

SONI Forward Work Plan

2023 – 2024

Appendix 4 SONI Deliverables 2023-2024

Role 4 Commercial Interface

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SONI Deliverables 2023-2024 – Role 4 Commercial Interface

The SONI Forward Work Plan provides details on the various projects and programmes of work that will be undertaken over the period from October 2023 to September 2024. This appendix provides further detail on those deliverables associated with Role 4 Commercial Interface and should be read in conjunction with the main document.

Cost Scale

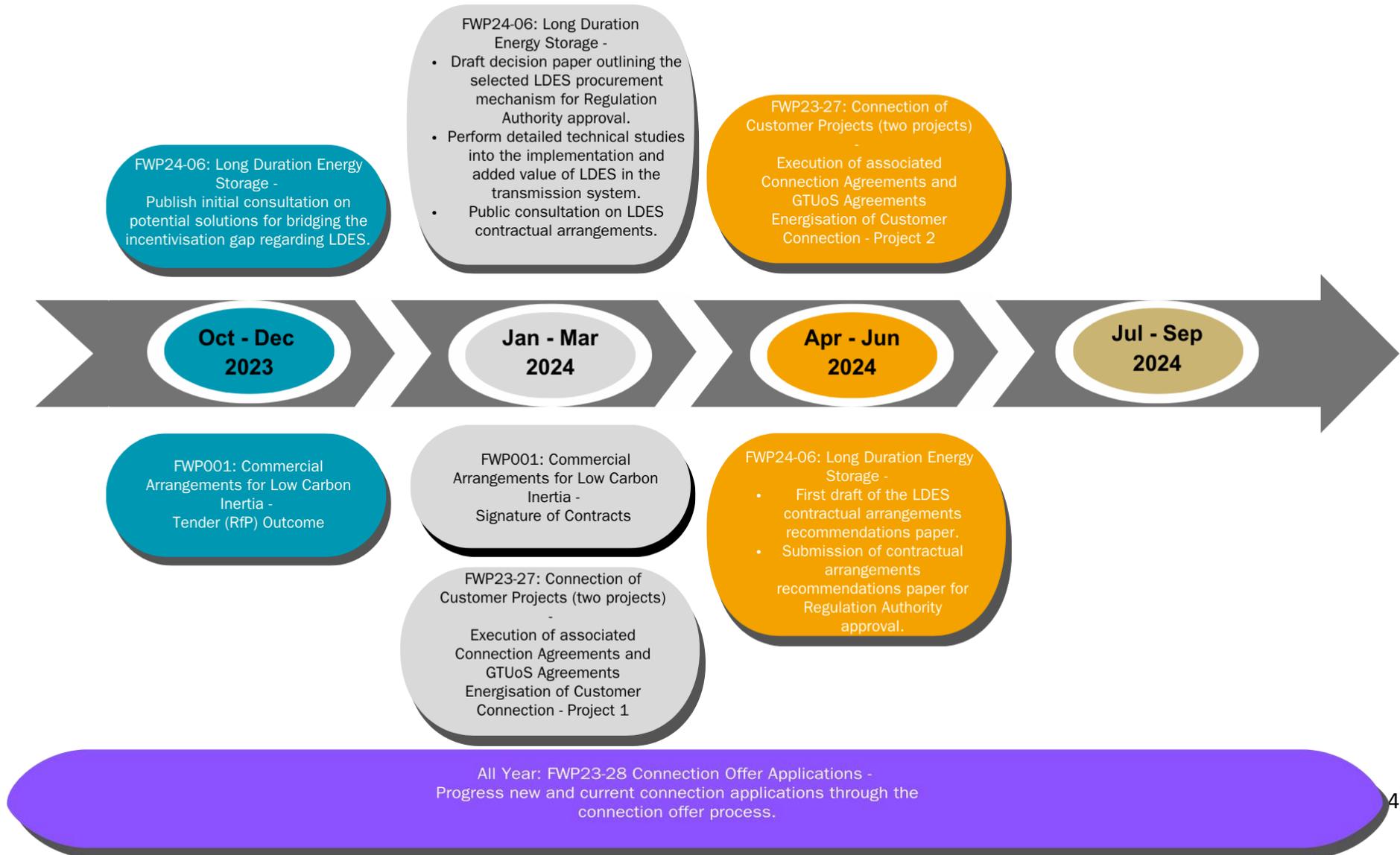
SONI have created a Cost Scale in order to assist the audience in understanding the scale and/or importance of a project, and detailed where on this scale each project lies. The costs indicated are SONI related costs and do not cover any costs accrued by any stakeholder SONI may be collaborating with on said project.

This scale applied is detailed below:

Low	Medium	High	Very High
£0 - £500k	£500k - £1M	£1M - £5M	£5M +

Overview of the projects

The table below provides a complete view of the projects being undertaken across Role 4 Commercial Interface. These projects are expanded upon throughout this document.



Project	Milestone	Performance Measure	Timescale
FWP23-27 Connection of Customer Projects (two projects)	Execution of associated Connection Agreements and GTUoS Agreements Energisation of Customer Connection	Number of Project Energisations	February 2024 and April 2024
FWP23-28 Current Applications in the Connection Offer Process	Progress new and current connection applications through the connection offer process	Connection Offer Issued in accordance with Condition 25	Throughout 2023/24
FWP001 Commercial Arrangements for Low Carbon Inertia	Tender (RfP) Outcome	Successful completion of Tender Process	December 2023
	Signature of Contracts		January 2024
FWP24-06 Long Duration Energy Storage	Publish initial consultation on potential solutions for bridging the incentivisation gap regarding LDES.	Timely delivery of the recommendations paper for Regulatory Authority approval.	October 2023
	Draft decision paper outlining the selected LDES procurement mechanism for Regulation Authority approval.		January 2024 (depending on the scale of responses)
	Perform detailed technical studies into the implementation and added value of LDES in the transmission system.		March 2024
	Public consultation on LDES contractual arrangements.		February 2024
	First draft of the LDES contractual arrangements recommendations paper.		April 2024
Submission of contractual arrangements recommendations paper for Regulatory approval.	June 2024		

Role 4: Detailed Programme of Deliverables

Connection of Customer Projects (two projects)

SONI is progressing the connection of two Gas Turbine (GT) projects which have accepted connection offers and are currently in the construction phase of development.

Over the period of this Forward Work Plan, it is planned that two projects will energise and therefore a key objective will be the execution of two Connection Agreements and two Generator Transmission Use of System (GTUoS) Agreements.

There are dependencies on NIE Networks and their continued collaboration during the construction phase to progress according to the project’s construction phase timeline. There are dependencies on the developer fulfilling their requirements in order to complete the construction of the connection assets and progress the issue of the associated Connection Agreement and GTUoS Agreement.

A detailed project overview is provided below.

Deliverable	FWP23-27: Connection of Customer Projects (Two projects)
Description of Activities	<p>SONI is supporting the delivery of two connections for the customer Gas Turbine (GT) projects which are currently in the construction phase of development.</p> <p>They are expected to energise during 2024. SONI’s key activities include:</p> <ul style="list-style-type: none"> • Completion of SONI construction activities • Energisation of the customer connections • Execution of associated Connection Agreements • Execution of associated GTUoS Agreements and • Testing to confirm Grid Code compliance <p>SONI will continue to progress the construction of the two connection assets for the customer projects in coordination and collaboration with NIE Networks (as Transmission Owner) and the developer of each project.</p> <p>Part of this process will include the preparation of both a Connection Agreement and Generator Transmission Use of System Agreement (GTUoSA). Preparation of these agreements is at an advanced stage to align with current target energisation dates in February and April 2024.</p>
Key Benefits	<p>These two projects will provide new generation capacity to the power system following energisation, contributing to security of supply.</p>
UR Service Priorities	<p>A culture of effective engagement and collaboration Whole system collaboration and coordination with 3rd parties, and NIE Networks across its various roles as a TO, DNO and DSO</p> <p>SONI will be engaged in open, transparent, and collaborative communication working together with the project developer and NIE Networks throughout the project to Energisation. This active engagement is critical in the preparation of the connection agreements, to ensure all information provided is up to date, accurate and relevant – actively communicating with all parties and working</p>

	together to energise these projects is an important aspect to the deliverables. This will continue through to the testing phase which will commence once the units are energised.			
Engagement	<p>There is expected to be continued engagement and collaboration with NIE Networks (as Transmission Owner) and the developer for the projects throughout 2023 and 2024.</p> <p>We will coordinate our approach to collaboration with both parties through continuous engagement, led by the SONI Project Manager. Regular tripartite meetings have been taking place and this will continue through energisation and commissioning phase of the projects to ensure that all technical, safety and contractual obligations are met. This will also facilitate an efficient exchange of information between all parties.</p>			
Performance Measure	GT6 and GT7 projects energised with TUoS and Connection Agreements in place.			
Timescale	<p>Project 1 available to energise in February 2024 Project 2 available to energise in April 2024</p> <p>Note: These dates are based on the latest available information and are also dependent on timely completion of developer and NIE Networks activities</p>			
Cost Scale	Low			
SONI Outcome	Decarbonisation	Grid Security	System Wide Costs	Stakeholder Satisfaction

Connection Offer Applications

SONI currently has a number of connection applications ongoing in the Connection Offer process. Over the period of the plan SONI will continue to engage with both NIE Networks and the Utility Regulator in order to progress current and new applications through the Connection Offer Process.

A detailed description of the associated activities within this area is provided below.

Deliverable	FWP23-28: Current Applications in the Connection Offer Process and projects in Connection Process (post offer acceptance)
Description of Activities	<p>SONI currently has a number of connection applications ongoing in the Connection Offer process. It is envisioned that these will progress over the next year through:</p> <ul style="list-style-type: none"> • Engagement with NIE Networks to progress the SONI Construction Application and NIE Networks Construction Offer required for SONI to develop the SONI Connection Offer. • Preparation and issue of the SONI Connection Offer. • Progressing any accepted Connection Offers and performing the required validation checks. • Handover of the projects to relevant SONI team and NIE Networks to progress the SONI Pre-Construction Works, NIE Networks' Construction Works and the SONI Construction Works • Ensure the NI Connections Register¹ on the SONI website is kept up to date. <p>This will involve working together with applicants to ensure that we have all the correct relevant information to progress their application to the deemed effective stage (i.e. in receipt of all such information as SONI may reasonably require for the purpose of formulating the terms of the Connection Offer and received any relevant Application Fee that may be applicable) and also close engagement to keep applicants apprised on the progress of their connection offer, and ensure that they are aware of the relevant consents for a Connection Offer Acceptance to be made.</p> <p>This work will also involve collaboration with NIE Networks which will require regular contact and engagement to discuss the various projects and establish these projects as well as engagement with the Utility Regulator at our monthly meetings to advise of any progressing connection offers, any challenges being faced and the actions SONI is taking to mitigate these challenges.</p> <p>In advance of prospective developers making a connection application to them, SONI encourages engagement in advance of the application being made to make the developer aware of the process and the conditions that would need to be met to accept an offer (e.g., deposits, Capacity Bonds, Relevant Consents, etc). This early engagement is particularly important for those wishing to apply to connect emerging technologies. SONI regularly engages with prospective developers in advance to support an efficient application process.</p> <p>SONI is experiencing a step change in the volume and complexity of connection applications received. The security of supply issues we face, 80% renewable targets set out in the Climate Change Act (NI) 2022 for 2030 and the road to net zero by 2050 means that the power system is being</p>

¹ [Connections and Applications \(soni.ltd.uk\)](https://soni.ltd.uk)

	transformed. The connections area is supporting this transformation by facilitating the connection of various technologies including replacement conventional generation, low carbon synchronous condensers, storage and renewable projects.
Key Benefits	<p>The key benefits to this work are:</p> <ul style="list-style-type: none"> • Timely provision of Connection Offers provided for prospective connectees that support wider economic growth, decarbonisation of the electricity system and enhance security of supply. • Clear information provided to ensure developers can progress commercially viable projects. • Supporting the Climate Change Act (NI) 2022 for 80% renewables by 2030. • Enhance security of supply.
Strategic Theme	<p>Developing markets through competition and stakeholder engagement and collaboration and whole system collaboration and coordination with 3rd parties, and NIE Networks across its various roles as a TO, DNO and DSO</p> <p>Engagement is pivotal in the connection offer and connection process. SONI engages at an early stage with NIE Networks, upon receipt of an application, through the progression of the project and continue this engagement through pre-construction and construction phases including energisation, sharing information and discussing the project through simultaneous engagement with the developer. We are working with NIE Networks and developers to increase competition, increase renewables and facilitate new technologies that reduce our reliance on traditional fossil fuels. Competition in the wholesale market will put downward pressure on prices and we anticipate many new connection applications will focus on decarbonisation. SONI therefore acts as a key enabler of change through driving the connection offer process whilst ensuring a level playing field.</p> <p>This therefore aligns with the Utility Regulator’s culture of effective engagement and collaboration as well as whole system collaboration and coordination with third parties and NIE Networks.</p> <p>Only by engaging with developers can we progress towards achieving our goals as provided in the Government targets set for achieving net zero carbon and enable the Path to Net Zero to be fulfilled. Working together with developers and key stakeholders, ensuring they are fully aware of their requirements during the Connection Offer Process and assisting them with any queries as and when they arise.</p>
Engagement	<p>Engagement occurs throughout the Connection Offer Process and Connection Process. SONI will be engaged with NIE Networks in accordance with the parties’ respective roles under the Transmission Interface Arrangements, collaborating on project progression, preparation and submission of the Construction Applications and Construction Offers and again as the project enters pre-construction and construction phases.</p> <p>SONI also maintains engagement with the developer throughout the connection offer process. From early discussions, when developers are considering making an application, to discussion of their project requirements, the application stages and the preparation of the associated connection offer. Once an offer is accepted and the project progresses through to the next</p>

	<p>phase, preconstruction then construction, SONI holds a handover meeting to formally introduce the project manager for the next phase of engagement so there is an efficient project handover.</p> <p>SONI engages with the Utility Regulator on a monthly basis in joint working level meetings but also as and when necessary. SONI informs the Utility Regulator of the progress being made across the projects, any potential issues and how it is mitigating those issues. We also share information of any projects approaching energisation with the Utility Regulator, so they are aware of the potential requirements that need addressed.</p> <p>SONI will also continue with the publication of the NI Connections Register² on the SONI website for all stakeholders to view as and when required.</p>			
Performance Measure	Connection Offers Issued in accordance with Licence Condition 25			
Timescale	Offers issued in 3 months, with extensions requested where complexities emerge in accordance with Licence Condition 25			
Cost Scale	Low			
SONI Outcome	Decarbonisation	Grid Security	System Wide Costs	Stakeholder Satisfaction

² [Connections and Applications \(soni.ltd.uk\)](https://www.soni.ltd.uk)

Commercial arrangements for Low Carbon Inertia

The Single Electricity Market Committee (SEMC) has requested that the TSOs carry out an assessment and bring forward proposals for a fixed term procurement in relation to low carbon inertia services (LCIS).

The motivation for this request is to support the integration of technologies which can facilitate a reduction in the quantity of carbon intensive conventional generation required on the all-island power system. This reduction will facilitate the further integration of renewable generation and contribute towards achieving our 2030 Renewable Energy Source (RES) targets.

Deliverable	FWP001: Low Carbon Inertia Services
Description of Activities	<p>LCIS is a critical service to deliver on the Government’s renewable energy ambitions to 2030. LCIS is required to enable relaxation of operational constraints and to accommodate more wind and solar generation. Therefore, the basis of this programme of work is to develop a process to procure LCIS in order to meet our requirements and achieve our targets.</p> <p>The procurement of LCIS will follow a phased approach. In Phase 1, LCIS will comprise the provision of synchronous inertia, reactive power support, and additional system strength (short circuit contribution) and the procurement will focus on our 2026 requirements. A Phase 2 will follow to meet our 2030 requirements.</p> <p>Phase 1:</p> <p>In 2022, SONI completed detailed technical studies to identify the volume requirements, including the locational requirements.</p> <p>Following the outcome of the studies, we have consulted stakeholders on the requirements and procurement design for LCIS and obtained approval from the Single Electricity Market Committee (SEMC) in January 2023.</p> <p>We have then published a second consultation in April 2023 on the contractual arrangements that will govern the provision of the service and have submitted our recommendations paper to the SEMC and have obtained approval from the SEMC in August 2023, allowing us to start the Tender.</p> <p>The LCIS Procurement process is being carried out in two separate stages, Stage 1 – Pre-Qualification Questionnaire (PQQ), followed by Stage 2 – Tender, which is also called a Request for Proposal (RfP). The purpose of the PQQ is to qualify companies based on their previous experience to progress to the next stage, while the purpose of the RfP is to evaluate the offers received and to identify the successful tenderers.</p> <p>The PQQ commenced in July 2023 and the outcome is expected in September 2023. It is expected that prequalified candidates will be invited to complete an RfP in September/October and that the outcome will be in December 2023.</p> <p>Planned activities over the 2023/2024 period include:</p> <ol style="list-style-type: none"> 1. Commence Tender (RfP) process – September/October 2023 2. Tender (RfP) Outcome – December 2023 3. Signature of Contracts – January 2024

	Phase 2:			
	Following the outcome of Phase 1, the LCIS Procurement Phase 2 will commence. Phase 2 will also require conducting a comprehensive suite of studies to determine our 2030 requirements and to consult industry on these requirements, procurement approach and contractual arrangements before progressing to tender stage. The tender process is expected to start in Q4 2024 and be completed in 2025.			
Key Benefits	New sources of low carbon system services are needed for a secure transition to 2030. This new capability will be significantly less carbon intensive than the legacy plant it replaces.			
	A balanced portfolio of batteries, demand side, interconnection, and renewable gas ready conventional capacity (amongst other service providers) will be required to meet our needs. This programme will ensure that we are able to operate a secure, safe, and reliable transmission system by ensuring that all forms of low carbon generation can be procured. This will ensure all renewable sources of generation can play an important role and facilitate security of supply, therefore bringing benefits to the SONI Grid Security outcome.			
Strategic Theme	A culture of effective engagement and collaboration, developing markets through competition and stakeholder engagement and collaboration.			
	The Low Carbon Inertia Services project is a key part in awarding contracts which will facilitate a low carbon future. SONI is being proactive in our engagement surrounding the procurement of, and contractual approach, to LCIS. SONI considers this demonstrates our agility and responsiveness to changing policy and market development through competition and engagement activities with stakeholders.			
Engagement	SONI engaged with stakeholders throughout the preparation of the LCIS procurement, giving them the opportunity to express their views in two separate consultations, as well as meeting with SONI in bilateral meetings. SONI also strongly engaged and kept updated the Regulatory Authorities through workshops and fortnightly meetings. Finally, as part of the standard procurement process, SONI will endeavour to answer any clarification questions from tenderers during the Pre-Qualifying Questionnaire (PQQ) and RfP processes.			
Performance Measure	Timely delivery of consultations and TSO recommendation papers Imperfections Cost			
Timescale	<ul style="list-style-type: none"> • Tender (RfP) Outcome – December 2023 • Signature of Contracts – January 2024 			
Cost Scale	Very High			
SONI Outcome	Decarbonisation	Grid Security	System Wide Costs	Stakeholder Satisfaction

Long Duration Energy Storage

The updated 2030 renewables targets and the carbon emission reduction targets has required a re-evaluation of the required capacity needed to maintain power system reliability while meeting these ambitious targets.

The analysis has shown that a balanced power system portfolio of different technologies is critical. There is an urgent requirement to ensure that there are no investment gaps in delivering on this. Long duration energy storage has been shown to be a crucial component of the balanced portfolio

A key output of the new iteration of Shaping Our Electricity Future (SOEF³) is that there is a need for Long Duration Energy Storage (LDES). Industry feedback is that there is a remuneration gap for investors to develop LDES. To investigate this the Market Operators and Transmission System Operators have commenced work, which will feed into a future expected decision by the SEM Committee, on this matter.

The tasks undertaken so far include:

- Engagement has been taking place with industry representative bodies, government agencies, the Distribution System Operators and the Regulatory Authorities throughout 2023.
- Shaping Our Electricity Future indicates the volume, durations and locations for LDES. We are also investigating further studies to look at the impact of not being able to deliver LDES, to support any regulatory submissions around the needs case.
- Work has been ongoing on the market options available to incentivise LDES. The options could include existing mechanisms such as the Capacity Remuneration Market or System Services. Equally it could be a new mechanism such as a support scheme, similar to the Renewable Electricity Support Scheme (RESS) in Ireland. We will engage and consult with industry on these options, prior to making a formal recommendation to the Regulatory Authorities.

Deliverable	FWP24-06: Long Duration Energy Storage
Description of Activities	<p>The Objectives & Key Benefits over the 2023/2024 period consist of:</p> <ul style="list-style-type: none"> • A consultation paper will outline the issues that are driving the need for a procurement mechanism for Long Duration Energy Storage (LDES) • Strike the balance between adequately incentivising investment in LDES, while also providing value for money to the end consumer • Close off a number of key risks such as questions surrounding, Minimum Import Capacity (MIC), Firm Access and market access. <p>The Key Actions & Deliverables over the 2023/2024 period include:</p> <p><u>Analysis of Potential Solutions:</u></p> <ul style="list-style-type: none"> • Publish initial consultation on potential solutions for bridging the incentivisation gap with regard to LDES – October 2023 • Draft decision paper outlining the selected LDES procurement mechanism for RA approval – January 2024 (depends on the scale of responses) <p><u>Technical Studies</u></p> <ul style="list-style-type: none"> • Perform detailed technical studies into the implementation and added value of LDES in the transmission system – March 2024 <p><u>Contractual Arrangements</u></p> <ul style="list-style-type: none"> • Public consultation on LDES contractual arrangements – February 2024 • First draft of the LDES contractual arrangements recommendations paper – April 2024

³ [Shaping Our Electricity Future Roadmap: A summary of version 1.1 \(soni.ltd.uk\)](#)

	<ul style="list-style-type: none"> Submission of contractual arrangements recommendations paper for RA approval – June 2024 			
Key Benefits	<p>Benefits are expected to include:</p> <ul style="list-style-type: none"> Facilitation of additional RES on the system Reduction in carbon usage Overall production cost reduction Reduction in dispatch down and associated costs <ul style="list-style-type: none"> ○ 			
Strategic Theme	<p>A culture of effective engagement and collaboration, developing markets through competition and stakeholder engagement and collaboration.</p> <p>The Long Duration Energy Storage project is a key part of the balanced power system portfolio of different technologies that is critical in being able to maintain power system reliability while meeting the 2030 renewables targets. SONI considers this demonstrates our agility and responsiveness to changing policy and market development through competition and engagement activities with stakeholders</p>			
Engagement	<p>Extensive engagement has already and will continue to take place with stakeholders. Engagement has also taken place with industry representative groups.</p>			
Performance Measure	<p>Timely delivery of the recommendations paper for Regulatory Authority approval.</p>			
Timescale	<p><u>Analysis of Potential Solutions:</u></p> <ul style="list-style-type: none"> Publish initial consultation on potential solutions for bridging the incentivisation gap with regard to LDES – October 2023 Draft decision paper outlining the selected LDES procurement mechanism for RA approval – January 2024 (depends on the scale of responses) <p><u>Technical Studies</u></p> <ul style="list-style-type: none"> Perform detailed technical studies into the implementation and added value of LDES in the transmission system – March 2024 <p><u>Contractual Arrangements</u></p> <ul style="list-style-type: none"> Public consultation on LDES contractual arrangements – February 2024 First draft of the LDES contractual arrangements recommendations paper – April 2024 Submission of contractual arrangements recommendations paper for RA approval – June 2024 			
Cost Scale	<p>Medium</p>			
SONI Outcome	Decarbonisation	Grid Security	System Wide Costs	Stakeholder Satisfaction