performance bonds could be tailored to the specific project – requiring discretion on the part of the TSOs.

- **Option 2 – Light monitoring – standard bid and performance bonds.** Under this option, standard bid and performance bonds would be provided. As in Option 1 the performance bond would be managed against milestones, noting that :

  – The milestones would be generic – removing the need for judgement and discretion by the TSOs in negotiating project specific milestones.

[11] Either by being successful in an auction or, if the market were not deemed sufficiently competitive, by being required to provide under the regulated tariff

  - The milestones and other contractual terms relating to the bid phase could be contained within the Systems Services contract, rather than forming a separate Implementation Agreement.

Progress reporting (ideally with such reports approved by an independent engineer) would still be required, but would be less detailed and less frequent [say six monthly] than under Option 1. The amounts of the bid and performance bonds would be set proportional to the System Service capability.

- **Option 3 – No monitoring – standard bid and performance bonds.** This option would be the same as Option 2 except that the System Services Contract would not include regular progress monitoring obligations. Instead, the System Services Contract would require that the potential System Service provider reported any substantial slippage or other events which would lead to payment of liquidated damages or calling of the performance bond as it became aware of them.

Each of the above options has different strengths and weaknesses. Notably:

- Option 1 typically requires a negotiation between the bidding party and the TSOs to establish the implementation agreement milestones. It then needs subsequent expertise and commitment from the TSOs to monitor project progress. This approach is most likely to give an early indication of projects that are going to fail to deliver; however:
  - It will be difficult to establish that the TSO has been even handed in the setting of milestones for two competing projects; and
  - The active monitoring of project progress will increase TSO costs.
- Option 2 removes the need for Implementation Agreements that are customised to each project – and so the need for TSO judgement. The retention of some progress reporting allows for the early identification of failing projects.
- Option 3 is the simplest approach, however, it can make it difficult to get early identification of those projects that are likely to fail.

The SEM Committee is minded to adopt Option 2 as representing an appropriate balance among the competing objectives noting that this is broadly similar to the mechanism adopted for qualification in the GB capacity market.

Question 29: Which of the above options do you prefer? Please provide a view of why you have chosen a particular option and the advantages your chosen option offers.

Question 30: Based on your consideration of options for the management of the build phase for DS3, do you wish to amend or augment your responses relating the management for build phase for new Capacity under the I-SEM?

6.11.4 Level of Performance Bonds

In principle, bonds should be set at a level to compensate for the consequence of a bidder failing to perform as contracted. Where this is difficult to determine, contract bonds levels can be set at an arbitrary level – provided all providers face equivalent requirements for bonds. Examples include:

- Construction contracts tend to carry a performance bond of 10% to 12.5% of the contract value. This is judged to be sufficient to cover the costs to the developer – should it need to appoint a new construction contractor to take over the project.
- The GB electricity capacity auctions, where failure to meet "substantial financial commitment" or "substantial completion" milestones results in penalties of £5,000/MW and £25,000/MW respectively.

It is notable that earlier work for DS3 has already identified the cost to consumers (in terms of increased energy costs) should DS3 services fail to be provided. This information could be used to form the basis for the level of penalties to be applied should parties fail to deliver their capacity, with the performance bond set to match those penalties.

This approach would allow for the penalties to be reduced to reflect the amount of notice a party gave of project abandonment. This is one of the changes being considered to the procurement of GB electricity capacity in light of the abandonment of a number of projects that were successful in the auction. For example, consider a project with a four-year lead-time which, if abandoned, will be procured at the next (annual) auction – leading to another project with a four-year lead-time:

- If that project is abandoned within 6 months, the resulting deficit in service provision will last for one year; and
- If that project is abandoned 6 months prior to its planned delivery, the resulting deficit will last for four years.

Delivery of contracted services for all providers throughout the contracted service provision is also something that might require a performance bond. This would apply to all providers equally (new plant post commissioning and testing), refurbished plant, and existing plant. It is not yet decided as to whether there will be an explicit contractual requirement to offer a certain level of committed availability in the bilateral contract between the TSO and DS3 System Service provider. This will be considered as part of the auction design. It is possible this may be necessary to reduce the risk of non-delivery of DS3 System services.

Question 31: Do you agree that performance bonds should be set relative to the cost to consumers of any failure to delivery?

Question 32: Do you agree that the level of performance penalty should vary inversely with the notice provided by the party that it will fail to deliver?

Question 33: Do you believe that these principles (relating to the level of performance bonds and penalties) should vary between DS3 and I-SEM Capacity?

7 NEXT STEPS

Interested parties are invited to respond to the consultation, commenting on the matters set out in this paper and the proposed positions that have been expressed in this paper.

The SEM Committee intends to issue a final decision paper in February 2016 on the various aspects of qualification covered in this consultation paper. In reaching this decision, it will take into account responses to this consultation and to the related consultation on capacity remuneration mechanism.

Responses to the consultation paper should be sent to Andrew McCorriston at the Utility Regulator (Andrew.McCorriston@uregni.gov.uk) and Mo Cloonan at the CER (mcloonan@cer.ie) **by 17:00 on Wednesday 9th December 2015**.

Please note that we intend to publish all responses unless marked confidential. While respondents may wish to identify some aspects of their responses as confidential, we request that non-confidential versions are also provided, or that the confidential information is provided in a separate annex. Please note that both Regulatory Authorities are subject to Freedom of Information legislation.

SEM committee

8 APPENDIX 1 – SYSTEM SERVICES

The Decision Paper SEM-13-098 defines 14 System Services of which seven are existing services and seven are new services. The table below lists these services and summarises their defining characteristics.

System Service (* indicates new service)		Broad definition of System Service volume (SEM-13-098 provides fuller definitions)
SIR*	Synchronous Inertial Response	Stored kinetic energy of synchronised plant multiplied by SIR factor. The SIR factor is the stored kinetic energy divided by the minimum MW output at which the plant can provide [the full range of] reactive power control (the SIR factor must exceed 15s and is constrained to be no more than 45s)
FPFAPR*	Fast Post-Fault Active Power Recovery	For faults cleared within 900ms, MW provided within 250ms of voltage reaching 90% of pre-fault level, being at least 90% of pre-fault MW, and sustained for 15 minutes
FFR*	Fast frequency response	Additional MW available in 2s and sustained until 10s post-event
POR	Primary Operating Reserve	Additional MW available at frequency nadir between 5s and 15s post-event
SOR	Secondary Operating Reserve	Additional MW fully available at 15s and sustainable until 90s post-event
TOR1	Tertiary Operating Reserve 1	Additional MW fully available at 90s and sustainable until 5 minutes post-event

TOR2	Tertiary Operating Reserve 2	Additional MW fully available at 5 minutes and sustainable until 20 minutes post-event
RRS	Replacement Reserve (Synchronised)	Additional MW fully available at 20 minutes and sustainable until 1 hour post-event
RRD	Replacement Reserve (De-synchronised)	Additional MW fully available at 20 minutes and sustainable until 1 hour post-event
RM1*	Ramping Margin 1 Hour	Additional MW available in 1 hour and sustainable until 3 hours post-event
RM3*	Ramping Margin 3 Hour	Additional MW available in 3 hours and sustainable until 9 hours post-event
RM8*	Ramping Margin 8 Hour	Additional MW available in 8 hours and sustainable until 16 hours post-event
SRP	Steady-state Reactive Power	MVAr range that can be maintained across the full range of MW output from minimum generation to maximum generation
DRR*	Dynamic Reactive Response	Reactive current response for a voltage dip in excess of 30% that would achieve at least a reactive power in MVAr of 31% of the registered capacity at nominal voltage. The reactive current response shall be supplied with a Rise Time no greater than 40 ms and a Settling Time no greater than 300 ms.

9 APPENDIX 2 - EXAMPLE QUALIFICATION CRITERIA

Table 1: Example Legal qualification requirements for new plants

	Evidence and data	Option	
		A	B
1	Statement that the potential System Service provider has understood the terms of the competition and that the qualification documents are complete, true and accurate	●	●
2	Potential System Service provider corporate form and legal status (company, joint venture, partnership etc).	●	●
3	Names of directors and/or names of authorised representatives and contact details	●	●
4	Ownership structure of potential System Service provider showing ownership shares above [25]%	●	
5	Statement that the potential System Service provider has, or will obtain, all necessary licences to operate	●	●
6	Statement of significant litigation which might impact on the ability to deliver the investment and System Services	●	
7	List and CVs of key legal personnel	●	

8	Confirmation statement by a professional services firm of appropriate standing that the potential System Service provider has, or will have, appropriate legal status and that the directors and/or other authorised representatives have authority to act in its name	●	●
9	Bid bond in the standard amount provided by an independent financial institution of appropriate standing	●	●
10	Confirmation statement by an independent financial institution of appropriate standing that it will provide a performance bond in the standard amount if the potential System Service provider is selected to provide any System Service	●	●

Table 2: Example Financial qualification requirements for new plants

	Evidence and data	A	B
1	Evidence of successful financing of investments of comparable scale to the proposed investment (at least [ ] reference projects)	●	
2	Historical financial statements and annual reports for the last [three] years	●	
3	List and status of any other investment projects being undertaken by the potential System Service provider which could materially impact on its ability to finance the System Service investment.	●	

4	Credit rating if the potential System Service provider is a rated entity	●	
5	Financing plan for the investment comprising detailed schedule of sources and uses of funds for the investment for the period through to the first delivery year	●	
6	Projected financial statements and solvency ratios for the period to end of the last delivery year.	●	●
7	List and CVs of key financial personnel	●	
8	Confirmation statement by an independent professional services firm of appropriate standing that historical financial data are accurate and that projected financial data are fair and reasonable and based on reasonable assumptions.	●	●

Table 3: Example Technical qualification requirements for new plants

	Evidence and data	A	B
1	Evidence of successful delivery of investments of comparable scale to the proposed investment (at least [ ] reference projects)	●	
2	Evidence of successful delivery of System Service investments similar to the proposed System Service investment (at least [ ] reference projects)	●	

3	Evidence of successful provision of System Services of comparable scale (at least [one] System Service being provided elsewhere)	●	
4	Technology classification as proven, demonstration, concept or unproven. Proven is defined as technology readily available on commercial markets and in commercial use for [three] years; Demonstration is defined as technology available on commercial markets but in commercial use for less than [three] years; Concept is defined as technology developed but not available on commercial markets; Unproven is all other technologies.	●	●
5	New or refurbishment statement.	●	●
6	Plant description. Major features of plant that will provide the System Service including matters such as type (for example OCGT, CCGT, hydro with storage, network device, interconnector, demand-side response) location. For generation and network plant, operating mode (for example, fully dispatchable, constrained dispatchable, must run), projected forced and planned outage rates. For thermal plants, fuel, fuel source and projected thermal efficiency. For demand-side response, details of how the response will be achieved.	●	●
7	Network connection description and status. [Transmission and] Distribution connection agreements showing connection capacity will be available before the delivery year may need to be provided.	●	
8	Metering description and status.	●	
9	Consent status. For example related to planning permissions, environmental and licensing requirements.	●	
10	Lead time. Minimum time required from selection to scheduled commercial operation date.	●	●

11	Project schedule including key project milestones, earliest and latest due dates, and showing critical path. Key pre-construction and construction milestones might include financial commitment, receipt of all licences and permits to commence site work, site start, foundations completed, electrical and mechanical plant completed, network connection completed, metering completed, synchronisation, performance tests and commissioning completed.	●	●
12	Plant technical characteristics relevant to dispatch of the System Services. These may vary by delivery year.	●	●
13	Capability statement. Maximum volume of System Services that can be provided. These may vary with delivery year.	●	●
14	List and CVs of key technical personnel	●	
15	Confirmation statement by an independent professional services firm of appropriate standing that historical technical data are accurate and that projected technical data are fair and reasonable and based on reasonable assumptions.	●	●

Table 4: Legal qualification requirements for existing plants

	Evidence and data	A	B
1	Statement that the potential System Service provider has understood the terms of the competition and that the qualification documents are complete, true and accurate.	●	●

2	Potential System Service provider legal structure (company, joint venture, partnership etc)	●	●
3	Names of directors and/or names of authorised representatives and contact details.	●	●
4	Statement that the potential System Service provider has all necessary licences to operate	●	●
5	List and CVs of key legal personnel	●	
6	Confirmation statement by a professional service firm of appropriate standing that the potential System Service provider has appropriate legal status and the directors and/or authorised representatives have authority to act in its name	●	●
7	Bid bond in the standard amount provided by an independent financial institution of appropriate standing	●	●
8	Confirmation statement by an independent financial institution of appropriate standing that it will provide a performance bond in the standard amount if the potential System Service provider is selected to provide any System Service	●	●

Table 5: Financial qualification requirements for existing plants

	Evidence and data	A	B
1	Historical financial statements and annual reports for the last [three] years	●	

2	Credit rating if the potential System Service provider is a rated entity	●	
3	Projected [financial statements and] solvency ratios for the delivery period.	●	
4	List and CVs of key financial personnel	●	
5	Confirmation statement by an independent professional services firm of appropriate standing that historical financial data are accurate and that projected financial data are fair and reasonable and based on reasonable assumptions	●	

Table 6: Technical qualification requirements for existing plants

	Evidence and data	A	B
1	Statement of changes to plant technical characteristics and capability to provide each System Service since last qualification with technical justification.	●	●
2	Evidence for reliability. This might comprise date of most recent successful performance test and a reliability indicator for the [last] delivery year.	●	
3	Plant description. Major features of plant that will provide the System Service including matters such as type (for example OCGT, CCGT, hydro with storage, network device, interconnector, demand-side response) location. For generation and network plant, operating mode (for example, fully dispatchable, constrained dispatchable, must run),. projected forced and	●	●

	planned outage rates. For thermal plants, fuel, fuel source and projected thermal efficiency. For demand-side response, details of how the response will be achieved.		
4	Network connection description.	●	●
5	Metering description and meter numbers.	●	●
6	Plant technical characteristics relevant to dispatch of the System Services.	●	●
7	Capability statement. Maximum volume of System Service s that can be provided. This may vary with time.	●	●
8	Evidence for capability. This might comprise volumes provided in [three] trading periods, separated by at least 24 hours, in the [last] delivery year in which the maximum volumes of the System Service were provided.	●	
9	List and CVs of key technical personnel	●	
10	Confirmation statement by an independent professional services firm of appropriate standing that historical technical data are accurate and that projected technical data are fair and reasonable and based on reasonable assumptions	●	●