SONI Annual Performance Report 2023-24

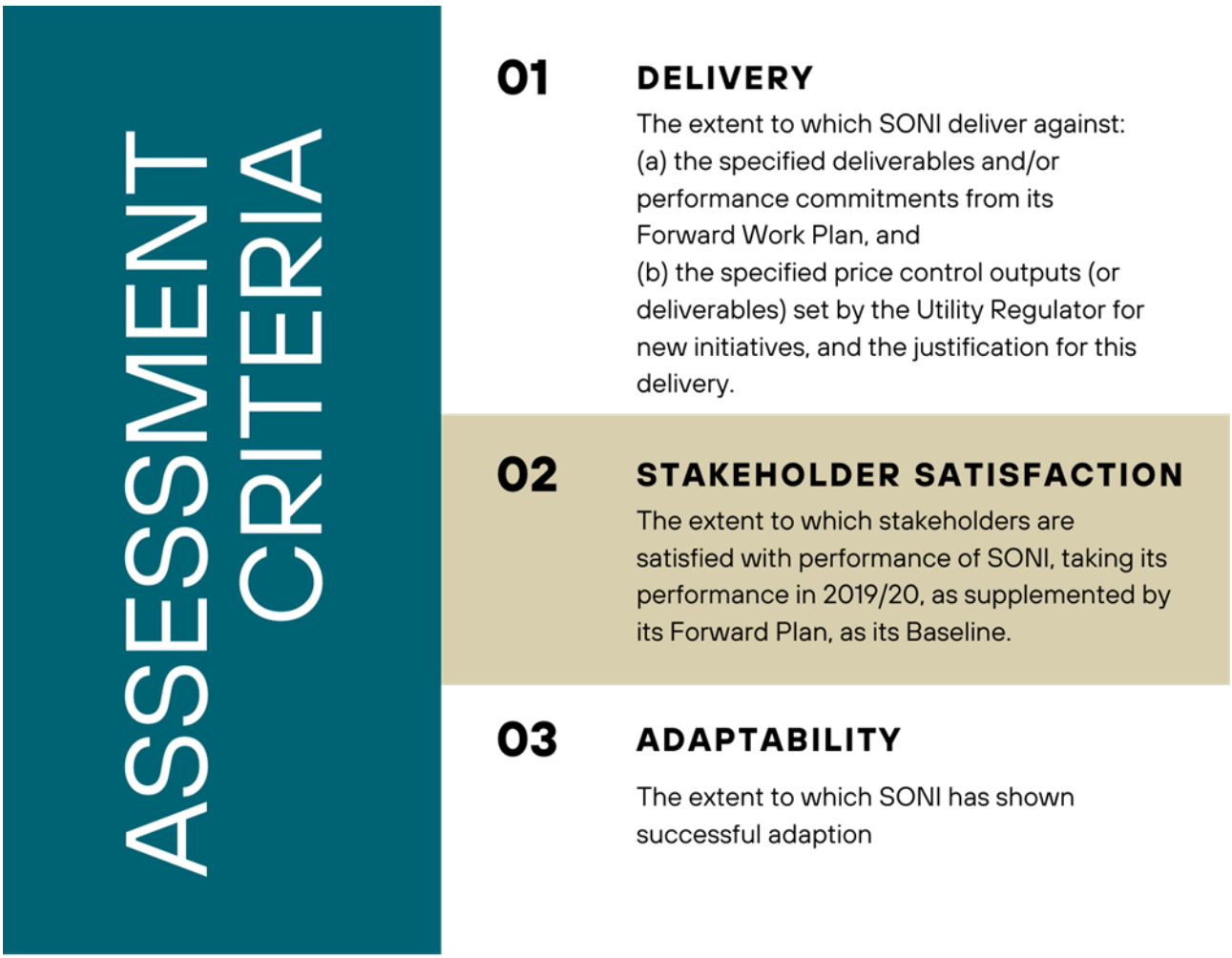
Appendix 1
System Operation and Adequacy

Northern Ireland
December 2024

Role 1 System Operation and Adequacy

Assessment Criteria

SONI's performance will be assessed by an independent panel and the UR on the following criteria:



For consistency and based on the advice contained in the UR's Evaluative Performance Framework Guidance document, we have applied the above criteria to the SONI Performance Report.

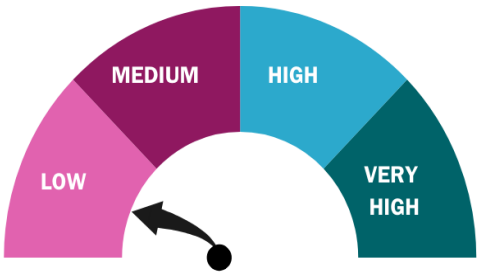
Cost Scale

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 in the table below, the gauge icon will be used in the detailed project information for each deliverable.

LOW	£0-£500K
MEDIUM	£500K-£1M
HIGH	£1M-£5M
VERY HIGH	£5M+

Cost Scale Table



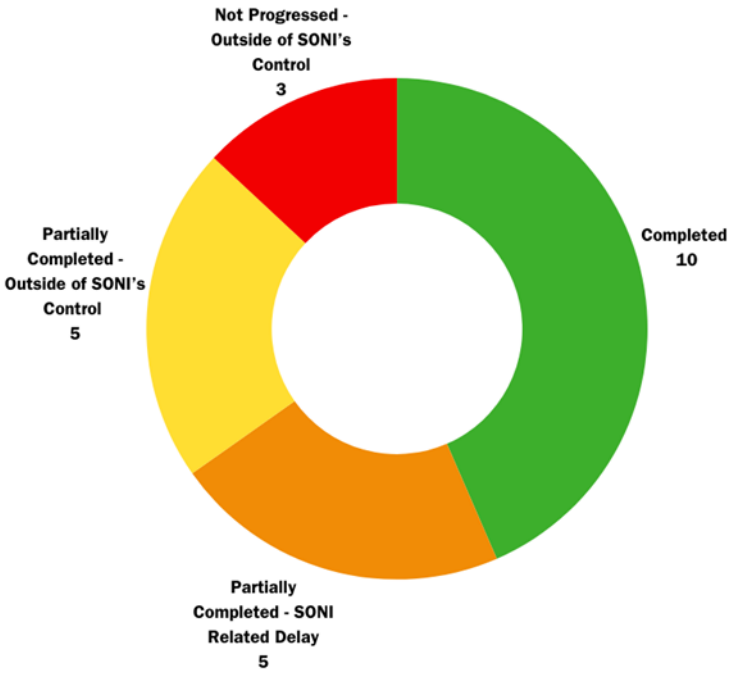
Cost Scale Gauge

Key Areas of Focus

In the 2023/24 Forward Work Plan, SONI highlighted our key areas of focus for the period, which include strategic projects that SONI deems to be of utmost importance for both SONI and Northern Ireland consumers. These projects are highlighted throughout this document and delivery of these areas of work is summarised below.

Role 1 System Operations & Adequacy Plan Delivery

Summary of Role 1 Deliverables



23 Milestones:

- **10** Completed
- 5 partially completed - Within SONI's Control
- **5** partially completed - **Outside of SONI's control**
- **3** Not progressed - **Outside of SONI's Control**

The table below has been included to provide a full list of the projects and deliverables associated with Role 1 System Operations & Adequacy

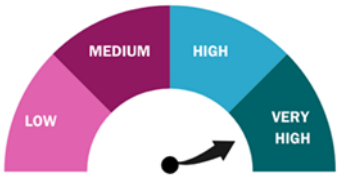
Project	Milestone	Status
FWP23-01: Future Arrangements System Services (FASS)	Publish FASS enduring daily auction/procurement design consultation paper	
	Publish FASS enduring daily auction/procurement design recommendations paper	
	Publish FASS enduring daily auction product review consultation paper	
	Publish FASS enduring daily auction product review recommendations paper	
FWP23-02 : Scheduling and Dispatch	A series of industry workshops are to be held monthly during Phase 3 & 4.	
	Approval for Trading and Settlement Code, Capacity Market Code & Grid Code Mods for Scheduling and Dispatch Programme Tranche 1 Initiatives.	

FWP004 Capacity Auctions Schedule	T-1 2024/2025 Capacity Auction	
	T-4 2027/2028 Capacity Auction	
	T-4 2028/2029 Capacity Auction	
FWP005: Control Centre Tools	Voltage Trajectory Tool (VTT) Single Time Point live and operational	
	Voltage Trajectory Tool (VTT) Multi-Timepoint Solution Live and Operational	
	Voltage Trajectory Tool (VTT) Enhancements - Phase 2	
	Voltage Trajectory Tool (VTT) Automated Modelling Environment	
	Ramping Margin Tool (RMT) Enhancements	
	Look-Ahead Security Assessment Tool (LSAT) Environments	
FWP008: Minimum Sets	Decision on trial completion and operational policy	
FWP012 End of Life Assets	System Refresh	
FWP013: EMS Upgrade	Energy Management System Midlife Upgrade Programme Phase 2	
FWP23-08: Implement a replacement energy metering solution	Conclude Contract with Chosen Vendor	
	Project Team Mobilisation	
	Complete the detailed design of the solution	
	Build and Implement the Solution	
FWP24-01: Introduction of NRAA	Publish the first Northern Ireland National Resource Adequacy Assessment (NRAA).	

Detailed Programme of Deliverables

FWP23-01 Future Arrangement System Services (FASS)	
Description of Activities	Our Shaping Our Electricity Future Roadmap identified the project deliverables below: ❑ Publish FASS enduring daily auction/procurement design consultation paper. Subject to SEMC Decision on Phased Implementation Roadmap being published in September 2023 - December 2023 ❑ Publish FASS enduring daily auction/procurement design recommendations paper. Subject to SEMC Decision on Phased Implementation Roadmap being published in September 2023 – March 2024 ❑ Publish FASS Layered Procurement Framework design consultation paper. Subject to SEMC Decision on Phased Implementation Roadmap being published in September 2023 – March 2024 ❑ Publish FASS Layered Procurement Framework design recommendations Paper. Subject to SEMC Decision on Phased Implementation Roadmap being published in September 2023 – June 2024 ❑ Publish FASS enduring daily auction product review consultation paper. Subject to SEMC Decision on Phased Implementation Roadmap being published in September 2023 – June 2024 ❑ Publish FASS enduring daily auction product review recommendations paper. Subject to SEMC Decision on Phased Implementation Roadmap being published in September 2023 – September 2024
Delivery	**Position as of 30th September 2024** ❑ Publish FASS enduring daily auction/procurement design consultation paper – **Complete** ❑ Publish FASS enduring daily auction/procurement design recommendations paper – **Complete** ❑ Publish FASS Layered Procurement Framework design consultation paper – **Descoped by Regulatory Authorities**

	❑ Publish FASS Layered Procurement Framework design recommendations Paper - **Descoped by Regulatory Authorities** ❑ Publish FASS enduring daily auction product review consultation paper - **Complete** ❑ Publish FASS enduring daily auction product review recommendations paper - **Complete**
Date Revision	Daily Auction/Procurement Design Consultation Paper and Recommendation Paper delayed due to delayed SEMC decision; SEM-23-103 published in December 2023.
Stakeholder Satisfaction/ Engagement	There has been extensive stakeholder engagement during the project including: ❑ Weekly engagement with the Regulatory Authorities on design issues. ❑ Joint RA/TSO workstreams established with weekly meetings held on licencing, and 4 workshops held on under the Real Time Security Arrangements workstream. ❑ Monthly engagement with Industry via Future Power Market Workshops (9 in total in 2024). ❑ Industry workshop hosted on each consultation paper released, either as part of the Future Power Markets workshop, or in a dedicated session. ❑ Bi-monthly engagement with stakeholders as part of a consultative group on the System Services Future Arrangements (SSFA) Project Panel. ❑ Quarterly engagement through Shaping Our Electricity Future (SOEF) Advisory Council. ❑ TSO presentation at the SEMC meeting in August 2024. ❑ SS Code Working Group held 3 workshops with working group members from industry and the Regulatory Authorities in 2024. ❑ FASSProgramme@soni.ltd.uk mailbox established to engage with industry
Adaptability	SONI has developed the DASSA (Day Ahead System Services Auction) design over a 2-year period and has adapted the design, as needed, following SEMC decisions. SONI publish 6 monthly updates to the FASS programme plan (the Phased Implementation Roadmap) to provide industry with increased detail as the programme progresses and to account for any changes following SEMC decisions. In addition, industry feedback has been gathered through an Industry Readiness Survey issued in November 2024. Allowing SONI to understand the current state of industry preparedness and adapt their readiness approach to best support stakeholders.

Cost Scale	

FWP23-02: Scheduling & Dispatch	
Description of Activities	Alignment of the energy market with high penetration of renewable generators - leading to scheduling and dispatch changes to ensure all market technologies and participants have equal access and opportunities. Over the period the following activities will be progressed: ❑ A series of industry workshops are to be held monthly during Phase 3 & 4. ❑ Approval for Trading and Settlement Code, Capacity Market Code & Grid Code Mods for Scheduling and Dispatch Programme Tranche 1 Initiatives. ❑ Implement the people, process, and technology changes for the Scheduling & Dispatch Tranche 1 initiatives based on the agreed detailed design of the Scheduling & Dispatch solution. ❑ Deliver Business and Industry Readiness for the Scheduling & Dispatch Tranche 1 initiatives.
Delivery	**Position as of 30 September 2024:** ❑ A series of industry workshops are to be held monthly during Phase 3 & 4.- **Complete** ❑ Approval for Trading and Settlement Code, Capacity Market Code & Grid Code Mods for Scheduling and Dispatch Programme Tranche 1 Initiatives. – **In Progress** ❑ Implement the people, process, and technology changes for the Scheduling & Dispatch Tranche 1 initiatives based on the agreed detailed design of the Scheduling & Dispatch solution. – **Descoped Not in Timeframe** ❑ Deliver Business and Industry Readiness for the Scheduling & Dispatch Tranche 1 initiatives. - **Descoped Not in Timeframe**
Date Revision	The overall milestone for Approval for Trading and Settlement Code, Capacity Market Code & Grid Code Mods for Scheduling and Dispatch Programme Tranche 1 Initiatives has not yet been achieved as the SEMC has not approved the Trading & Settlement code modifications that were sent to them in the Spring. However we have made progress in this milestone with the following areas approved: ❑ SDP_02 ESPS Mod_02_24 approved by SEM-C on 28-Nov-24. ❑ SDP_01 Mod_13_23 listed on agenda for SEM-C meeting on 19-Dec-24 ❑ SDP_01 EirGrid Grid Code mod MPID320 approved by Nov-24 ❑ SDP_01 SONI Grid Code mod SPID-01-2024 with UR for approval

Stakeholder Satisfaction/ Engagement	The target delivery date of the programme of April 2024 has not changed since Phase 3-5 funding approval was received from the RAs on 29-Feb-24 and the subsequent publishing of the programme Tranche 1 milestones to all stakeholders at the industry workshop on the 7th March 2024. The programme has held monthly industry workshops every month since September 2023 with market participant attendance at these workshops averaging circa 100 people indicating strong engagement from industry
Adaptability	Between April 2023 and January 2024 when phase 2 funding was approved by the RAs and February 2024 when phase 3-5 funding was approved by the RAs the programme was undergoing a large amount of uncertainty regarding scope, effort, cost and timelines. During this time the programme team demonstrated a high degree of flexibility and resilience as they adapted to the uncertainty and focused on the tasks at hand which were to prepare the detailed requirements and design of the system changes while also progressing the related trading and settlement code modifications through the modification committee process. As part of the design process for the system changes and in the related trading and settlement code modifications the programme team demonstrated their ability to find workable solutions to the problems at hand. Many of the team members have had to develop new skills or enhance existing skills in order to become knowledgeable in the complexity of the scheduling and dispatch requirements and also in working with all stakeholders to prepare a successful modifications submission. The multi located team made of TSO, Market Operator and external consultants along with external system vendors has worked effectively in person and through the use of conference technology to deliver complex system designs, working software and
Cost Scale	

FWP004 Capacity Auctions Schedule	
Description of Activities	Capacity Auction process to be completed for T-1 2024/2025 capacity auction T-4 2027/2028 capacity auction, and T-4 2028/2029 Capacity Auction The timetables for completion of both capacity auctions are detailed below. Capacity Auction Timetable 2024/2025 T-1 capacity auction

Category	Appendix C ref	Event	Date & Time
Info	A.1	Initial Auction Information Pack Date	07/09/23
Qualification	A.2	Opt-out Notification Date	21/09/23
Qualification	A.3	Exception Application Date	05/10/23
Qualification	A.4	Qualification Application Date	05/10/23
Qualification	A.5	Provisional Qualification Results Date	07/12/23
Review	B.19	Application for Review Date	11/12/23
Review	B.20	Non-complying Application for Review rejection Date	13/12/23
Review	B.22	System Operators request for further information Date	15/12/23
Review	B.21	Participant provision of further information Date	04/01/24
Review	B.22	System Operators notification of outcome Date	11/01/24
Disputes	B.24	Qualification Dispute Notice Date	16/01/24
Disputes	B.25	Qualification Dispute Decision Date	13/02/24
Qualification	A.6	Final Qualification Submission Date	15/02/24
Info	A.9	Final Locational Capacity Constraint Limits Date	07/03/24
Qualification	A.7	Final Qualification Results Date	07/03/24
Qualification	A.8	Qualification Results Publication Date	07/03/24
Info	A.10	Final Auction Information Pack Date	07/03/24
Auction	A.11	Capacity Auction Submission Commencement	21/03/24
Auction	A.12	Capacity Auction Submission End	28/03/24 10:00
Auction	A.13	Capacity Auction Run Start	28/03/24 12:00
Auction	A.14	Capacity Auction Completion Date	05/04/24
Auction	A.15	Capacity Auction Provisional Results Date	05/04/24
Auction	A.15A	Capacity Auction Provisional Results Publication Date	09/04/24
Post Auction	A.16	Capacity Auction Approval Date	02/05/24
Post Auction	A.17	Capacity Auction Results Date	02/05/24
Post Auction	A.18	Performance Security Date	13/06/24

Capacity Auction Timetable 2027/2028 T-4 Capacity Auction

Category	Appendix C ref	Event	Date & Time
Info	A.1	Initial Auction Information Pack Date	02/03/23
Qualification	A.2	Opt-out Notification Date	30/03/23
Qualification	A.3	Exception Application Date	14/04/23
Qualification	A.4	Qualification Application Date	14/04/23
Qualification	A.5	Provisional Qualification Results Date	22/06/23
Review	B.19	Application for Review Date	26/06/23
Review	B.20	Non-complying Application for Review rejection Date	28/06/23
Review	B.22	System Operators request for further information Date	03/07/23
Review	B.21	Participant provision of further information Date	05/07/23
Review	B.22	System Operators notification of outcome Date	13/07/23
Disputes	B.24	Qualification Dispute Notice Date	18/07/23
Disputes	B.25	Qualification Dispute Decision Date	14/08/23
Qualification	A.6	Final Qualification Submission Date	14/09/23
Info	A.9	Final Locational Capacity Constraint Limits Date	05/10/23
Qualification	A.7	Final Qualification Results Date	05/10/23
Qualification	A.8	Qualification Results Publication Date	05/10/23
Info	A.10	Final Auction Information Pack Date	05/10/23
Auction	A.11	Capacity Auction Submission Commencement	19/10/23
Auction	A.12	Capacity Auction Submission End	26/10/23 10:00
Auction	A.13	Capacity Auction Run Start	26/10/23 12:00
Auction	A.14	Capacity Auction Completion Date	01/11/23
Auction	A.15	Capacity Auction Provisional Results Date	01/11/23
Auction	A.15A	Capacity Auction Provisional Results Publication Date	08/11/23
Post Auction	A.16	Capacity Auction Approval Date	05/12/23
Post Auction	A.17	Capacity Auction Results Date	05/12/23
Post Auction	A.18	Performance Security Date	16/01/24

Capacity Auction Timetable T-4 2028/2029 Capacity Auction

A Capacity Auction will be run for the 2028/2029 Capacity Year, an updated timetable published on 10th December 2024 is included below

Category	Appendix C ref	Event	Date & Time
Info	A.1	Initial Auction Information Pack Date	02/05/2024
Qualification	A.2	Opt-out Notification Date	17/05/2024
Qualification	A.3	Exception Application Date	04/06/2024
Qualification	A.4	Qualification Application Date	04/06/2024
Qualification	A.5	Provisional Qualification Results Date	14/08/2024
Review	B.19	Application for Review Date	16/08/2024
Review	B.20	Non-complying Application for Review rejection Date	20/08/2024
Review	B.22	System Operators request for further information Date	23/08/2024
Review	B.21	Participant provision of further information Date	28/08/2024
Review	B.22	System Operators notification of outcome Date	04/09/2024
Disputes	B.24	Qualification Dispute Notice Date	09/09/2024
Disputes	B.25	Qualification Dispute Decision Date	09/10/2024
Qualification	A.6	Final Qualification Submission Date	15/10/2024
Info	A.9	Final Locational Capacity Constraint Limits Date	07/11/2024
Qualification	A.7	Final Qualification Results Date	07/11/2024
Qualification	A.8	Qualification Results Publication Date	07/11/2024
Info	A.10	Final Auction Information Pack Date	07/11/2024
Auction	A.11	Capacity Auction Submission Commencement	03/12/2024
Auction	A.12	Capacity Auction Submission End	17/12/2024 10:00
Auction	A.13	Capacity Auction Run Start	17/12/2024 12:00
Auction	A.14	Capacity Auction Completion Date	18/12/2024
Auction	A.15	Capacity Auction Provisional Results Date	18/12/2024
Auction	A.15A	Capacity Auction Provisional Results Publication Date	20/12/2024
Post Auction	A.16	Capacity Auction Approval Date	16/01/2025
Post Auction	A.17	Capacity Auction Results Date	16/01/2025
Post Auction	A.18	Performance Security Date	25/02/2025

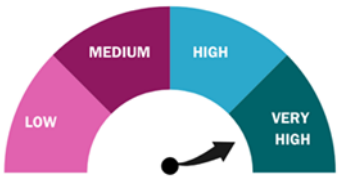
Delivery

Position as of 30 September 2023:

- ❑ T-4 2027/2028 Capacity Auction - **Complete**
- ❑ T-1 2024/2025 Capacity Auction -**Complete**
- ❑ T-4 2028/2029 Capacity Auction – **In Progress**

Stakeholder Satisfaction/ Engagement

The Forward Work plan did not include a confirmed timetable for the T-4 2028/29 Capacity Auction. Once the timetable was published, the capacity auction was originally scheduled for November 2024. However following a decision by the SEM Committee, the auction was delayed. The revised date for the auction is now set for 17th December 2024.

Adaptability	As part of the Qualification process for an auction, the System Operator's host an Information Session before the Application for Qualification Date. This provides participants the opportunity to raise questions, engage with the TSOs, and familiarise themselves with the Qualification process. These sessions are mainly held for T-4 auctions, with the last Information Session held for the period in question being 15th May 2024. These sessions regularly attract large numbers of participants and positive feedback, with the opportunity to submit any questions they have via email beforehand.
Cost Scale	

FWP005: Control Centre Tools	
Description of Activities	**Completion of Phase 1 and delivery of Phase 2.** SONI uses a range of Control Centre Tools, namely Look-ahead Security Assessment Tool (LSAT), Ramping Margin Tool (RMT), and Voltage Trajectory Tool (VTT), to assist in monitoring and managing the power system of Northern Ireland. These tools are needed to operate the power system safely and securely as the system becomes fundamentally more complex and levels of uncertainty increase with increased renewables. The objective of these tools is to provide the Control Centre operators with more accurate real-time information, flexibility and greater control and monitoring facilities. This enhanced capability in real-time is essential to increasing the level of System Non-Synchronous Penetration (SNSP) on the system to enable the maximum amount of renewable generation at any one time, whilst ensuring the safe, secure, reliable operation of the power system. Increasing SNSP is also essential to ensure that levels of renewable generation curtailment are minimised, which ensures that the largest possible volume of price-taking generation is available to the market and hence, to the end consumers in Northern Ireland and Ireland. These ground-breaking decision support tools will be required for power system operation with reduced number of conventional plan on-line and, thus, will facilitate increased levels of SNSP in the All-Island system. The Control Centre Tools have been scoped and developed throughout 2019 through 2023 using Agile development, testing and validation completed in cooperation with vendors and external consultants. SONI (and EirGrid) will be the first TSOs in the world to include these within their scheduling and dispatch processes. These tools have been delivered and the main objective for 2023/2024 will be to refine and improve the tools to meet business enhancements and Regulatory requirements.

<table>
<tr><td></td><td>The details of items included in this are below.

<table>
<tr><th>Activity</th><th>Description</th></tr>
<tr><td>VTT Tuning</td><td>Operational Tuning of the Single Time Point Solution for initial roll out into the Control Room. Vendor Support and Maintenance contract will commence providing full support from IT and vendor throughout tuning.</td></tr>
<tr><td>VTT Master Problem</td><td>User Acceptance Testing and Tuning of the Master Problem Optimisation solution in VTT and close out of the Delivery Project for full operational go live in the Control Room.</td></tr>
<tr><td>VTT Modelling</td><td>Automatic transition of updated Model configurations from Modelling environment to Production and remove requirement for manual configuration in Production.</td></tr>
<tr><td>RMT Change Requests</td><td>Consolidate Reserve Scheduling Data (RSD) functionality into the Ramping Margin software.
Retire the Reserve Scheduling Data application and move it to enterprise solutions in line with IT Strategy
Integrate Reserve Scheduling Data feeds from RMT to MMS.</td></tr>
<tr><td>LSAT Environments</td><td>Close out testing of LSAT Modelling environment.
Implement additional environment for the Operations Support team to safely triage issues and test solutions.</td></tr>
</table></td></tr>
<tr><td>Delivery</td><td>❑ VTT Single Time Point live and operational - Complete
❑ VTT Multi-Timepoint Solution Live and Operational - Complete
❑ VTT Enhancements - Phase 2 – In Progress
❑ VTT Automated Modelling Environment - In Progress
❑ RMT Enhancements - In Progress
❑ LSAT Environments- In Progress</td></tr>
<tr><td>Date Revision</td><td>❑ VTT Multi Timepoint was delayed due to the complexity in testing the applications.
❑ VTT Enhancements - Phase 2, VTT Automated Modelling Environment, RMT Enhancements, & LSAT Environments, are all under the Control Centre Tools Phase 2 scope and were delayed due to funding not being available for the implementation to start as originally expected. Projects were re-baselined with the approval of the CCT programme board.</td></tr>
</table>

Stakeholder Satisfaction/ Engagement	Due to the extremely complex and highly innovative nature of the Voltage Trajectory Tool, a high level of specialised knowledge was required from inception to delivery of this tool. Business subject matter experts were involved from the outset of the tendering process with procurement to working directly with the vendor through the full software development lifecycle of initiation, design and implementation of the product. Stakeholder familiarisation and feedback analysis commenced following the completion of tuning for the single timepoint optimisation completed in September 2023. The VTT Multi-timepoint solution is live in the Control Rooms for further familiarization with the advanced functionality as they move toward full operational use of the tools.
Adaptability	The Voltage Trajectory Tool is extremely complex and highly innovative - there is no "off-the-shelf" solution to leverage and when complete, SONI and EirGrid will be the only TSOs in the world with this capability. The project was delivered using an Agile methodology. Development followed an Agile Scrum sprint delivery roadmap.
Cost Scale	

FWP008: Minimum Sets	
Description of Activities	Reduction of the operational constraints related to the minimum number of large synchronous units online. We will complete the ongoing operational trial for a minimum of 7 large synchronous units online, which is part of the transition to system operation with 3 large conventional units or less (the interim steps have been laid out in the Operational Policy Roadmap to 2030). The steps commenced in 2022 and will continue up to 2030. Specifically, the operational trial for a minimum of 7 large synchronous units online which started in May 2023 is expected to continue until at least March 2024. Trial analysis has already commenced and will continue until it can be proven that the system is secure, and mitigations are available for any issues that may arise. Following the successful completion and conclusion of the 'Minimum 7 Conventional Sets' trial, operation with a minimum of 7 sets as enduring operational policy came in as effective from 23:00 on Sunday 7th April.
Delivery	**Position as of 30th September 2024: Complete**
Date Revision	N/A
Stakeholder Satisfaction/ Engagement	The DS3 and the Shaping Our Electricity Future Advisory Councils were kept informed of the progress of all system operational trials over the life of the project. Following the completion of the trial the adoption of 7 sets was widely communicate. The Operational Constraints weekly publication on the week 7th April contained information relating to the new enduring 7 sets policy. The first phase of the Operational Policy Roadmap, published in June 2022, contains information on the reduction of minimum number of units. A second more detailed phase of this Roadmap, setting out our plans for evolving operational policy from 2023 to 2030 was published in December 2022.
Adaptability	Originally the scope assumed that reducing the inertia floor would be required in order to trial a reduction in the number of large sets. However, it transpired that with the addition of new technology to the system (e.g. synchronous condenser) we could keep the inertia floor high without significantly increasing the carbon output. Hence, we adapted the study to incorporate this learning.

Adaptability	Originally the scope assumed that reducing the inertia floor would be required in order to trial a reduction in the number of large sets. However, it transpired that with the addition of new technology to the system (e.g. synchronous condenser) we could keep the inertia floor high without significantly increasing the carbon output. Hence, we adapted the study to incorporate this learning.
Cost Scale	

FWP012: End of Life Assets	
Description of Activities	System Refresh ERP Upgrade to Dynamics 365 Finance The Enterprise Resource Planning (ERP) system used by SONI is Microsoft Dynamics. The current version of the system – Microsoft Dynamics 2012 R3 is at end of life and is under extended support until January 2025. The recommended upgrade path is to Microsoft Dynamics 365. SONI has implemented two instances of Microsoft Dynamics – one for the SONI business and a second for the SEMO business. SONI intends to run an upgrade project to complete the SONI Instance upgrade of Dynamics 365 in July 2024 Telecommunications and Information Technology Refresh 2023-2024 SONI is dependent on telecommunications equipment and systems for the delivery of real time data to support control centre operation. It is also dependent on Information Technology Infrastructure for the delivery of business systems. The following elements of these have been identified as needing replacement over the next year: ❑ Operating Systems decommissioning: Windows Server 2012 decommissioned – May 2024 ❑ Oracle 12c decommissioned - Dec 2023 ❑ IT Network upgrade complete – Sep 2024 Work is ongoing scoping out the work associated with a Telecoms Asset Transfer to NIE Networks. Further engagement is needed with NIE Networks and the UR in relation to this project.
Delivery	**Position as of 30th September 2024** ❑ Operating Systems decommissioning: Windows Server 2012 decommissioned – **Complete** ❑ Oracle 12c decommissioned **- In Progress** ❑ SONI Instance upgrade of Dynamics 365 - **Complete** ❑ IT Network upgrade complete - **In Progress**

Date Revision	The remaining areas to be delivered for this milestone have been delayed dur to resource allocation conflicts with other competing projects. These adjustments were made after considering the relative priorities of the projects that required the same resources. Importantly, these changes did not impact the outcome for consumers.
Stakeholder Satisfaction/ Engagement	A Technology Refresh Programme board is in place and technology refresh activities are reported to the Board on a monthly basis. This board consists of stakeholders from Enterprise Security, IT Operations and IT Delivery.
Adaptability	This project includes the delivery of a series of activities across a broad range of technologies. It is delivered by a combination of upgrading technologies already in place, replacing the constituent technology components with the latest versions of those available and migrating to newer appropriate technologies (such as cloud-based solutions). The migration to cloud based technologies in particular will provide a means to ensure the organisation always uses the most up to date supported systems without the need to run major upgrade projects. The migration to cloud based systems brought its own cyber security challenges. The teams and individuals involved in designing how we implement, deploy and connect to cloud-based systems have had to solve many problems and in the process have learned new skills which will be used again as we migrate more systems to the cloud. Where appropriate we will migrate to cloud based systems. For those systems the "upgrades" in future will be performed by the cloud vendor
Cost Scale	

FWP013: End of Life Assets	
Description of Activities	**Energy Management System Midlife Upgrade Programme** The EMS is a mission-critical platform utilised in our control centres to enable the monitoring and control of the power system of Northern Ireland and Ireland. The current platform is reaching end of life and the hardware, software and telecoms components must now be upgraded so that the resilience and availability of the critical process related to managing the power system can be maintained. This upgrade will ensure that the critical supporting systems are robust, resilient, secure, performant, and maintain appropriate support arrangements with vendors, ensuring access to new functionality, bug fixes, security patches etc. The primary objective of the current upgrade project is to address upcoming obsolescence of our EMS platform. To achieve this objective, all components of the EMS architecture are being replaced including new production and pre-production infrastructure, upgraded operating systems, middleware and databases versions as well as the upgraded GE eterra platform. The project commenced in FY21/22. In FY 23/24 some of the key programme delivery activities/outputs are as follows: 1. Completion of application build sprints 2. FAT testing completion 3. Infrastructure delivery 4. SAT testing 5. Live Service Cutover
Delivery	**Position as of 30th September 2024: In Progress**
Date Revision	During the life of the programme there have been two major replans: 1 – delays in procurement of critical network infrastructure hardware due to the global chip shortage 2 – delays in building the new EMS environments largely due to resourcing being share between production support and programme delivery. *Both of these issues are now complete and will have no further impact on the plan.*

Stakeholder Satisfaction/ Engagement	Engagement with all stakeholder and SMEs across organisation is aligned to the agreed EMS upgrade governance model. This engagement is executed through the below governance forums: 1. Daily workstream stand ups. 2. Weekly team lead checkpoints 3. Fortnightly heads of function reviews 4. Monthly programme board 5. Bi-monthly Executive Steering In the final quarter of FY 23/24 this above governance was ramped up to daily heads of function reviews as well as weekly programme boards to ensure time resolution of issues. This heightened focus has been key in keeping the plan on track.
Adaptability	As outlined in the milestone section the programme has had to adapt to a number of hardware procurement dependencies not being delivered in FY 22/23. There have been a number of replans, changes in delivery approach and mitigations that have had to be taken to maintain progress in spite of these issues – all of which were agreed and executed in line with the agreed governance model outlined above In FY23/24 the key plan impact was delays in environment builds due to resourcing being shared between production support and programme delivery. This was reflected in the March '24 replan. This plan as baselined in March '24 remains on track.
Cost Scale	

FWP23-08: Implement a Replacement Energy Metering Solution	
Description of Activities	The various phases associated with this project are detailed as follows: Having completed the first two stages detailed in 2022/2023: 1. Analysis and Solution Specification, Solution Tender Development and 2. Procurement and Supplier Selection Over the 2023/2024 period, SONI will be progressing the following stages: 1. Conclude Contract with Chosen Vendor – November 2023 This will involve detailed contract negotiation with the successful tenderer for the delivery of the Energy Metering Solution. The culmination of this stage will result in a signed contract for delivery of the project. 2. Project Team Mobilisation – December 2023 Following contract execution a project team will be established consisting of both vendor and SONI resources. 3. Complete the detailed design of the solution– May 2024 During this phase the project team will conduct a detailed analysis of the business requirements for the Energy Metering Solution and map these requirements to the functional implementation of the vendor solution. 4. Build and Implement the Solution – September 2024
Delivery	**Position as of 30th September 2024:** ❑ Conclude Contract with Chosen Vendor - **In Progress** ❑ Project Team Mobilisation – **Not Progressed** ❑ Complete the detailed design of the solution - **Not Progressed** ❑ Build and Implement the Solution - **Not Progressed**
Date Revision	Delays Outside of SONI's Control with the first milestone to conclude the contract with the chosen vendor have impacted the subsequent three milestones. The proposed contract is a tri-party agreement between SONI, EirGrid and the system provided. Following protracted contract negotiations, the contract was submitted for signing. However, additional time was required to progress additional amendments to ensure the contracts were fully future proof. This amendment has been incorporated, and the contract is now back with the system provider for review. SONI is continuing to work with EirGrid to ensure delivery of this project

Stakeholder Satisfaction/ Engagement	Up until the point of vendor selection, all stakeholders involved in this project were internal. These stakeholders were fully represented throughout the process, with opportunities to review both the tender package and the vendor responses, as well as to actively participate in the selection of the vendor. Following the selection, the vendor became a stakeholder and has since been involved in the ongoing contract negotiations
Adaptability	The process of contract negotiations has been challenging to conclude, with various complexities requiring careful consideration and resolution. Despite these difficulties, the teams involved have shown remarkable perseverance and commitment, working collaboratively to ensure progress and maintain momentum towards reaching a final agreement
Cost Scale	

FWP24-01: Introduction of NRAA	
Description of Activities	For Northern Ireland, the United Kingdom's Committee on Climate Change recently advised that it is necessary, feasible and cost-effective for the UK to set a target of net-zero Green House Gas (GHG) emissions by 2050. The Climate Change Act 2008 (2050 Target Amendment) Order 2019 came into effect on the 27 June 2019. The revised legally binding target towards net zero emissions covers all sectors of the economy. This update to the Order demonstrates the UK's and Northern Ireland's commitment to targeting a challenging ambition in line with the requirements of the Paris Agreement. The Generation Capacity Statement Methodology Statement, which SONI and Eirgrid worked collaboratively to publish in 2023, outline the expected electricity demand and the level of generation capacity that will be required on the island over the next ten years. This project has been initiated to improve the GCS methodology in order to meet the needs of the Island of Ireland while aligning with the National Resource Adequacy Assessment (NRAA) process (legal requirement) Over the period SONI will be reviewing our modelling systems to transition to Plexos and ensure that our methodology is aligned with the NRAA process. Moving to a new adequacy assessment methodology will enable us to enhance our modelling of a power system with at least 80% renewables. We are moving to a system where the greatest risk is no longer the loss of a thermal power plant, but uncertainties of disruption to gas supply and weather, particularly during extended periods of low renewable output. Having already developed a high-level plan on what is required to deliver a new resource adequacy and a high-level design for the modelling framework and a project migration implementation plan, SONI, in collaboration with Eirgrid, will publish the first Northern Ireland NRAA in 2024.
Delivery	**Position as of 30th September 2024: In Progress**

Date Revision	The NRAA methodology is an all-island document, and as such, agreement to publish it requires approval from both UR and CRU. In collaboration with EirGrid, the proposed methodology was submitted to the Regulatory Authorities on 7th June 2024 for review and approval. However following their feedback, an update version was submitted to the Regulatory Authorities on 22nd August 2024. June 2024 however following feedback from the Regulatory Authorities, a revised version was submitted in August 2024. We anticipate submitting for formal approval in January 2025, pending the outcome of the Regulatory Authorities review in early January 2025.
Stakeholder Satisfaction/ Engagement	Significant stakeholder engagement has been a cornerstone of this project, ensuring a transparent and inclusive approach to its development. Consultations have been conducted to gather input on the proposed methodology as well as the Inputs and Assumptions underpinning the project. These consultations provided an opportunity for stakeholders to voice their perspectives, ensuring that diverse viewpoints were considered in shaping the project's framework. Throughout this process, extensive feedback has been received from industry participants and regulatory authorities, highlighting the areas of alignment, potential challenges, and opportunities for refinement. This feedback has been carefully analysed and integrated into the projects development to ensure it meets the needs of all stakeholder while adhering to regulatory requirements.
Adaptability	Throughout the course of this project, we have demonstrated a high degree of adaptability in response to several challenges. Notably, key staff left the organisation midway through the projects, requiring the remaining team members to quickly adjust to new tasks and responsibilities. In order to maintain momentum, new skills were rapidly development with team members adapting to emerging technologies and tools. For instance, we embraced the adoption of ENTSOE DFT and detailed Plexos modelling, ensuring that the project continued to evolve in line with industry best practices and technical requirements. To ensure continuity and keep the project moving forward, a series of webinars covering various critical aspects of the project were held. These webinars allowed each team member to take on specific roles in presenting key material, fostering a collaborative approach and enabling knowledge sharing across the team. This adaptability, combined with effective communication and upskilling, has allowed us to navigate challenges while maintaining focus on delivering high-quality outcomes.

Cost Scale