

SONI Forward Work Plan

2022 - 23

Published September 2022



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Foreword

SONI has prepared this Forward Work Plan in line with the Utility Regulator's (UR's) Guidance on the Evaluative Performance Framework that came into effect in January 2022. It has become part of our annual business planning process and this edition covers the period from 1 October 2022 to 30 September 2023. The Forward Work Plan provides an overview of the deliverables that SONI is planning to deliver across a set of four TSO roles: System Operations; Independent Expert; System Planning; and Commercial Interface.

The publication of this plan sets the tone for our accountability for the services we provide and the programmes of work that we will deliver.

When preparing this plan, we have drawn on the studies and stakeholder engagement that we undertook when developing the 'Shaping Our Electricity Future' roadmap. While the roadmap sets out the route towards the 2030 target, this plan identifies some of the key programmes which will be progressed over the next year which will support the Path to Net Zero Energy, as set out in the Northern Ireland Energy Strategy.

We appreciate the value that stakeholder input provides. As a result of the feedback received through the 2021-22 process, we recognise that we need to build on our stakeholder engagement exercises and introduce criteria to measure our performance around engagement. In this plan we set out the engagement activities currently planned for each role over the 2022-23 period.

In line with the UR's Guidance on the Evaluative Performance Framework, the UR welcomes submissions from stakeholders to provide feedback on SONI's Forward Work Plan. The UR will also host a stakeholder event which will provide an opportunity for further feedback and allow questions on our plan. SONI would also welcome any feedback to this publication¹.

We would like to take the opportunity to thank stakeholders for their feedback ahead of this process, as this will help to inform our implementation of this plan and the content of future plans.



Alan Campbell
SONI
Managing Director

¹ Stakeholders can provide comments using the email address: info@soni.ltd.uk quoting "Feedback on SONI Forward Work Plan" in the subject heading.

Section 1: Introduction

As part of its Final Determination of the SONI Price Control 2020-25 the UR introduced an Evaluative Performance Framework², with the aim of

- SONI taking an open, flexible and collaborative approach to responding to stakeholders and considering new innovative ideas
- SONI developing greater transparency and accountability to its operations in both its planning and performance reporting
- Bringing additional skills, insights and knowledge to the UR's review of SONI's performance through the use of independent experts, and
- Encouraging action from SONI that contributes to the positive outcomes for NI Consumers (SONI Outcomes)

The framework includes the publication of this Forward Work Plan, a stakeholder discussion on the plan, an interim performance review and an annual performance report. The UR has established an expert independent panel to assess these documents and will use the output from the process to inform its assessment of SONI's performance.

SONI's Forward Work Plan 2022-2023 highlights our key priorities for the year ahead which will help us to deliver on our obligations to the Northern Ireland consumers considering the drivers for change in 2023 as demonstrated below. The UR has asked that we structure our plan around four roles that we deliver. Therefore, this Forward Work Plan 2022-2023 is supplemented by seven appendices:

- Appendix 1: SONI Deliverables Role 1 System Operation and Adequacy
- Appendix 2: SONI Deliverables Role 2 Independent Expert
- Appendix 3: SONI Deliverables Role 3 System Planning
- Appendix 4: SONI Deliverables Role 4 Commercial Interface
- Appendix 5: SONI Performance Measures
- Appendix 6: SONI Stakeholder Satisfaction
- Appendix 7: SONI Self-Assessment

We have included an overview of the process in Appendix 7: SONI Self-Assessment, where we also include the criteria used to assess SONI's plans.

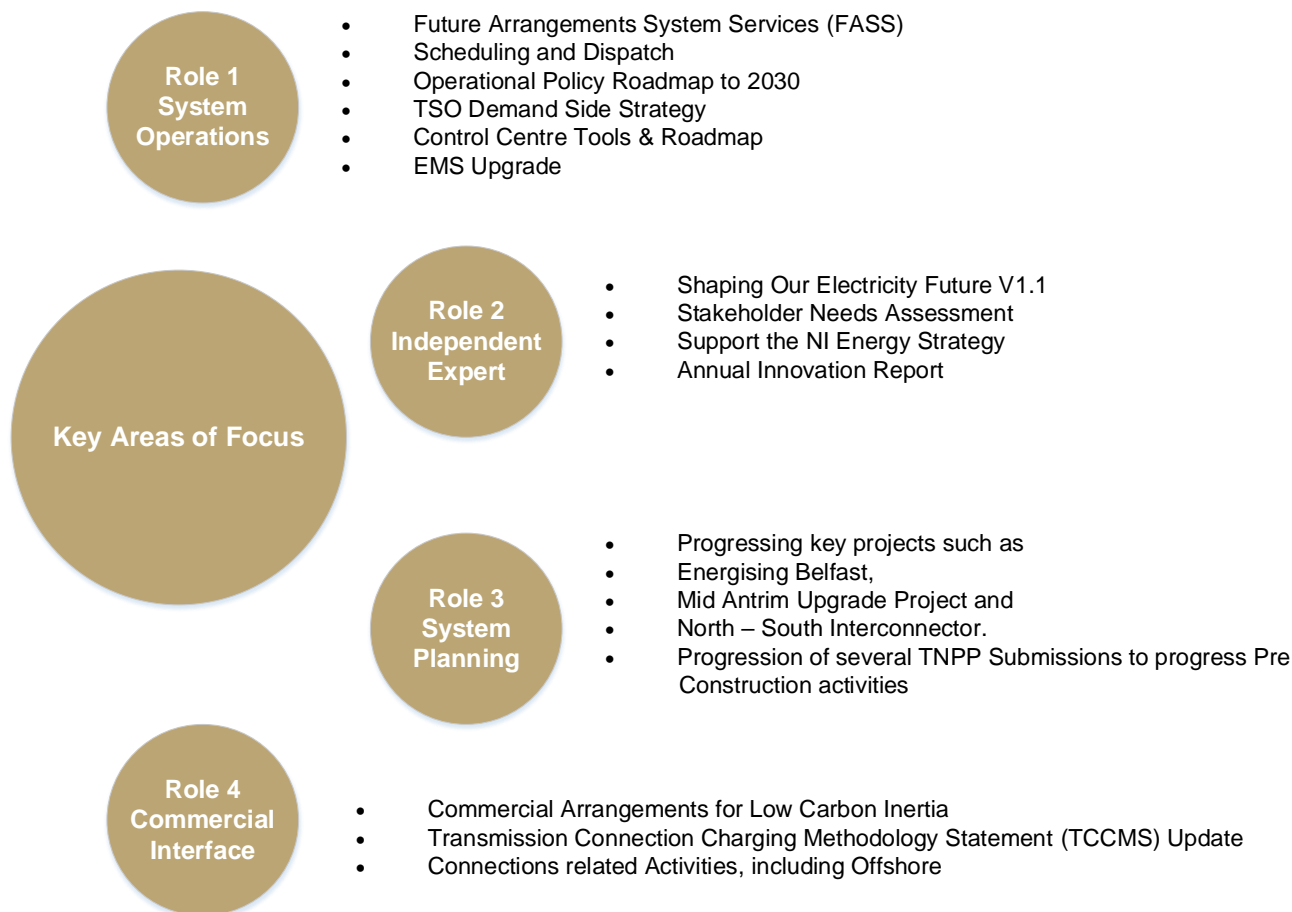
A key function of the performance framework is listening to stakeholders when developing our Forward Work Plan. SONI considers it pertinent to highlight the feedback that we received during the 2021 – 2022 process which has been used to shape this Forward Work Plan. This is included throughout the document and also collated in Appendix 6: SONI Stakeholder Engagement³. We would like to thank everyone who has shared their views with us.

² [epf-guidance.pdf \(uregni.gov.uk\)](#)

Note - The Utility Regulator (UR) issued correspondence to SONI on 7 July 2022 to advise SONI could proceed to issue the Forward Work Plan 2022-2023 by the end of September 2022 and updated guidance will be provided by the UR.

³ Please see pages 11 to 16 How Stakeholder Views Formed SONI's Forward Work Plan

The diagram below highlights the key areas of focus for each role. Over the period October 2022 to September 2023. A key requirement of the UR guidance is the inclusion of projects that have secured funding; therefore, we have included some future plans, where relevant, to give stakeholders more detail as the cut-off date of September 2023 will not always align with the milestones or funding for each project.



SONI Governance

SONI has been preparing the FWP for 2022/23 over the summer period. The plan has been prepared based on the current arrangements and price control mechanisms.

The UR published its decision on SONI Governance¹ on 30 August 2022. Due to the timing of the publication of the UR decision, the impact of the UR’s decision on SONI Governance and the associated licence modifications have not been considered in this forward work plan. Any impacts on the plan will be highlighted at the mid-year review.

Section 2: Overview of SONI

SONI is the Transmission System Operator (TSO) for Northern Ireland. We are responsible for the safe, secure, efficient and reliable operation of the high voltage electricity system.



SONI's statutory obligations to NI consumers include⁴:

- developing and maintaining an efficient, coordinated and economical Transmission Network capable of meeting the long-term reasonable demands for the transmission of electricity
- Contributing to Security of Supply through adequate capacity and reliability, and
- Facilitating competition in Supply and Generation.

A key strand of these obligations is that we take a whole system, collaborated and coordinated approach to working with all relevant organisations. In fulfilling our role, SONI:

- Operates and plans the development of the Transmission Network to meet reliability and capacity requirements in the short and longer term
- Operates and plans the development of the Transmission Network in a way that best balances short term costs and the longer term needs for the benefit of the NI consumer and user
- Works in conjunction with parties across the whole supply chain to improve competition, deliver innovation and minimise short and long term costs to the NI consumer, and
- Supports users to make informed decisions through seeking and embracing their requirements for openness and transparency.

⁴ Please see Article 12 of the Northern Ireland Electricity 1992 Order

Section 3: Strategy & Goals

The SONI Strategy 2020-25⁵ is shaped by climate change and the need for a secure transition of the electricity sector to low-carbon, renewable energy, in an economic and cost efficient way. The context of climate change is well understood and beyond scientific doubt and the only question now is how fast society can respond to limit the damage already done and protect our planet for current and future generations.

Our strategy is demonstrated in Figure 1 below.

Figure 1. SONI Strategy 2020-25



To support this, in 2021 we launched the Shaping Our Electricity Future initiative, which sought to understand the changes needed to the electricity system to achieve at least 70% of electricity from renewable generation sources (referred to as RES-E) by 2030 in Northern Ireland.

In June 2022, the Climate Change Act (Northern Ireland) came into force. This legislation commits Northern Ireland to achieving net zero carbon emissions by 2050, the introduction of targets for 2030 and 2040 and the introduction of a carbon budget for 2023-2027 and every 5 years thereafter and the development of a climate action plan within 24 months. Part of this legislation also sets a new target of achieving at least 80% RES-E in Northern Ireland by 2030.

Given the updated legislation, we now need to plan for an electricity system that can deliver up to 80% RES-E by 2030 in Northern Ireland. We are updating our Shaping Our Electricity Future Roadmap to reflect the changes required to adapt to the increased target of 80%.

SONI and the NI Energy Strategy

Our strategy focuses on leading the Northern Ireland electricity sector on sustainability and decarbonisation. This primary goal, alongside our supporting outcomes of operating, develop and enhance the all-island grid and market; work with partners for positive change, and engage for better outcomes for all are aligned to actions that will facilitate delivery of the Northern Ireland Energy

⁵ [SONI Strategy 2020-25](#)

Strategy, The Path to Net Zero Energy Action Plan⁶. While we can influence all of the threads of the NI Energy Strategy, SONI has specific roles in the delivery of two of the key principles:

- Replace Fossil Fuels with Renewable Energy, and
- Create a Flexible, Resilient and Integrated Energy System

We have been actively supporting the Department for the Economy (DfE) in its Action plan for 2022 and will continue to support where possible in the Action plan for 2023. We expect that many of the initiatives detailed in this plan will complement the work being progressed as part of the delivery of the NI Energy Strategy.

⁶ [The Path to Net Zero Energy Action Plan](#)

Section 4: Stakeholders

Overview

Stakeholder engagement is the key to successful delivery for SONI, in particular in Role 2 Independent Expert, and holds its own pillar within our Shaping Our Electricity Future as it underpins delivery across all of our activities.

Figure 2 below shows the broad range of stakeholders who we seek input from across the industry and statutory bodies.

Figure 2: SONI Stakeholders



This section focuses on our planned engagements across the four roles across 2022/23. The Appendix 6: SONI Stakeholder Engagement contains more information on how SONI engages, why we engage and what we do with the feedback we receive during this engagement process.

Engagement Approach for Grid Projects

Fundamentally, public acceptance is at the heart of our approach to grid delivery in Northern Ireland. We will continue to embed this approach in our projects and work with stakeholders and communities to deliver the grid solutions of the future.

Early engagement with councils, landowners and impacted communities will enable optimal solutions to be identified and delivered effectively and efficiently. We develop detailed engagement and communications plans for individual projects and programmes of work as required.

Shaping Our Electricity Future

'Shaping Our Electricity Future' presented SONI with an opportunity to make significant changes in the way we engage. Our engagement over the consultation period is summarised in the diagram below.



This was a significant step change in how SONI engages with stakeholders and led to the development of our Engagement Roadmap for Northern Ireland⁷

Shaping Our Electricity Future V1.1

SONI intends to publish a revised version of Shaping Our Electricity Future V1.1⁸ which will take into consideration the changes required to meet the revised target of 80% renewables by 2030. Engagement will form a key part of this review. In July 2022, SONI launched a Call for Inputs⁹ which requested submissions from stakeholders and the public on the changes required to our four key pillars that industry considers is required to meet this revised target. This also included an industry webinar to provide a forum to debate and deliberate over the key areas which industry considered relevant. SONI will use these engagements to inform the Shaping Our Electricity Future V1.1 publication.

Shaping Our Electricity Future Advisory Council

SONI values inclusive, transparent and collaborative engagement with industry that facilitates two-way sharing of information. One of the ways in which we do this is through our Shaping Our Electricity Future Advisory Council Engagement.

⁷ Slide 9 - <https://www.soni.ltd.uk/media/documents/04052022-SOEF-Adviosry-Council-Presentation.pdf>

⁸ Please refer to Appendix 2: SONI Deliverables for Role 2 Independent Expert, FWP018

⁹ [Call for Inputs: Shaping Our Electricity Future Version 1.1 | SONI Consultation Portal](#)

**SOEF Advisory Council
provisional meeting dates**

1	04 May 2022
2	15 September 2022
3	18 January 2023
4	10 May 2023
5	13 September 2023

Dates may be subject to change

The Shaping Our Electricity Future Advisory Council, builds on the equivalent DS3 Advisory Council. We established it in response to feedback received through that consultation. Direct industry feedback has acknowledged this forum as a very effective way of tackling complicated issues with subject matter experts (SMEs) from across the island and internationally. Similar to the Advisory Council, we will build on the industry engagement model used for DS3 – which was adjudged to be very effective.

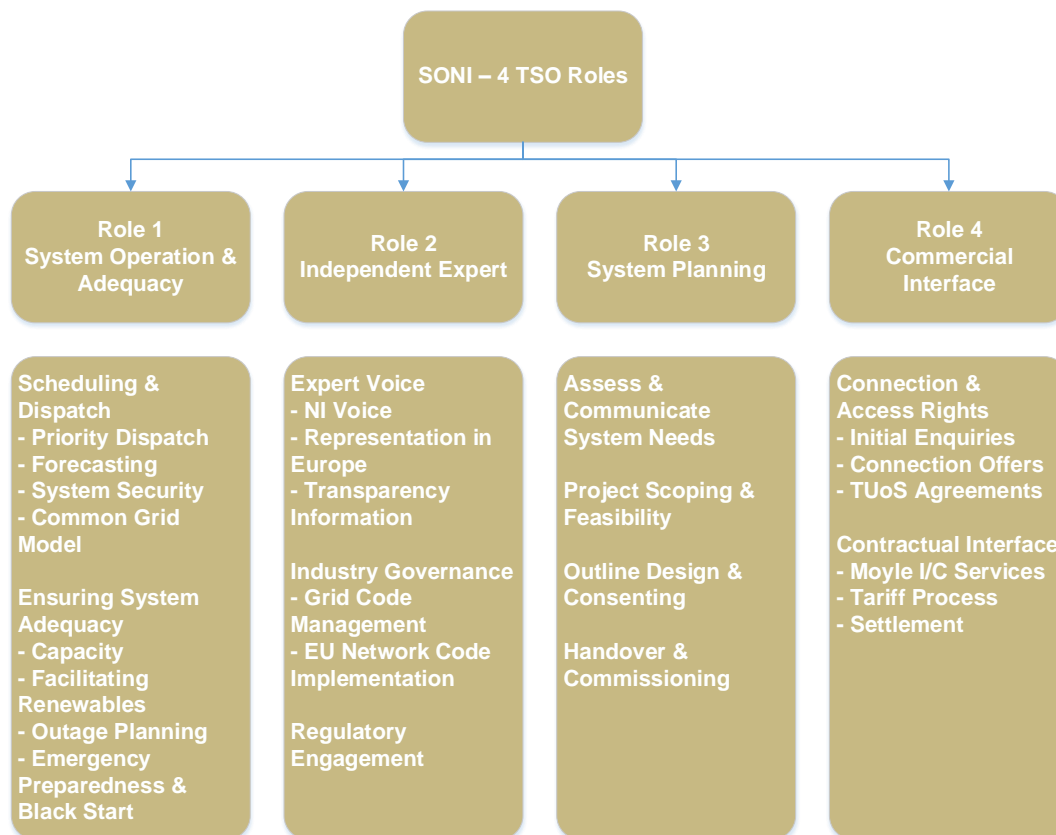
Industry Engagement

During 2022/23, SONI will build on the industry engagement model that has underpinned the DS3 programme to communicate the developments we will be delivering over the year and to obtain feedback on them. These will cover the full suite of deliverables set out in this plan.

Throughout the roles, SONI includes references to the project specific engagement activities that will be undertaken during the period, such as workshops, consultations and so forth. These are detailed in Appendices 1 to 4, which cover the associated deliverables of the four TSO roles.

Section 5: Overview of Roles

The Forward Work Plan is presented across four TSO roles as demonstrated in the diagram below.





Layout of each role

For each TSO role, SONI provides a description of the key deliverables and a breakdown of each deliverable in turn. We also highlight the benefits these deliverables will bring and using the symbols below, we provide a link from these benefits to each of the four SONI outcomes. The four SONI outcomes are the actions and behaviours which SONI is measured against.

Figure 3: The Four SONI Outcomes

Symbol	SONI Outcome	Description
	Decarbonisation	The Northern Ireland electricity system supports government decarbonisation policy and targets
	Grid Security	Northern Ireland electricity consumers receive secure and reliable electricity supplies.

Symbol	SONI Outcome	Description
	System-Wide Cost	Northern Ireland electricity consumers get good value for money which reflects efficiency within, and across, different parts of the Northern Ireland electricity system and All Island system, over the short term and the longer term.
	SONI Service Quality	SONI provides an appropriate range and quality of services to participants in the Northern Ireland electricity system and other stakeholders.

For deliverables progressing through a programme of work which were detailed in the 2021-2022 Plan¹⁰, we have retained the same project ID in order to maintain consistency so there is a clear continuation from the previous publication. For new projects detailed in the plan, a new project ID has been assigned to comply with the UR's Guidance requesting unique project IDs.

Performance Measures

We intend to measure two aspects of our delivery of this plan, the performance of each project and also successful delivery of each role.

In the feedback provided during the 2021–2022 Forward Work Plan Call for Stakeholder Submissions, we were asked to include relevant performance measures associated with each deliverable. This will allow stakeholders to measure our success for each of the projects detailed for the 2022 – 2023 programme. These measures¹¹ are included under each deliverable.

We were also asked to measure our overall effectiveness. In the table below we provide information on the key performance indicators that we will use to measure successful delivery across each of our roles. Additional information for each measure of performance is provided in Appendix 5: SONI Performance Measures.

SONI TSO Role	Key Performance Indicator
Role 1 System Operation and Adequacy	RES-E (%)
	System Non-Synchronous Penetration (SNSP) (%)
	Renewable Dispatch Down (%)
	Imperfections Costs (£)
	System Frequency (%)

¹⁰ [Microsoft Word - Forward Work Plan 2021 to 2022 - entire doc \(soni.ltd.uk\)](#)

¹¹ These are further expanded upon with historic data in Appendix 5: SONI Performance Measures

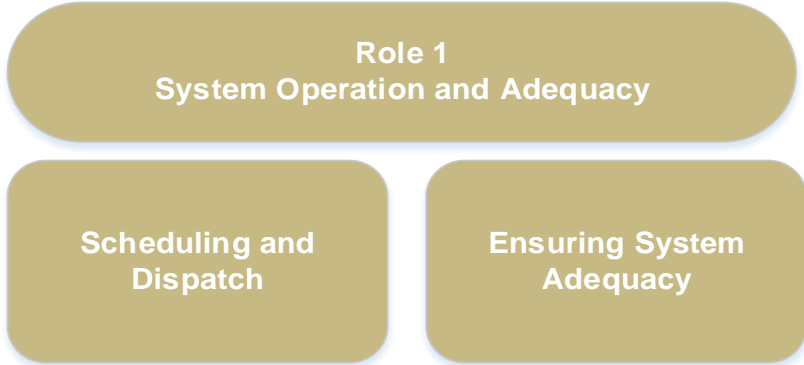
SONI TSO Role	Key Performance Indicator
Role 2 Independent Expert	Timely delivery of publications/material
	Achievement of the set of deliverables
	Quality and Quantity of Stakeholder Engagement
Role 3 System Planning	Transmission Network Pre-Construction Project (TNPP) Submissions
	Achievement of the set of deliverables
	Quality and Quantity of Stakeholder Engagement
Role 4 Commercial Interface	Achievement of the set of deliverables
	Quality and Quantity of Stakeholder Engagement

The above list also includes an overall metric for both the timely publication of documents/materials and also the quality and quantity of feedback received.

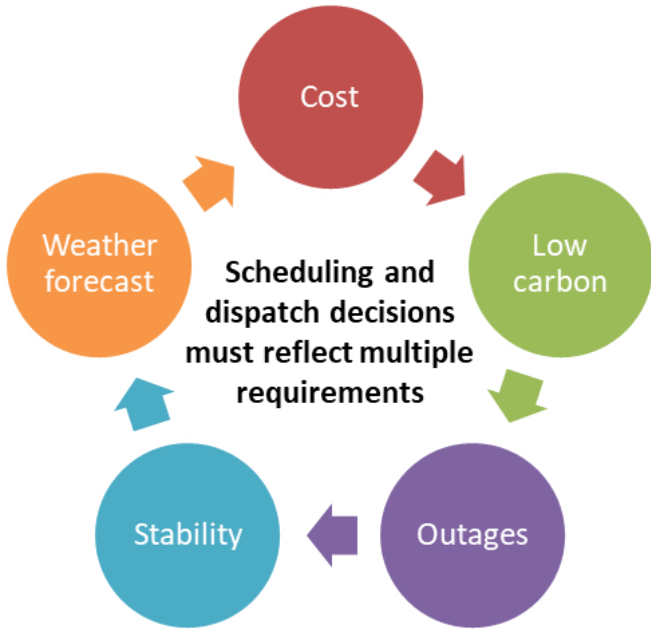
Section 6: Role 1 System Operation and Adequacy

Overview of Role

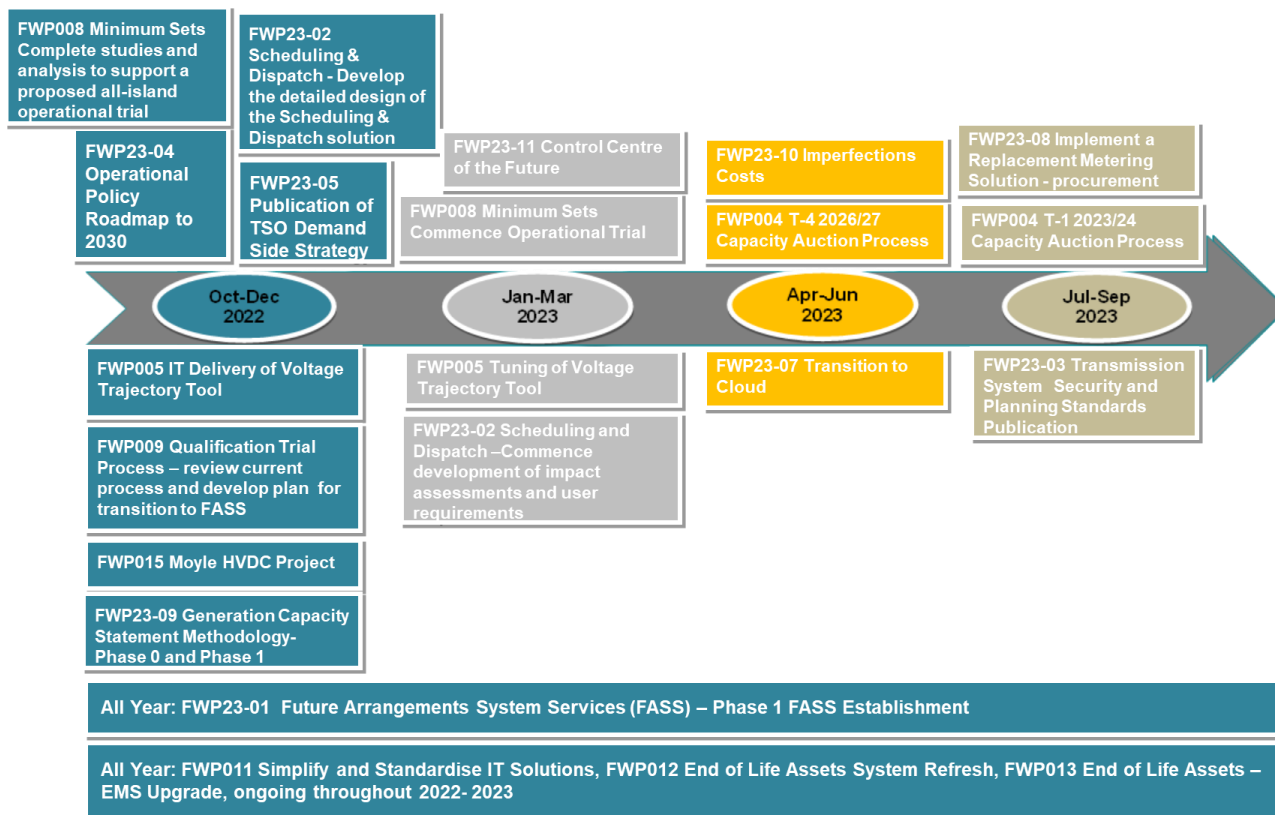
Role 1 captures the associated deliverables linked to System Operation and Ensuring System Adequacy.



Role 1 primarily relates to our operational and market related activities including scheduling and dispatch, future arrangements for system services, emergency preparedness and security of supply. Our work to facilitate of renewable generation is also covered here and is key in the context of the Northern Ireland Energy Strategy. This role is fully aligned with the requirements under the Single Electricity Market (SEM).



Summary of Deliverables



A table below has been included to provide a full list of the projects and deliverables associated with Role 1 System Operation and Adequacy. Additional detail on these projects is provided in Appendix 1: SONI Deliverables for Role 1 System Operation and Adequacy.

It is important to note that Future Arrangements for System Services (FASS) and the Scheduling and Dispatch Programme in particular have significant dependence on SEMC decisions. A delay in SEMC decisions could have implications on delivering on the scope detailed in this Forward Work Plan.

Project	Milestone	Performance Measure	Engagement	Timescale
FWP23-01 Future Arrangements System Services (FASS)	High-level design of System Services products: <ol style="list-style-type: none"> 1. Progress the Auction Design 2. Compile a Detailed Project Plan 	Delivery of Phase 1	Consultations Industry Workshops	December 2022 and ongoing throughout 2022 – 2023
FWP23-02 Scheduling and Dispatch	Develop the detailed design of the Scheduling & Dispatch solution, including requirements for the treatment of new non-priority dispatch renewable generators in the SEM Develop impact assessments and detailed user requirements based on	Delivery of Phase 1	Industry Workshops	November 2022 Commence January 2023

	agreed / approved detailed design;			
FWP23-03 Transmission System Security and Planning Standards (TSSPS)	Review and refresh of the Transmission System Security and Planning Standards (TSSPS)	Delivery of Publication	Formal Consultation	July 2023
FWP23-04 Operational Policy Roadmap to 2030	Publication of the SONI Operational Policy Roadmap to 2030	Delivery of Publication	Engagement with Industry and Stakeholders via Shaping Our Electricity Advisory Council	December 2022
FWP23-05 TSO Demand Side Strategy	Publication of a TSO Demand Side Strategy	Delivery of Publication	Industry Workshops	December 2022
FWP004 Capacity Auctions Schedule	T-1 2023/2024 Capacity Auction T-4 2026/2027 Capacity Auction Complete Transmission Impact Assessment Reports for the qualified T-3/T-4 generation applications	Annual Audit	Capacity Code Modifications Panel Consultations	July 2023 May 2023
FWP005 Control Centre Tools	IT Delivery of the Voltage Trajectory Tool (VTT) VTT Go live Tuning	Delivery of VTT	Internal Engagement	December 2023 March 2023
FWP23-11 Control Centre of the Future	Develop a delivery plan for the tools and capability we need to operate the system to 2030	Delivery Plan Agreed	Internal Engagement	March 2023
FWP008 Minimum Sets	Complete studies and analysis to support a proposed all-island operational trial for operation with a minimum of 7 large synchronous units / 20,000 MWs inertia floor Commence the operational trial with a minimum of 7 large	RES-E & Imperfections Incentive	Internal Engagement Activities	December 2022 March 2023

	synchronous units / 20,000MW's inertia floor			
FWP009 Qualification Trial Process	Review the current QTP Process and develop a plan for the transition to the System Services Future Arrangements Conduct Annual QTP Process to facilitate the integration of new technologies	Launch of New QTP Design and Tender for Applicants	Industry Consultation	December 2022 Annually
FWP011 Simplify and Standardise IT Solutions	Application Rationalisation Capacity Market Platform	Implementation of the Qualification Hub	Internal Engagement Activities	October 2022 ongoing Ongoing alignment to capacity auctions
FWP012 End of Life Assets	System Refresh	Delivery of all activities	Internal Engagement	Ongoing throughout 2022 – 2023
FWP013 EMS Upgrade	Energy Management System Midlife Upgrade Programme Phase 2	Delivery of all activities detailed	Internal Engagement	Ongoing throughout 2022 – 2023
FWP23-07 Transition to Cloud	Delivery of Cloud Foundations	Delivery of activities detailed.	Internal Engagement	June 2023
FWP015 Moyle HVDC Project – Telecoms	SONI requires IT hardware, software & resilient telecommunications circuits to replace current aging assets	Delivery of activities detailed	Internal Engagement and with Mutual Energy Limited	November 2022
FWP23-08 Implement a replacement energy metering solution	Procurement and Supplier Selection	Successful Procurement Process	Engagement with various stakeholders throughout	September 2023
FWP23-09 Generation Capacity Statement methodology	Phase 0: Develop a high-level plan on what is required to deliver a new resource adequacy Phase 1: Develop a high-level design for the modelling framework and a project migration implementation plan	Phase 0 and Phase 1	Completion of Phase 0 and Phase 1	December 2022

FWP23-10 Imperfections Cost	Improved modelling of imperfections costs	Delivery of planned activities	Engagement between TSOs	April 2023
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Benefit of Deliverables

These deliverables will contribute towards the four SONI outcomes of decarbonisation, grid security, system wide costs and stakeholder satisfaction. The benefits are:



Decarbonisation

The activities set out above will combine to move Northern Ireland towards its decarbonisation targets. Our evolving Qualification Trial Process¹² will support the integration of new technologies on the system which will facilitate an increase in electricity from renewable sources. The commercial arrangements and level playing field for these essential new technologies will be developed through our Future Arrangements for System Services project¹³. Our work on Scheduling and Dispatch¹⁴ will also ensure that we are on the path to enable the requirements set out in the Clean Energy Package. These projects, along with those identified in the table above are important to set us on course to achieve the targets of 80% electricity from renewable sources by 2030.



Grid Security is important for security of supply for Northern Ireland. Our work to update our IT systems and control centre tools are key to operating a safe, secure and reliable Transmission System. The environment in which we are operating in is increasingly complex and challenging with the amount of electricity sourced from weather dependent non-synchronous sources. SONI is required to be a prudent operator and a number of our activities detailed above, including the operational policies we will implement, will facilitate greater grid security. Our activities under FWP004 Capacity

Auctions and FWP23-09 Generation Capacity Statement Methodology will consider our activities associated with Security of Supply and strengthen the Grid Security outcome.



System Wide Costs are important for SONI, even more so in the current economic climate. When implemented, the Future Arrangements for System Services will increase competition between providers, ensuring that costs are minimised across all markets. Our work on Scheduling and Dispatch will ensure that we are able to make best use of the technologies available on the grid, putting downward pressure on prices. These initiatives will take more than one year to deliver, but the progress made during 2022/23 will provide

a foundation for future years. We will continue to take steps to minimise dispatch balancing costs and will report on the outturn of those when the assessment is completed.

¹² Please refer to Appendix 1, FWP009 Qualification Trial Process, page 32 to 35 for more detail

¹³ Please refer to Appendix 1, FWP23-01 Future Arrangements System Services, page 6 to 10 for more detail

¹⁴ Please refer to Appendix 1, FWP23-02 Scheduling and Dispatch, page 11 to 14 for more information

Stakeholder Satisfaction

SONI Service Quality

SONI has already planned a number of engagement activities over the period, in addition to the development of a Stakeholder Engagement KPI. We continue to improve the level of information provided to stakeholders and will provide an engagement timeline to set out our communication plans for the period ahead for Role 1. We have also used stakeholder views to inform our 2022 – 2023 plan.

Key Performance Indicators

A detailed description of all key performance indicators is provided in Appendix 5: SONI Performance Measures. Those performance measures which pertain to SONI TSO role 1 are summarised below.

Performance Measure	Target	2019 baseline	Commentary
System Non-Synchronous Penetration (SNSP)	75%	65%	<p>SONI achieved operational policy of 75% SNSP during early 2022.</p> <p>As set out in SONI's operational policy roadmap, the key operational policy change targeted for the coming year is a reduction in the all-island Minimum Number of Conventional Units constraint from 8 to 7.</p> <p>Further increases to the SNSP limit will require enhanced capabilities including system services provision to be incentivised through implementation of the Future Arrangements for System Services programme. The focus now in terms of SNSP is on planning and preparations to increase this target but for 2022 – 2023 we plan to maintain operation of the Transmission System in a safe, secure and reliable manner at this 75% level.</p> <p>More information is provided in the Appendix 5: SONI Performance Measures, pages 7 to 8</p>
Imperfections Costs	Determined Annually Ex-Post	To be considered over the period	This will be determined for the December 2023 Performance Report as it requires the use of the backcast model and this information is not available at the date of preparing this plan.

Performance Measure	Target	2019 baseline	Commentary
			<p>This metric has a natural tension between it and the System Frequency measures.</p> <p>More information is provided in the Appendix 5: SONI Performance Measures, pages 15 to 16</p>
RES-E	Under Review ¹⁵	39%	<p>This is the percentage of electricity from renewable sources in Northern Ireland.</p> <p>The RES-E performance measure is the amount of electricity generated by renewable sources over the course of the year. It is anticipated that the projects, for which RES-E is a key performance indicator, will play a key role in achieving increases in this metric.</p> <p>More information is provided in the Appendix 5: SONI Performance Measures page 6.</p>
Renewable Dispatch Down	10%	10.7%	<p>Renewable Dispatch Down (%) is calculated on a monthly basis and published one month in arrears ¹⁶ . Annual figures are available one month following the end of the year.</p> <p>More information is provided in the Appendix 5: SONI Performance Measures, pages 9 to 11.</p>
System Frequency (%)	Within the range 50 Hz \pm 0.2 Hz for 98% of time	98% ¹⁷	<p>To ensure that SONI manages the system frequency within Grid Code requirements.</p> <p>More information is provided in the Appendix 5: SONI Performance Measures pages 12 to 13.</p>

¹⁵ This will be considered as part of Shaping Our Electricity Future V1.1, see Appendix 2 FWP018

¹⁶ See link to monthly reports [TSO Responsibilities \(sem-o.com\)](https://www.sem-o.com)

¹⁷ 2019 figure was 99.66%, over a 5 year period the system frequency was between 98.6% and 99.6% and as such the target is set at 50Hz \pm 0.2 Hz for 98% of the time

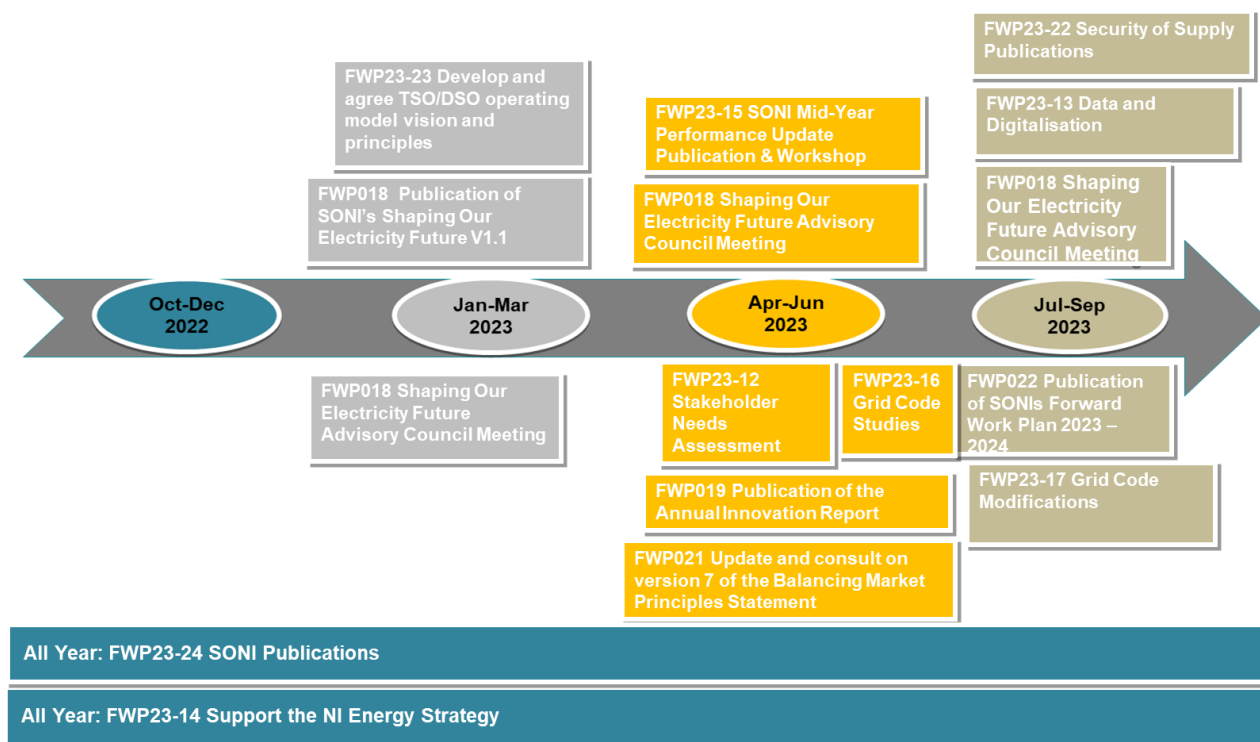
Section 7: Role 2 Independent Expert

Overview of Role

The Independent Expert role covers our engagement activities and involves providing an expert voice for stakeholders and actively listening to their views and concerns. We then adapt our approach proportionately. This role also includes activities such as our Annual Innovation Report, the Transmission Development Plan for Northern Ireland¹⁸ (TDPNI) and other publications.



Summary of Deliverables



A table below has been included to provide a full list of the projects and deliverables associated with Role 2 Independent Expert.

¹⁸ Note the TDPNI will be progressing to a 2 year publication and will therefore be included in the 2023 – 2024 Forward Work Plan.

Project	Milestone	Performance Measure	Timescale
FWP018 Shaping Our Electricity Future V1.1	Publication of Version 1.1 of Shaping Our Electricity Future	Stakeholder Engagement and the timely publication of the Shaping Our Electricity Future V1.1	February 2023
	Continuous Engagement during the period	Stakeholder Engagement and the timely achievement of workshops and advisory council meetings.	January 2023, May 2023, September 2023 and Throughout 2022-2023
FWP23-12 Stakeholder Needs Assessment	Stakeholder Needs Assessment Development of a Stakeholder Engagement KPI	Stakeholder Engagement and the timely provision of the stakeholder needs assessment.	June 2023
FWP23-13 Data & Digitalisation	Agree Open Data Sharing with NIE Networks	Successful achievement of deliverable	September 2023
FWP23-14 Support the NI Energy Strategy	Support 5 identified actions in DfE's Path to Net Zero Action Plan Active participation in relevant Working Groups associated with Energy Strategy	This programme of work will be monitored throughout the period	Throughout 2022-2023
FWP019 Annual Innovation Report	Publication of the Annual Innovation Report	Timely publication of the Annual Innovation Report and stakeholder engagement to inform which projects should progress to UR funding request.	April 2023
FWP23-15 SONI Mid-Year Performance Review	Mid-Year Update on SONI's 2022-2023 Performance	Successful SONI Mid-	April 2023

	Mid-Year Update Workshop	Year Review Workshop	May 2023
FWP022 Publish SONI's 2023/24 Forward Work Plan	Publication of SONI's Forward Work Plan for 2023-2024	The timely publication of the SONI Forward Work Plan	September 2023
FWP021 Balancing Market Principles Statement	Update and consult on version 7 of the Balancing Market Principles Statement	Timely consultation process, feedback will be assessed on quality and quantity and the timely provision of the document to the UR for approval.	June 2023
FWP23-16 Grid Code Studies	Providing outcome of the studies considering minimum generation parameters for Grid Code to Grid Code Review Panel and UR	Timely provision of the outcome to Grid Code Review Panel and the UR	April 2023
FWP23-17 Grid Code Modifications	Battery Grid Code Modifications RoCoF Modifications	Modification process followed for three sets of changes, stakeholder views considered and proposals submitted to UR	September 2023
FWP23-22 Security of Supply Publications	Publication of materials associated with Security of Supply – All Island Generation Capacity Statement and Winter Outlook	Timely publication of material.	September 2023
FWP23-23 SONI TSO – DSO Operating Model	Develop and agree the TSO – DSO operating model vision and principles	Achievement of an agreed Vision and Principles for the TSO-DSO Operating Model	March 2023

FWP23-24 SONI Publications	SONI Publications over the period to include the All-Island Transmission System Performance Report and the Annual Renewable Energy Curtailment and Constraint Report.	Timely publication of accurate information and assessment of feedback received	Ongoing throughout 2022 – 2023 and as indicated May 2023 and August 2023
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Benefit of Deliverables

As per the section “Layout of Deliverables” on page 12 of this paper, SONI has provided a description of the key benefits as they pertain to the four SONI outcomes, being decarbonisation, grid security, system wide costs and stakeholder satisfaction.



Decarbonisation

The decarbonisation outcome remains relevant throughout Role 2. We are progressing projects which support the NI Energy Strategy¹⁹. SONI’s advice and information will facilitate developers of renewable generation and policy decision makers including the key areas where we are supporting the DfE²⁰. The update to Shaping our Electricity Future²¹ will set out a road map towards Northern Ireland obtaining 80% of its electricity from renewable sources.



Grid Security is important to consumers and our stakeholders. Grid security is considered across a number of factors within Role 2, for instance our Shaping Our Electricity Future V1.²² is focused on continuing grid security for future generations. The Grid Code Studies and any subsequent modifications²³ are designed to ensure grid security with an evolving generation portfolio.



System Wide Costs is an equally important SONI outcome, especially in the current economic climate. The consultation and publication of the Annual Innovation Report²⁴ will play an important role. This will seek stakeholder views on suggested projects to be progressed by SONI. These projects and the innovation process itself are of key importance when considering transmission constraint groups and how we react to alleviate these, therefore creating customer savings as a result of these projects. Our Shaping Our Electricity Future V1.1 will also capture the Markets Pillar and provide updated programmes of work

¹⁹ Please refer to Appendix 2: SONI Deliverables for Role 2 Independent Expert, page 14 to 15, FWP23-14 Support the NI Energy Strategy for more detail

²⁰ Please see Appendix 2, FWP23-12 Support the NI Energy Strategy for more information

²¹ See Appendix 2, page 6 to 9 for more information

²² See Appendix 2, page 6 to 9 for more information

²³ See Appendix 2, FWP23-16 Grid Code Studies and FWP23-17 Grid Code modifications, pages 23 to 25 for more information

²⁴ Please refer to Appendix 2, FWP019 Annual Innovation Report on pages 16 to 17 for more detail

which will also contribute to this outcome, alongside information published by SONI which supports efficient decision making by third parties.

SONI Service Quality



SONI will seek stakeholder input to these deliverables, including the development of a Stakeholder Engagement KPI. A number of key activities will continue our step change in engagement, particularly the update of Shaping Our Electricity Future to Version 1.1. SONI will also provide input to the NI Energy Strategy and share information as well as obtain input through those working groups that will shape how we deliver our aspects of the strategy. SONI has identified the stakeholder groups pertaining to

Role 2 and detailed these, alongside our planned engagement activities in the Appendix 6: SONI Stakeholder Engagement.

Key Performance Indicators

A detailed description of all key performance indicators is provided in the document, Appendix 5: SONI Performance Measures. Those performance measures which pertain to SONI TSO Role 2 are summarised below.

Performance Measure	Target	2019 Baseline	Commentary
Timely delivery of publications and agreed programmes	100%		Where SONI has provided a date or range of dates for the publication of documents/reports or availability of materials for use, we may measure our performance, alongside other KPIs, as the “timely delivery” of the described deliverable. This is expanded on in Appendix 5: SONI Performance Measures, page 17.
Quality & Quantity of Feedback			Over the period of the plan, SONI will be progressing a deliverable FWP23-12 Stakeholder Needs Assessment ²⁵ . This is the first step in SONI moving forwards on a KPI to consider stakeholder views. However, in the interim we would like to refer to the Appendix 6: Stakeholder Engagement which details why and how we engage with stakeholders, our various stakeholder groups and what we do with the views and information provided by stakeholders. This is expanded on in Appendix 5: SONI Performance Measures, page 18.

²⁵ FWP23-12 Stakeholder Needs Assessment is detailed further in Appendix 2: SONI Deliverables for Role 2

Section 8: Role 3 System Planning

Overview of Role

SONI is independent of interests in the generation and supply of electricity, and therefore we are responsible for planning the configuration of the transmission system and obtaining all of the consents necessary for it. Role 3 covers SONI's activities in the System Planning area, our approach is set out in our three-part Grid Development Process.



Coordination with NIE Networks underpins this three-part Grid Development Process. We work every day with NIE Networks who own, build and maintain the grid transmission assets. We engage with NIE Networks in relation to the functional specification and design specification documents and on any associated options reports.

As demand and generation change, or as the transmission network becomes more interconnected with neighbouring transmission networks²⁶, the flow of electrical energy throughout the transmission network changes. To accommodate these changes in power flows it is necessary to modify or strengthen the transmission network to ensure performance and reliability levels are upheld. SONI and NIE Networks are obliged to develop an economic, efficient and coordinated transmission system²⁷. NIE Networks is responsible for maintaining the transmission network in Northern Ireland, including replacing assets that have reached the end of their useful life.

We publish a Transmission Development Plan for Northern Ireland. The most recent edition is expected to be published shortly. It contains approximately 76 planned projects. Of these, 39 are NIE Networks asset replacement projects and 37 are network development projects (see Table 1 below). SONI has detailed the projects with significant milestones over the next year.

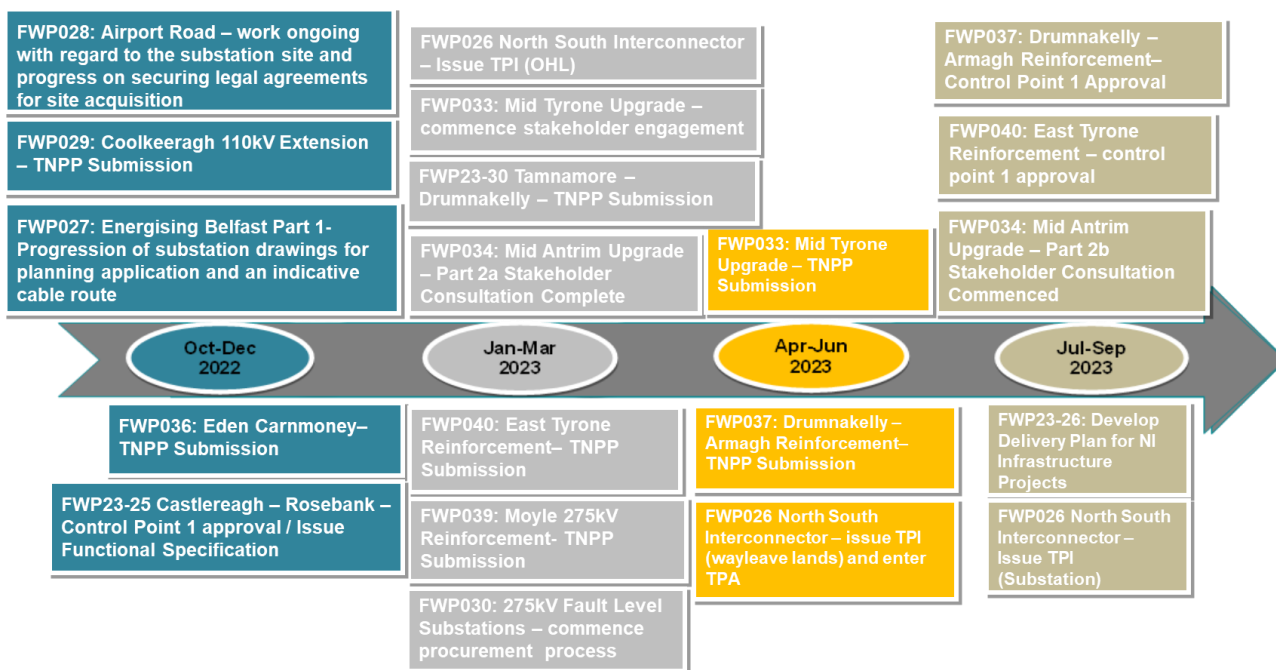
²⁶ The European electric power transmission networks are interconnected, so as to be able to transmit energy from one jurisdiction to others.

²⁷ The Electricity (Northern Ireland) Order 1992, Article 12

Table 1: Network Development Projects by Planning Area

Network Development Projects by Planning Area				
Project Category	North and West	South-East	Projects in Both Areas	TOTAL
New Build	9	6	0	15
Uprate/ Modify	9	7	4	20
Refurbish/ Replace	0	0	0	0
Combination	0	2	0	2
TOTAL	18	15	4	37

Summary of Deliverables



A full list of the projects and deliverables associated with Role 3 System Planning during 2022/23 is set out in the table below.

SONI would emphasise that any TNPP submissions are also dependent on timely receipt of information from NIE Networks.

Project	Milestone	Performance Measure	Timescale
FWP027 Energising Belfast Part 1:	Review and approve NIE Networks Design Specification for the works at Finaghy Main.	Progression of set of substation drawings for the planning	October 2022

Castlereagh – Hannahstown	Review and approve NIE Networks Design Specification for the transformer works at Castlereagh Main.	application and an indicative cable route	
	Issue partial Transmission Project Instructions to NIE Networks and enter into a Transmission Project Agreement with NIE Networks for the works associated with Castlereagh Main and Finaghy Main.	Note: this is dependent on site specifications and third parties.	November 2022
	Commence development of the set of substation drawings for the planning application and an indicative cable route		December 2022
FWP026: North South 400kV Interconnector	Currently in Part 3		
	Issue Transmission Project Instruction (Overhead Line)	Transmission Project Instruction Issued	March 2023
	Issue Transmission Project Instruction (wayleave lands)		June 2023
	Issue Transmission Project Instruction (substation)		September 2023
	SONI to enter into a TPA	Transmission Project Agreement	June 2023
FWP028: Airport Road Main 110/33 kV Substation	Currently in Part 3 SONI work ongoing with regard to the substation site and progress on securing legal agreements for site acquisition	Finalise Landowner Agreements	Commence November 2022
FWP034: Mid Antrim Upgrade	Part 2a Stakeholder Consultation	Part 2a Stakeholder Consultation – Completed	January 2023
	Part 2b Stakeholder Consultation	Part 2b Stakeholder Consultation – Commenced	September 2023
FWP036: Eden – Carnmoney	Prepare and submit TNPP for UR approval	TNPP Submission	November 2022
FWP037: Drumnakelly and Armagh Reinforcement	TNPP Submission	TNPP Submission	April 2023
	Control Point 1 Approval		August 2023

FWP040 East Tyrone Reinforcement	TNPP Submission Control Point 1 Approval	TNPP Submission	February 2023 September 2023
FWP033 Mid Tyrone Upgrade	Commence Part 1 Stakeholder Engagement	Part 1 Stakeholder Engagement commenced	March 2023
FWP039: Moyle 275kV Reinforcement	TNPP Submission	TNPP Submission	January 2023
FWP029 Coolkeeragh 110kV Extension	TNPP Submission	TNPP Submission	November 2022
FWP23-30 Tamnamore – Drumnakelly Restrung	TNPP Submission	TNPP Submission	February 2023
FWP030: 275kV Substation Fault Level Solutions	Commence progression of procurement and award of contract with substation design consultant	Procurement and award of contract with substation design consultant	Commence from January 2023
FWP23-25 Castlereagh – Rosebank	Control Point 1 approval / Issue Functional Specification	Timely Issue of Functional Specification	November 2022
FWP23-26 Delivery Plan for NI Infrastructure Projects	Development of a delivery plan for all NI Infrastructure Projects and communicate externally	Timely delivery of a plan for NI Infrastructure Projects	September 2023

Benefit of Deliverables

Decarbonisation



As indicated above, the mitigation of risk around facilitating the connection of increased renewable generation to the Transmission System is integral to allowing a smoother connection offer process and reduces the challenges SONI, NIE Networks and potential developers face during the construction process. Many of the grid development projects listed here are essential to meet our renewable targets. In particular the Mid Antrim Upgrade Project will increase the output of renewable generation. Currently, there is a bottleneck on the grid in the Mid-Antrim area and there is an inability to transmit all the renewable energy generated in the North and West, to urban centres such as Ballymena, Antrim, and Greater Belfast. The Mid Antrim Upgrade is a proposed solution to this problem.

Grid Security



Increased interconnection between transmission networks results in a larger energy market. With increased market integration there is greater competition and the potential for prices to be reduced. The Moyle export capacity project²⁸ will enable higher flows out of Northern Ireland, increasing options for system stability at high levels of renewable generation. In addition, the Energising Belfast project is essential for long term stable and secure supplies of electricity in the greater Belfast area.

System-Wide Costs



The integration of RES and other forms of low carbon generation significantly increases the power exchange opportunities across the region. Our three-part process is designed to ensure the most economical solution to each grid need identified – ensuring best value investment for customers – and checkpoint ensure that any projects that become unnecessary are stopped in a timely way.

SONI Service Quality



Engagement with all parties is important so that SONI are aware of the wider views of stakeholders. This is captured during the various stages of engagement during our three-part process, which ensures that all relevant parties are consulted with at the appropriate stage. With improvements in data and digitalisation, SONI is now able to use a more targeted approach to stakeholder engagement within Role 3. We plan to use geotargeted locations

for our online messaging to bring awareness to communities that will be impacted by some transmission projects. We are also launching a virtual consultation room over the period which will allow more attendees from residential areas and other stakeholder groups who may wish to contribute, as it means location and timing of meetings will facilitate a larger stakeholder audience and reduce the costs of hosting an event if this is actioned virtually. SONI will also bear in mind the impact of having events online may have on other stakeholders who are not experienced in the use of technology in these situations and prefer an in-person event.

KPIs

A detailed description of all key performance indicators is provided in the document, Appendix 5: SONI Performance Measures. Those performance measures which pertain to SONI TSO role 3 are summarised below.

Performance Measure	Target	2019 Baseline	Commentary
TNPP submissions	As detailed under commentary.		The number of TNPP submissions made to the Utility Regulator over the period and the timeliness of approval from the UR (i.e., a high-quality submission will not require many

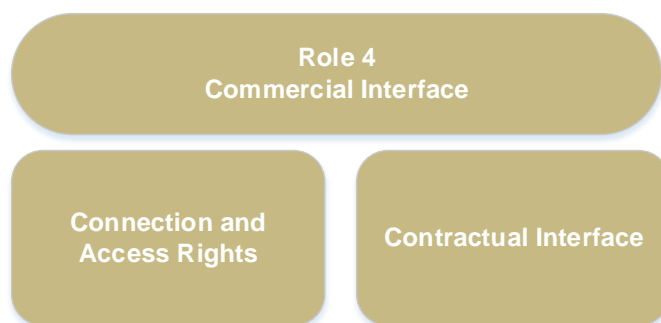
²⁸ Please refer to Appendix 3: SONI Deliverables for Role 3 System Planning, FWP039 Moyle Reinforcement Project.

Performance Measure	Target	2019 Baseline	Commentary	
			queries from the UR and result in a shorter approval time). This provides a quantitative and qualitative analysis for SONI's performance in these areas.	
			SONI Expectation	Target
			Falls below expectation	Submissions are longer than 4 months for the UR approval
			Meets Expectation	Submissions approved at 4 months by the UR
			Exceeds Expectation	Submissions are approved by the UR in less than 4 months

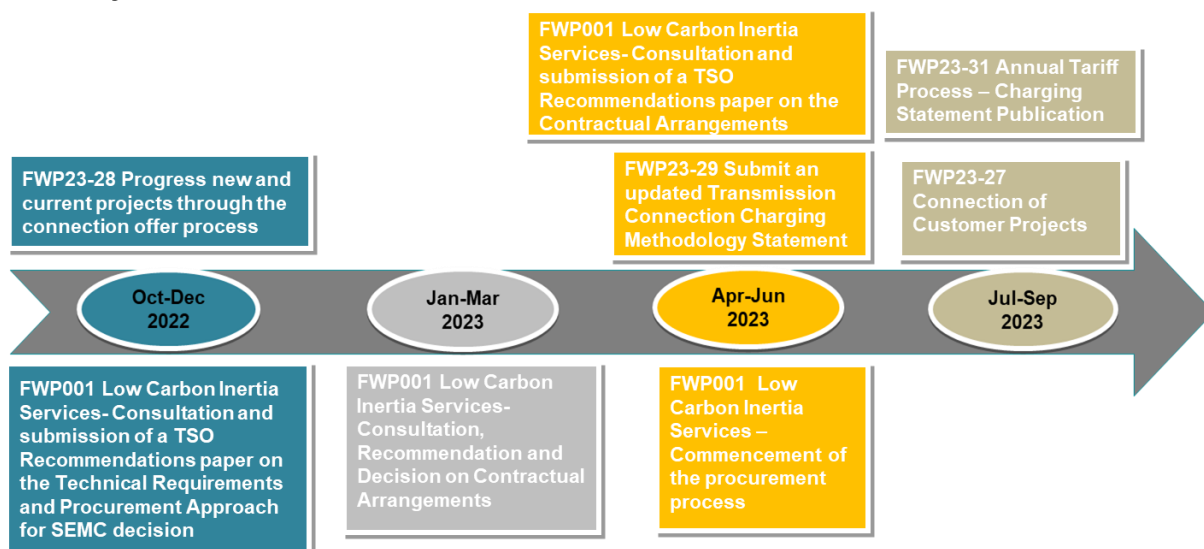
Section 9: Role 4 Commercial Interface

Overview of Role

Role 4 covers SONI’s activities as a Commercial Interface. Role 4 primarily focuses on our interactions with customers through the Connection Offer Process, engaging with NIE Networks through associated Construction Offers and Preparation of Connection Agreements and Transmission Use of System Agreements. It also looks at the Moyle Interconnector and the contractual arrangements we facilitate for connectees.



Summary of Deliverables



The table below provides a full list of the projects and deliverables associated with Role 4 Commercial Interface.

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	July 2023 and September 2023
FWP23-28 Current Applications in the	Progress new and current connection applications	Connection Offer Issued in	Throughout 2023

Connection Offer Process	through the connection offer process	accordance with Condition 25	
FWP23-29 Transmission Connection Charging Methodology Statement (TCCMS) Update	Consult on and publish an updated Transmission Connection Charging Methodology Statement	Delivery of an updated TCCMS	June 2023
FWP001 Commercial Arrangements for Low Carbon Inertia	<p>Consultation and submission of a TSO Recommendations paper on the Technical Requirements and Procurement Approach for SEMC decision</p> <p>Consultation and submission of a TSO Recommendations paper on the Contractual Arrangements</p> <p>Commencement of the procurement process</p> <p><i>Note that all of the above timelines are subject to timely SEMC decisions on the Technical Requirements and Procurement Approach and subsequently on the Contractual Arrangements</i></p>	Timely publication of consultations and decision papers	<p>October 2022</p> <p>March 2023</p> <p>April 2023</p>
FWP23-31 Annual Tariff Process	Commence work under Condition 30 of the TSO Licence, preparation to publish a Charging Statement each year which is approved by the UR.	Timely submission of the Charging Statement	September 2023

Benefit of Deliverables

The deliverables identified in the table above highlights the work that will be conducted during the specified timeframes in order to facilitate future connection to the Transmission System.



Decarbonisation and Grid Security

This role is a key part of SONI acting as an enabler to facilitate new technologies connecting to the network and increasing the number of renewable technologies in order to meet the targets as set by the Department for the Economy in the Northern Ireland Energy Strategy.

In order to achieve these targets, we need to make sure that our policies and procedures, in particular in the connection process, remain fit for purpose and provide clear information for future applicants who will be seeking to participate in providing generation or services to the Transmission System.



In recognition of this, SONI is considering the Transmission Connection Charging Methodology Statement²⁹. It is important to recognise that achieving net zero is going to be a challenge, but by conducting this review of our policies and processes, we aim to identify any barriers and are being proactive in our approach rather than reacting as applications are received for new technologies.

The benefit this work will have is that we will be ready for new technologies to come forward and begin the connection offer process. We will have a clear pathway for potential applicants to provide the key information that they require in order to allow them to progress through this process efficiently.

System Wide Costs



An additional benefit of the deliverables will include the affect this is likely to have on the cost to the consumer. This will not be an immediate benefit, but by taking the actions presented in this role we are resolving to remove any potential barriers that may impact on timelines to connect new technologies.

SONI Service Quality



Engagement and open, transparent communication will play an important role in this process. We will be consulting on the SONI Transmission Connection Charging Methodology Statement. This review and refresh of the TCCMS will be carried out with engagement between SONI, NIE Networks, the Utility Regulator and other stakeholders. We will listen to the feedback provided and consider this feedback along with the positives and negative impact of any action and used a balanced approach to future changes. We will also publish this updated version and a report to provide the feedback we received and the subsequent actions we have taken to address the submissions. This will benefit SONI in that we will hear directly from those impacted from these updates on their views and provide insight and clarity. This will also provide a clear pathway for future applicants, by having updated information readily available.

Key Performance Indicators

Giving consideration to the deliverables above, SONI have established the key performance indicators below in order to measure our success during 2022-2023 for the activities in Role 4.

These have been identified for each of the deliverables above and expanded upon below. Further information is also provided in the Appendix 5: SONI Performance Measures.

²⁹ Please see Appendix 4: SONI Deliverables for Role 4, FWP23-29 Transmission Connection Charging Methodology Update, page 10

Performance Measure	Target	2019 Baseline	Commentary
Timely delivery of publications and agreed programmes	100%		Where SONI has provided a date or range of dates for the publication of documents/reports or availability of materials for use, we may measure our performance, alongside other KPIs, as the “timely delivery” of the described deliverable. This is expanded on in Appendix 5: SONI Performance Measures, page 17.
Quality & Quantity of Feedback			Over the period of the plan, SONI will be progressing a deliverable FWP23-12 Stakeholder Needs Assessment ³⁰ . This is the first step in SONI moving forwards on a KPI to consider stakeholder views. However, in the interim we would like to refer to the Appendix 6: Stakeholder Engagement which details why and how we engage with stakeholders, our various stakeholder groups and what we do with the views and information provided by stakeholders. This is expanded on in Appendix 5: SONI Performance Measures, page 18.

³⁰ FWP23-12 Stakeholder Needs Assessment is detailed further in Appendix 2: SONI Deliverables for Role 2