



NETWORKS



CRU Strategic plan 2025 - 2027

ESB Networks response to CRU Strategic Plan 2025-2027

Date: 22nd July 2024

DOC-210824-IAJ

Contents

1. Introduction	3
1.1. Role of ESB Networks	4
2. ESB Networks response to consultation questions	5
2.1 Response to Question 1	5
2.2 Response to Question 2	5
2.3 Response to Question 3	6
2.4 Response to Question 4	9
2.5 Response to Question 5	11
2.6 Response to Question 6	12
3. Conclusion	13

1. Introduction

ESB Networks welcomes the opportunity to respond to the Commission for the Regulation of Utilities (CRU) request for input to the upcoming Strategic Plan for the period 2025 - 2027. ESB Networks appreciates the continued engagement with CRU as we continue to deliver on PR5 while planning the investments required in PR6 to enable a decarbonised electricity system which meets the needs of our customers.

Our electricity system is currently undergoing major change, driven by Ireland's commitment to source 80% of electricity requirements from renewable sources by 2030 and facilitation of our customers to reach net zero no later than 2050. The electrification of heat, transport and our economy will see citizens and businesses adopting low carbon technologies such as heat pumps, electric vehicles and microgeneration such as roof top solar. The electricity networks are being adapted to meet this challenge. As decarbonisation of society develops through electrification, and the dependence on the electricity network increases, the quality, condition and performance of the network will become increasingly important.

ESB Networks is fully committed to the delivery of the national Climate Action Plan¹ targets and the journey to net zero emissions. Our Networks for Net Zero Strategy² launched in January 2023, sets out how ESB Networks will continue to play a leading role in delivering the Government's Climate Action Plan. Our Networks for Net Zero Strategy commits us to deliver on our part to achieve the targets set out for 2025 and 2030. We will develop the distribution network and supporting systems to meet the changing needs of our customers as we enable decarbonisation of the Irish economy and society.

Beyond 2030, our Strategy commits ESB Networks to continue investing to deliver a Net Zero Ready Distribution Network by 2040 that will enable Ireland's achievement of net zero no later than 2050. This will accommodate high levels of renewable generation to provide clean electricity which will be used to replace fossil fuels wherever possible and enable Ireland's Clean Electric Future. It includes actions that we will take between now and 2030 to deliver on this. Progress can only be achieved through continued collaboration with CRU, our customers, stakeholders and business partners so that we can deliver a clean electric future together.

At time of writing this response ESB Networks has a live consultation on our Investment Plan Approach for Price Review 6 (PR6)³. We have outlined some key areas of investment and anticipated outcomes from our Business Plan which include:

Secure and Resilient Networks and Supplies

Requirement to make significant investments to build network capacity to connect renewable generation and accommodate significant increases in demand associated with population growth, new housing developments and the electrification of heat, transport and industry.

¹ <https://www.gov.ie/en/publication/79659-climate-action-plan-2024/>

² <https://www.esbnetworks.ie/who-we-are/our-strategy>

³ [ESB Networks Investment Plan Approach for Price Review 6](#)

Also, as dependence on electricity increases, we also need to ensure that the network is reliable, and resilient to the impacts of climate change and disruptive events such as cyber threats.

Decarbonised Electricity

This involves enhancing the network to accommodate high levels of renewable electricity, deploying advanced digital technologies, and implementing smart and flexible network solutions to optimise the management of these new energy resources.

Empowered Customers

We will put in place solutions to make it easy for customers and communities to participate in markets for flexibility and make active choices in their use of energy. In addition, ESB Networks will put in place supports for customers, ensuring that vulnerable customers are able to participate fully in the energy transition.

1.1. Role of ESB Networks

As Distribution System Operator (DSO), Distribution Asset Owner (DAO) and Transmission Asset Owner (TAO), ESB Networks works to meet the needs of all Irish electricity customers – generation and demand - providing universal access to the electricity system. We deliver and manage the performance of a system of almost 157,000 km of overhead networks, 27,000 km of underground cables and 800 high voltage substations.

To date we have connected approximately 6GW of renewable generation to the distribution and transmission systems, from micro-generation, mini-generation and small-scale generation through to large amounts of distribution and transmission connected renewable generation. We have almost 2.5 million demand customers, of which a rapidly increasing number are installing microgeneration, mini-generation and small scale generation.

In 2023, the National Network, Local Connections Programme, National Smart Metering Programme, and Retail Market Services areas within ESB Networks have been structured into a single new unit, Distribution Markets and System Operation (DMSO). This function is responsible for driving and enabling smart energy services and flexible demand across all markets, enabling climate action and greater customer participation in a secure and sustainable energy system.

2. ESB Networks response to consultation questions

2.1 Response to Question 1

What are your principal areas of engagement with the work of the CRU?

ESB Networks invest in the electricity network on behalf of all electricity customers. This investment is approved and overseen by the Commission for Regulation of Utilities (CRU) in 5-year periods through the Price Review process. These reviews determine the revenue that ESB Networks can recover from customers and outline our responsibilities as Distribution System Operator (DSO), Distribution Asset Owner (DAO), and Transmission Asset Owner (TAO). We are currently drafting our Business Plan for PR6 for submission to the CRU later this year.

As the Distribution System Operator, ESB Networks is responsible for building, maintaining and operating the distribution network in Ireland. ESB Networks' activities are regulated by the Commission for the Regulation of Utilities (CRU) and as such, ESB Networks engages with the CRU across a number of areas, but not limited to;

- Revenues & Tariffs
- Monitoring & Reporting
- National Smart Metering Project (NSMP)
- National Networks Local Connections / Distribution System Market Operator (DMSO)
- Network Codes & Access
- Network Connections
- Active Consumers & Energy Communities
- Retail Market Services
- Price Review 6 Engagement

Our engagement with CRU changes as needs and reporting requirements arise during the operation of the network.

2.2 Response to Question 2

What specific activities of the CRU do you believe have brought most value to its stakeholders over the last three years?

ESB Networks continues to work closely with CRU to ensure the delivery and maintenance of the electricity network meets the needs of our customers. This engagement has allowed customers to be connected (both Generation and Demand) while moving us closer to a

decarbonised electricity system and society. Key recent activities which brought value to customers include:

- The National Smart Metering Programme delivery and Implementation
- Development of the Distribution, Markets and System Operator capability
- Microgeneration, Mini Generation and Small-Scale Generation Policy and implementation
- Implementation of the Enduring Connection Policy process
- Renewable Hubs
- Government Electricity Credit Payment Scheme
- Connected over 40,928 homes and businesses in 2023
- Invested circa €1Bn during each of the last 2 years in the Network and supporting Services

ESB Networks looks forward to continued engagement with the CRU to deliver the objectives as set out in PR5, plan the investments required in PR6 and support the achievement of the government's Climate Action Plan, Housing for All, and other policy targets.

2.3 Response to Question 3

What will be the most important/significant external opportunities for the CRU over the next 5-10 years that will require action during the period of the 2025-27 Strategy Statement?

As society decarbonises, the role of electricity is changing, bringing opportunities for all customers to take control of their energy consumption, participate in the energy markets, and adopt innovative energy products and services. To support this, ESB Networks considers that particular focus could be given to a number of areas in the CRU's Strategic Plan 2025 – 2027, including;

Connection Policy: Facilitating the increased connection of renewables will be crucial to meet the 2024 Climate Action Plan (CAP 24) targets for 2030. The publication and implementation of the next stage of connection policy is key to support the acceleration of the connection of renewables to meet Article 16 RED III timelines. ESB Networks is committed to support the development of the policy and continuing to work closely with the CRU to achieve this.

The current generator connection policy has served industry well to date but a simplified process, giving customers more cost certainty, and reducing connection offer timelines is required to accelerate the connection of renewables. ESB Networks believes a full review of connection charging methodology led by CRU and supported by ESB Networks is required.

ESB Networks supports the integration of hybrid technology to optimise existing infrastructure as it has the potential to facilitate increased volumes of renewables faster. Development of hybrid policy by the CRU, in particular facilitation of Multiple Legal Entities (MLEs) behind one connection point, and policy on the sharing of Maximum Export Capacity (MEC), will support the acceleration of connecting renewables and contributing towards the CAP 24 targets.

Direct Lines / Private Wires: As the Government Policy in this area continues to evolve, the CRU will play a critical role in ensuring that a robust framework is put in place to ensure that the policy guidelines that DECC has recently published are observed. Most importantly this would include ensuring that Private Wires do not negatively impact on other customers and that the efficient development of the distribution and transmissions is not infringed upon. We look forward to continuing to work constructively with CRU, the Department and industry to develop the appropriate legal and regulatory approach to be taken in this area.

Customers: Prosumers will, over the next 5-10 years, become increasingly connected, informed and empowered to engage with their local electricity system. Putting in place the regulatory pathways that enable prosumers' participation in flexibility markets and demand reduction events will be key, with the need to effect behavioural change – including when best to generate, store and consume electricity – to support the electricity system during periods of system stress (or high carbon intensity).

Technology and Data: Rapid advances in technology will impact the energy sector; this will necessitate enhanced, data-driven policymaking and regulation of – but not limited to – consumer protection and energy systems.

Systems/platforms available to the network operators are ever evolving. Over the next 5-10 years, with increased digitisation, IT/OT convergence and the proliferation of generative AI, opportunities to innovate – and, potentially, reduce the cost borne by the end customer – will abound; the CRU can incentivise this innovation.

Digitalisation will contribute to better coordination, planning and optimisation of network infrastructure, which will help to accelerate decarbonisation. Advancements in technology will continue to fundamentally change how business is done, as well as how customer and stakeholder can be empowered, so it is critical that we remain agile in order to adapt to the evolving industry as well as uncertainty around technology advancements.

An outcome of digitalisation is the ability to unlock the value of data for our customers. Investing in digitisation and digitalisation is not just about adopting new technologies; it's also about the ability to effectively manage and analyse large amounts of data to be able to optimise the energy system performance, enhance reliability, and facilitate the transition to a more sustainable energy system. Improved visibility from greater data openness can help ensure optimised infrastructure investments, and also empower customers and stakeholder across the ecosystem to get to net zero. Interoperability of data from different sources is critical to ensure data is accessible and easily integrated as well as embedding data privacy and give assurance around data governance and compliance.

Cross Vector DSO/TSO: Enhanced regulatory frameworks are needed to maximise whole-energy-system outcomes; by putting in place the mechanisms needed to enable cross-vector solutions (electricity-heat, electricity-gas), the CRU can incentivise sector coupling that harnesses the inherent synergies.

With the Transmission System Operator (TSO) requiring distribution-connected flexibility to help solve transmission-level constraints, enhanced protocols will shape the future DSO-TSO relationship. The DSO will facilitate this by actively managing flows across electricity and data interfaces with the transmission system, thus enabling enhanced service and information exchanges to realise whole-of-system optimisation. An opportunity exists now to seek input on the potential changes needed to regulatory licences to enable the DSO's enhanced role; opportunities afforded by the new network code on demand response must also be understood in detail.

Markets: How distribution markets – retail and flexibility – interact and converge will become clearer over the next 5-10 years; steps need to be taken in the period 2025-2027 to drive this discussion, ensuring introduction of the new types of products and services for consumers. It will also be important that the regulatory treatment of new types of market participants is clear and robust – and the treatment of these new types of market participant in the market governance arrangements is transparent. ESB Networks looks forward to working closely with CRU on the evolution and development of both the retail and flexibility markets in the coming years.

The re-coupling of the Single Electricity Market (SEM) to EU energy markets – and implementing enduring SEM-GB cross-border trading arrangements, increasing market efficiency and cross-border trading – should lower wholesale market prices and is an opportunity to be maximised. Implementing outstanding obligations in existing EU rules will require substantial review by all stakeholders and approval by the CRU.

Infrastructure Delivery: It is critical that CRU continue to support Integrated Planning and Agile approaches across the whole ecosystem to enhance the pace of delivery of infrastructure.

Meeting the ambition of the Climate Action Plan targets requires an acceleration in delivery of capital infrastructure across the span of the electrical network during the PR6 period. Electrification of the heat and transport sectors along with economic growth mean that additional network capacity is required to allow larger volumes of lower carbon energy to flow on the network. In the net zero future, our customers will have an ever-greater dependence on electricity meaning that providing a secure, high quality and reliable supply in the transition phase is essential.

Our plans are aligned with the renewable and flexible generation targets that form part of the national Climate Action Plan. This will require timely connection of increasing amounts of generation customers at all levels in the network, from large scale wind and solar on the transmission system through to embedded generation at domestic level. In addition, we will ensure the connection of energy storage and system services providers that afford a critical

role in the evolution of the Irish island-based electrical network which is targeting world leading renewable penetration levels.

Agile delivery models will continue to evolve in response to the level of investment that is required to achieve Ireland's 2030 targets. Our strategy includes continuing to build our total workforce model which strives to augment internal capability with outsourcing through our contracting partnerships. This approach provides the flexibility needed to scale resources and respond effectively to delivery challenges.

Price Review 6 Determination: PR6 will cover a critical time in our efforts to meet the CAP targets and it will be essential that it supports the transformational change required over the period to ensure a more secure and sustainable energy future for individuals and communities across Ireland. We look forward to continued engagement with CRU on its development and implementation.

2.4 Response to Question 4

What will be the most important/significant external threats likely to impact on the CRU over the next 5-10 years that will require action during the period of the 2025 to 2027 Strategy?

Our operating environment is changing rapidly, driven by new policy and regulation measures, by the advancement of technology, and by the changing needs and expectations of our customers and stakeholders. As the electricity system plays a key role in the decarbonisation of society, it is increasingly important that the correct safeguards are put in place to protect this critical infrastructure. Below, we highlight some areas for consideration;

Resourcing and Supply Chain: Given the extensive level of planning, resources and equipment required to deliver on all of the priorities required of the electricity system, we suggest that consideration should be given to how policy and regulation can support the full breadth of these requirements to safeguard overall deliverability.

ESB Networks launched several initiatives during PR5 to address resourcing demands associate with the increased level of infrastructure investment on the network. These multiyear programmes aim to ensure that resourcing requirements continue to be met during the remainder of PR5 and throughout PR6. Programmes to date have focused on hiring qualified network technicians, recruitment of apprentices, training and development, succession planning and organisational readiness. These programmes are critical to achieving ESB Networks' ambitions to drive decarbonisation of the electricity system in Ireland and to achieve a net-zero network.

We recognise that international supply chain conditions have changed, and that the transition to a low carbon future alongside current geopolitical events place additional burden on supply chain capacity at EU and a global level. This is amidst an increasing commodity price landscape.

We are addressing supply chain challenges by working with our suppliers to align production capacity with our delivery needs. We have identified key materials and areas of ramp up and are assessing our suppliers' capacity to meet the demand. We are optimising our stock holding levels based on a combination of current and future use, taking material criticality, supplier capacity and lead times into account. Standardisation of material, increasing framework capacity where required, advanced procurement, early engagement with our suppliers to provide visibility of the programme and associated material requirement are all components of our supply chain strategy which we are applying to address these challenges. It is critical that CRU continue to support these efforts.

Technology: While rapid advances in technology are an opportunity, they are, simultaneously, a threat (in particular, cybersecurity); the necessary guardrails and resourcing must be put in place to ensure that the energy sector is sufficiently equipped to meet the challenges and asks ahead, including those coming from the Network and Information Security Directive (NIS)2 and a future NIS3.

Furthermore, there will be challenges in adopting technology to meet the needs of a more complex electricity system with Distributed Energy Resources, expanded electrification such as EVs and heat pumps as well as empowering customers with more control of their energy usage.

Cyber-Security: In an ever-more-connected world, the implementation of the EU network code on cybersecurity for the electricity sector (C/2024/1366) will ensure (cyber) security of supply for all electricity customers. Clarity around the CRU's approach to implementation – and governance of same – will be key, including ways of working with energy and water network operators (to ensure critical infrastructure is secure).

Security of Supply: In an ever-more-unstable geopolitical landscape, the impact of international events – and actions of international actors – on security of energy supply must remain as a strategic priority for the CRU; continuing to work closely with the energy network operators – to develop scenarios and energy supply continuity plans – must remain a priority in the period 2025-2027.

Evolving Legislation & Regulations: EU and government policy over the next 5-10 years will be shaped by the ever-pressing urgency to realise net zero and carbon neutrality by 2050. Network codes will play an enhanced role in facilitating the harmonisation, integration and efficiency of European electricity markets. To enable electricity market redesign, future EU legislation will necessitate closer collaboration between EU bodies such as the Agency for the Cooperation of Energy Regulators (ACER), EU DSO Entity and European Network of Transmission System Operators for Electricity (ENTSO-E).

Evolving regulations and policies at national and EU levels can affect network management strategies and investment decisions, thus the CRU must ensure that future Price Review frameworks are sufficiently agile. Anticipatory investment frameworks may be key to scale and maintain a very significant level of investment in the network from now to 2040.

If ACER intend to include the SEM in the Core capacity calculation region, additional market process methodologies will need to be amended and implemented. In this case, the cost-benefit should be clearly identified.

2.5 Response to Question 5

Do you have any suggestion for strategic priorities/goals/actions and associated outcomes for the next Strategy Statement?

Our Networks for Net Zero Strategy is structured around three key strategic objectives and identifies high level actions out to 2030 with PR6 (2026 to 2030) which we believe are of critical importance to continued momentum to achieve net zero;

- **Secure and Resilient Networks and Supplies.** In the transition to a low-carbon future, ESB Networks needs to make significant investments to build network capacity to connect renewable generation and accommodate significant increases in demand associated with population growth, new housing developments and the electrification of heat, transport and industry. As dependence on electricity increases, we also need to ensure that the network is reliable, and resilient to the impacts of climate change and disruptive events such as cyber threats. We will also need to invest in the replacement of aged and obsolete equipment. This outcome must be met while ensuring the safety of customers, employees, our contracting partners and the general public.
- **Decarbonised Electricity.** This investment will be directed towards the connection of renewable generation and ensuring that the network can accommodate significant demand growth from across all sectors arising from the electrification of heat, transport, and industry. This involves enhancing the network to accommodate high levels of renewable electricity, deploying advanced digital technologies, and implementing smart and flexible network solutions to optimise the management of these new energy resources.
- **Empowered Customers.** Customers value a reliable and resilient supply of electricity - this is our core purpose and we provide this essential service to almost 2.5 million electricity customers in the Republic of Ireland. This investment seeks to empower customers by delivering services that are personalised and convenient and supporting them to adopt new low carbon technologies that are healthier and more efficient. We will put in place solutions to make it easy for customers and communities to participate in markets for flexibility and make active choices in their use of energy. In addition, ESB Networks will put in place supports for customers, ensuring that vulnerable customers are able to participate fully in the energy transition.

We are currently consulting on our [Investment Plan Approach for Price Review 6](#). We will include stakeholder feedback in our PR6 proposal and discuss any additional strategic priorities with the CRU in our PR6 discussions.

2.6 Response to Question 6

Are there any other issues/aspects that you consider should be taken into consideration in framing the next CRU Strategy Statement?

Other areas for consideration include;

Smart Meters: With the ongoing installation of smart meters (in line with Climate Action Plan targets) – and the imminent decision on the Smart Meter Data Access Code to determine how smart meter data can be accessed by market participants and third parties – a pathway to prioritised (and approved) smart meter data use cases is now needed.

Further, ESB Networks anticipates that, over the course of the forthcoming PR6 period, it will need to consider the evolving technological opportunities from smart meters and how this will inform innovation in flexibility and demand-side response; it will be important therefore that, over the course of the Strategic Plan 2025-2027, the CRU is ready to work with stakeholders to explore potential opportunities in this space.

Markets: In line with the recent electricity market reform, it will be important for CRU, ESB Networks and other industry stakeholders to work together on development of new types of initiatives such as energy sharing, sub-metering and multiple suppliers at an MPRN. These initiatives, even taken in isolation, have the potential to result in profound change for existing systems, processes, etc. and it will be imperative that all industry stakeholders work collectively to ensure appropriate solutions are put in place which deliver benefits for consumers.

ESB Networks, through its DMSO areas, is utilising the rollout of pilots, trials and sandboxes to test new and innovative ways of delivering change in flexibility. ESB Networks anticipates that CRU support will continue to be needed over the course of CRU's Strategic Plan 2025-2027 to continue the deployment of innovative delivery methods and we look forward to working closely with CRU on same.

The development of a streamlined procurement process should be a strategic priority for the CRU, supporting the DSO in establishing a liquid flexibility market; barriers to entry will hamper the DSO's efforts to stand up local markets (with significant change required for day-ahead and intraday procurements). Given the scale of investment needed in the coming decade, the current interpretation of state aid must also be reviewed as a matter of urgency.

Tariffs: Electricity network tariff reform must be a strategic priority for the CRU in its Statement of Strategy 2025-2027.

A focus is needed on ensuring that customers are encouraged to switch to a Standard Smart Tariff (which may result in customers reducing their usage over the peak).

3. Conclusion

The electricity system is fundamental to enabling the decarbonisation of society, to ensure Ireland meets its ambitious targets for 2025 and 2030 and to reach net zero emissions by 2050. This will be underpinned by a reliable, resilient, and flexible electricity network, which will also facilitate customer-centric solutions for citizens to become active participants in the energy system. The delivery of PR6 will come at a critical time to implement the changes required and we look forward to further engagement in relation to its development and implementation.

ESB Networks looks forward to working in partnership with the CRU, along with energy suppliers, other system operators, the relevant agencies (for example the SEAI and Enterprise Ireland) to stimulate and accelerate the significant changes needed.