Qualification Trial Process (QTP)

Call for Information Response

A response to the 2025 Call for Information on Qualification Trial Process

August 2025

EirGrid SONI

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1. Introduction & Background to QTP

The Qualification Trial Process (QTP) is a key activity under the Operations pillar of EirGrid and SONI's Shaping Our Electricity Future Roadmap. The process contributes towards the transition of the power system from one powered by fossil fuels to renewables.

The purpose of the QTP has been to enable new technologies to prove their system service capabilities prior to their participation in the central procurement process. It originally started under the DS3 System Services Regulated Arrangements and has helped to support new technologies to qualify for system services and subsequently provide these services at scale. While each individual service provider needs to pre-qualify through the central procurement process for any system services they intend to provide, the QTP provides a process for proving the capability of a technology type to provide a service where there had been no proof of this before, thereby removing barriers to participation in the central procurement processes.

The outcomes of these trials help EirGrid and SONI to consider whether the ability of the technology to provide the system services within a service category is 'proven' (such as those on the "Proven Technology Types" list, the latest version of which is at the following link).

Following the lack of responses to the last two Calls for Information, EirGrid and SONI engaged with the regulators and made changes to the scope of the QTP. These changes aim to support the trial of new or modified system services. Based on this, EirGrid and SONI published a "Call for Information" on 09/05/2025. Following this, feedback was received from 4 industry stakeholders.

This response to the call for information discusses opportunities to improve the QTP framework and highlight the potential of emerging technologies to support system needs.

2. List of questions for stakeholders

The following questions were put to the stakeholders in the Call for Information.

Q1. Do you have any comments on the current QTP process, and do you have feedback on the new proposed wider QTP scope? Are there any changes you would like to suggest which can enhance the effectiveness of the QTP?

Q2. Are there particular technology classes or services that you think the TSOs should focus on for our next trial?

The remaining section of the report discusses the responses received to each of questions. In reviewing the respondents feedback, the key areas of that emerged relate to the need for greater flexibility in trial eligibility, the importance of expanding the QTP scope to include emerging technologies, concerns around technical integration challenges such as short-circuit levels, and calls for a more streamlined and well-resourced process to accelerate low-carbon innovation while ensuring grid stability. Detailed feedback relevant to each theme is presented below.

Q1. Do you have any comments on the current QTP process, and do you have feedback on the new proposed wider QTP scope? Are there any changes you would like to suggest which can enhance the effectiveness of the QTP?

Industry feedback: Respondents broadly support the expansion of the QTP scope to include emerging technologies and services under the Future Arrangements for System Services (FASS). One respondent highlighted a need for more clarity and flexibility in the QTP process to ensure it does not create unintended barriers to participation. This includes calls for clearer application procedures, improved guidance on the proven technology list, and transparency around eligibility and timelines.

There is also a strong call for increased flexibility in participation requirements – particularly regarding grid connection status at the time of application – and for allowing stakeholders to express interest year-round. Some respondents also suggested incorporating staged or phased trial designs, simplified DSO involvement for distribution-connected assets, and clearer reporting expectation to improve efficiency and engagement.

Respondent	1	2	3	4
Support QTP Scope	✓	✓	✓	✗
Request more flexibility	✓	✓	✓	✓
Suggested Phased/Structured Trials	✓	✗	✓	✗

Table 1 - Common Points in Response to Question1

TSO's Response: The TSOs would like to thank all stakeholders for their valuable engagement and contributions to date. We are committed to supporting strong communication with industry and will continue to look for ways to make it easier for developers to engage with the QTP. Going forward, we aim to improve how we work with industry, including more regular updates, opportunities to express interest and clearer guidance. We will also look to develop improvements in the process to provide such flexibility where suitable and provide further clarity in the proven technology list.

Future QTP trials will take into account both the helpful suggestions received in response to this Call for Information and the directions provided by the SEM Committee's decision. This combined input will help us shape a process that is transparent, flexible and better to supporting innovation and system needs.

Q2. Are there particular technology classes or services that you think the TSOs should focus on for our next trial?

Industry feedback: Feedback highlighted a range of promising technologies to prioritise, including supercapacitors, ultra-fast storage, mechanical storages like compressed gas storage, hybrid plant controllers, and synchronous wind turbines (Type 5) capable of delivering full system services. Respondents emphasized the importance of testing technologies that can provide Fast Frequency Response (FFR), synthetic inertia, blackstart capability, and advanced control functionalities. There were also calls to enable trials that address real system challenges – like renewables curtailment, dispatch-down reduction, and long-duration storage integration.

One of the respondents, proposed a number of high-level technology solutions aimed at addressing current system challenges, particularly around curtailment and grid resilience. They pointed to potential trial areas including wind-battery blackstart capability, negative reserve operation from wind assets, and intertrip schemes to enable greater use of renewable generation in transmission constrained areas.

Respondent	1	2	3	4
Storage Technologies	✓	✗	✓	✓
Wind or Hybrid Technologies	✓	✓	✗	✗
Technologies addressing curtailment, reduce dispatch-down, blackstart & dynamic SSRP in BESS Control systems	✗	✗	✓	✗

Table 2 - Summary of Technology Areas Suggested by Call for Information Respondents

In addition to the responses received through the Call for Information, the TSO have engaged with a number of other stakeholders through prior interactions and ongoing discussions. While these stakeholders did not submit formal responses as part of the Call for Information, they have expressed a strong interest in participating in future trials. In particular, there has been notable interest in developing new approaches

to enable aggregations of smaller demand sites to provide reserve services in ways which are different to how they are provided today.

TSO's Response: The TSOs are pleased to see the feedback reflects a diverse and innovative range of technologies, highlighting the industry's strong interest in supporting system needs through emerging solutions. We particularly welcome the focus on innovation and system value, with energy storage emerging as a common area of opportunity across submissions. We strongly support the continued development of such solutions and encourage applicants from across the technology spectrum to engage with future QTP opportunities. The insights provided will help inform how we shape and prioritise future trials, ensuring they remain relevant, inclusive, and aligned with the evolving needs of the power systems.

In addition to proposals suited to the QTP framework, some responses included concepts that fall outside its immediate scope – such as initiatives related to enhanced forecasting tools, intertrip schemes to maximise renewable output and dispatchable demand. However, the TSOs recognise the importance of these ideas and their potential to support broader system objectives. We are open to continuing discussion on these topics and will explore the opportunities to engage further through other appropriate channels outside the QTP process.

The TSOs also note a growing sector-wide interest in Grid Forming technologies due to the potential to contribute to system stability, voltage support and operational resilience. This topic was raised indirectly in the responses to this Call for Information (such as in proposals for blackstart and dynamic reactive power provision from BESS technologies), and it aligns closely with ongoing system operator development objectives (such as the development of a grid forming strategy and policy, as outlined in TSO documents such as the Operational Policy Roadmap 2025-2035). As such, the TSOs intend to prioritise Grid Forming technologies in future QTP trials to support the integration of advanced capabilities that can operate reliably across a wide range of system conditions.

3. Qualification Trial Process

Following the conclusion of the Call for Information, and taking into account the feedback received, the TSOs have outlined the QTP 2025 process to ensure a clear, structured and transparent approach. The process spans approximately 26 months (depending on the duration of trials) and is designed to support innovation and provide sufficient time for meaningful trial execution and evaluation. It is structured into five key phases:

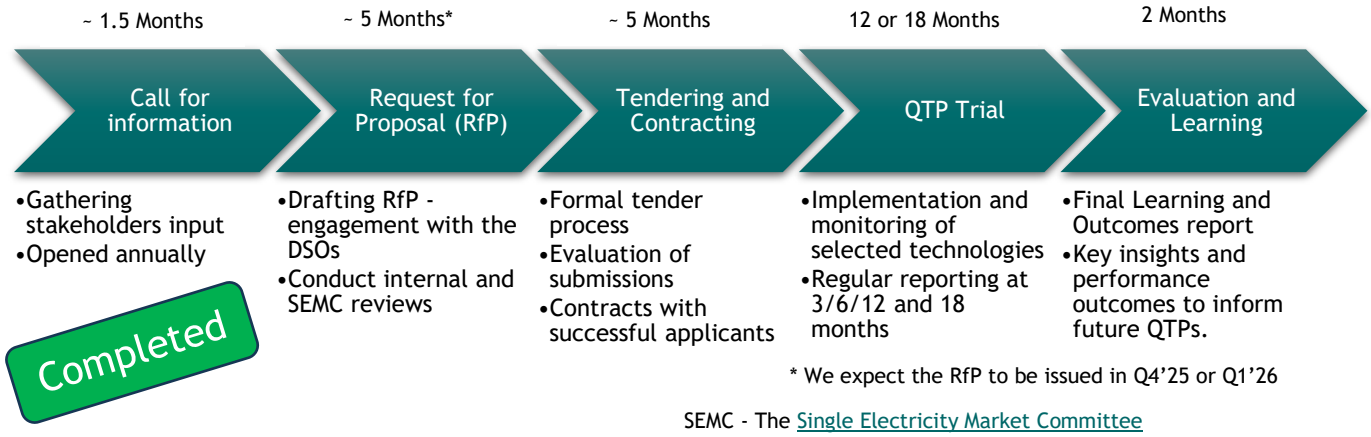

Figure 1 – Qualification Trial Process

4. Next Steps

Our stakeholders are central to how we shape and deliver future QTP trials. Their input plays a key role in identifying system needs, emerging technologies, and the most effective ways to structure the process. Some suggestions received extended beyond the immediate scope of the QTP framework – including areas such as enhanced forecasting, intertrip schemes, renewable output maximisation etc. While these are outside the current QTP scope, they offer potential benefits for broader system objectives, and the TSOs will consider further engagement on them through other suitable channels.

Based on the valuable feedback received through this Call for Information and prior engagement with the stakeholders, the TSOs are proposing to conduct one or more trials for the QTP 2025-2026 (one open lot) which will mainly focus on provision of system services by new technologies, with priority given to **grid forming** proposals. A sample of proposed technologies are outline below, however this not limited to those proposed.

- Provision of System Services by renewable generation in ways which are not yet proven,
- Ultra-capacitors/supercapacitor,
- Energy Storage, others than the ones listed in the Proven Technology list (link), or in ways which are not yet proven,

Provision of system services by demand side response in ways which are not yet proven (such as different technical approaches to providing the services, or different sources such as Residential Demand Side Management).The trial/trials will be designed to assess the technical capabilities of the new technologies that are not yet proven (link). A maximum budget of €400,000 will be allocated for trialling and will be split across the trials, with procurement planned to commence in early 2026. Further details on the budget and timeline will be provided in the Request for Proposal (RfP), which is expected to be published in early December 2025.

This Call for Information published on 9th May 2025 has directly informed the focus of the QTP trials planned for 2025-2026. A new Call for Information is expected in Q1/Q2 2026, which will guide the planning of QTP trials for the 2026-2027 cycle.