Introduction

My thanks to the Committee for the opportunity to appear before you to outline EirGrid's contribution to the delivery of the Government's Climate Action targets. As you know, electricity will play a central role. This is reflected across climate and energy policy which recognises the importance of both decarbonising electricity supply and using this supply of cleaner electricity to deliver decarbonisation in other sectors of the economy.

EirGrid's Shaping our Electricity Future provides the blueprint for Ireland's power system in 2030, yes the targets are ambitious and achieving them will require collaboration across the entire ecosystem, but the plan is clear, it is deliverable and is based, in the main, on proven technologies. In this regard, we must make the electricity grid stronger and more flexible as it will need to carry more power from distributed renewable sources. It is also essential that we invest in the correct technologies to ensure that we have a balanced portfolio in meeting government targets around carbon emissions. This includes renewable generation, gas fired generation (which is renewable gas ready), electricity storage, low carbon technologies which provides essential services for a secure power system and of course demand side flexibility on the demand or consumer side.

Generation and Demand

The demand for electricity in Ireland is that of a normal growing prosperous economy. We are fortunate in that we have a fantastic renewable resource on the Island and off the coast of the island.

Over the last year 39% of our demand was supplied by renewable sources. We have the capacity to accommodate 75% at points in time and are taking measures to increase that to almost 100% Last December we reached a new wind record on the system where for that month 52% of the electrical energy required came from wind sources. Electrical demand has continued to grow, In the last few weeks we have seen two new peaks for electricity driven by the cold weather and the growth in a prosperous economy. It is essential the elements I mentioned earlier are in place to allow us to utilise the maximum amount of renewables at any one time. Higher renewable penetration is not just a goal in itself, we need a safe secure, reliable and low carbon supply of electricity. Shaping our Electricity Future is the plan that helps Ireland deliver on that.

I would like to speak to the facts about electricity demand in order to ground this conversation and maybe the question and answers session which follows. As a nation, we are fortunate to have an economy which has performed well in the last number of years, our population continues to grow, Foreign Direct Investment remains strong, and Government surpluses have helped Ireland navigate the twin crises of Covid and the Energy crisis arising from the war in Ukraine.

Electricity demand in the years 2017 to 2022 has grown at an average rate of 2.80% This is according to the CSO report on metered electricity consumption. This

excluded self-consumption. The metered data for 2023 is not yet available. The forecasted centre-line growth rate for demand for the next 10 years is estimated to grow at an average rate of 3.63%, as detailed in EirGrid's latest Generation Capacity Statement 2023-2032. The recent report from the International Energy Agency appears to be based on unrealistic assumptions, particularly an unconstrained views, and is not consistent with our analysis. As per EirGrid's latest Generation Capacity statement the demand in 2026 is forecast to be 39.6 Terawatts and 10.2 Terawatts (25.7%) of this will be from Large Energy Users and 2.39 Terawatts (6%) will be from domestic growth in the electrification of heat and transport.

Shaping our Electricity Future provides for our demand projection and indeed caters for a 50% demand growth over the decade, were such to materialise. This is a prudent approach considering the many variables at play during the electricity transition.

In the recent all-island Generation Capacity Statement (GCS) 2023-2032 published by EirGrid and SONI which examines the balance between electricity demand and supply in Ireland and Northern Ireland, we continue to highlight the challenging outlook for Ireland with capacity deficits identified during the 10 years to 2032. The deficits will increase up to 2032 due to the deteriorating availability of conventional electricity generation plants and the ongoing failure of the capacity market mechanism to deliver adequate new gas generation capacity. Our analysis for Ireland shows that further new electricity generation such as those powered by cleaner gas which is renewable fuel ready, will be required to secure the transition to high levels of renewable electricity over the coming decades.

To address the immediate capacity deficit challenge, in 2021, EirGrid proposed an intervention in the form of the direct purchase of temporary generation units which was supported by Government in the form of legislation, funding and policy direction and the first tranche is now available at North Wall, with more coming on-line over the coming months. This Temporary Emergency Generation is a first for Ireland and is designed to provide temporary resilience to the electricity system as the regulators work to bridge the gap between supply and demand on a more enduring and sustainable basis. The enduring problem of the failure of the capacity market must be resolved as a matter of urgency.

Data Centres

Shaping our Electricity Future caters for a balanced growth between demand and generation of electricity as part of a holistic system which will operate at between 70% and 80% renewables on an annual basis. Electricity demand will come from economic growth, population growth, electrification of heat and transport and industry, including large energy users. Shaping our Electricity Future provides for growth across all demand categories and EirGrid stresses the need for an appropriate Government policy framework, and accompanying regulatory framework, which can facilitate the allocation of appropriate demand to support the digital economy, which is key to both the energy transition and the overall

welfare of the economy. If appropriate demand does not manifest it will undermine the business case for new renewables and the system will stagnate at low levels of renewable energy. Concern about excessive demand growth is not helpful as it fails to recognise the importance of appropriate demand increases which is synchronised with increased renewables. We have provided our views to Government on this matter.

The Capital Programme

EirGrid published Shaping Our Electricity Future Roadmap Version 1.1 (SOEF v1.1) in June 2023. This follows the publication of the original Shaping Our Electricity Future Roadmap in November 2021.

The Roadmap outlines how we will meet the ambitious targets in the Climate Action Plan 2023. This will require Ireland to have connected 9GW of onshore wind generation, 5GW of grid-connected offshore wind generation and 8 GW of solar PV generation by 2030.

EirGrid needs to transform the Grid to achieve these targets and this requires the delivery of over 350 projects in Ireland by 2030.To achieve this we need unprecedented collaboration with our partner ESB Networks and across the entire energy ecosystem as well as strong support from the public, particularly on project delivery. A large element about collaboration with industry is transparency and to support this we provide a quarterly updates an our 350 projects since 2022.

To minimise the requirement for new infrastructure many of the 350 projects involve uprating or upgrading the existing network. Last year alone to move this along we made 20 planning applications and over 40 decisions that planning was exempt while also receiving over 20 planning decisions. In addition, a number of new strategic projects are also required and I want to update you on some of these.

In North Connacht we need a new circuit to improve the security of supply and transport renewables. We received the positive planning decision from An Bord Pleanála last year and this project is now handed over to ESB for construction. Near Dublin we need two new circuits in Kildare Meath and Dublin to also improve security of supply, transport renewables and meeting increasing demand. The Kildare Meath Project planning application was submitted last April and the East Meath North Dublin Project application will be submitted this quarter. Both of these projects will be handed over to ESB Network for construction next year.

We also need to upgrade and effectively replace the existing network in Dublin. In 2022 we launched Powering Up Dublin and after major stakeholder engagement last year just this morning we announced three of the five cable routes for these circuits. We also received planning permission for two new substations in Belcamp and Poolbeg.

I would add that with each of the projects I have outlined, there is a strong emphasis on public engagement and listening to the community views. We now establish a dedicated Community Forum with each project where people can have

their say. In addition, due to the significant amount of new infrastructure projects ongoing we established the Dublin Infrastructure Forum which has brough together many semi state bodies such as ourselves to coordinate and collaborate on projects with the aim of reducing the amount of disturbance on communities. Such is the success of this to date is that there already some ducts now installed as a result of other semi-state projects that we can utilise when construction commences – ducting in the Royal Canal Greenway is an example.

Finally, the last key project I will highlight is the North South Interconnector in the North East. While this project has often drawn criticism locally, we cannot underline enough the central role it will play in helping Ireland – and Northern Ireland – to decarbonise.

The project has full planning permission, and last year, an independent international review cleared the way for us to begin engaging with landowners and local communities.

We are currently active across Meath, Cavan and Monaghan, engaging with landowners and communities and we would ask Members to support the project as a key piece of all-island infrastructure.

In summary we are well underway on the development of these projects and will have €5 billion of infrastructure in construction by mid-2025 and details of our progress is available on eirgrid.ie.

The future

The energy transition is happening, in addition to the infrastructure progress – we are changing how we operate the power system, currently we can operate the power system where 75% of the instantaneous electricity is delivered by non-synchronous renewable sources. We have reduced the number of must run thermal plant on the system from 5 to 4, we are scheduled to execute contacts for the provision of Low Carbon inertia in Q2 of this year, we are concluding our recommendation paper to the CRU and DECC following the EirGrid call for evidence on Long Duration Energy Storage. We are changing how we plan the system and looking at anticipatory investments, in collaboration with 3rd parties in the ecosystem – under the well-established contestability approach - to accelerate the energy transition and unlocking the renewable energy and storage potential.

Aligned with Government policy, offshore wind is planned to be a key contributor to delivering the Renewable Ambition. Strong progress is being made to set the required regulatory frameworks and connection principles and methods in place. The initial focus leading up to 2030 is on developments on the east and south coasts which places the generation close to the largest centre of demand, again reducing network constraints and the scale and quantity of network reinforcements required.

As detailed in Shaping Our Electricity further interconnection with neighbouring power systems in addition to EWIC, Celtic and Greenlink is required. This will

provide additional flexibility to operating the system and will help us to maximise the use of our surplus renewable generation.

Our ability to deliver the network needed by the target dates is dependent on cooperation, collaboration and support from the wider energy ecosystem. We require planning decisions and foreshore licences to be granted in a timely manner; we require availability of sufficient outages to facilitate the delivery of the required infrastructure; the road networks will need to be available for the routing of underground cable infrastructure and; suitable land must be available for strategic network investments as well as access to sites for necessary site investigations. In addition, for onshore infrastructure, once consents are achieved EirGrid hands the project over to ESB Networks who will build the Infrastructure.

We recognise 2030 is a milestone on the ultimate journey to a net zero energy system.

In December 2023 we and SONI, the System Operator for the power system in Northern Ireland, opened our consultation on Tomorrow's Energy Scenarios 2023 (TES 2023) to outline our long-term energy scenarios for Ireland and Northern Ireland. Our scenarios consider how electricity demand and generation might evolve from 2035 to 2050 and considers electricity demand, generation, storage and interconnection supported by different technologies.

TES 2023 will enable us to continue to support Governments and Regulatory Authorities in the development of energy policy and market design development required to achieve net zero.

In the recent days the Offshore Network Development Plan was published by ENTSO-E, the association of Transmission System operators in Europe, it calls out the need for further interconnection or hybrid interconnection between Ireland and Great Britan and also between Ireland and France to unlock our offshore potential and assist in the European decarbonisation, mainly focused on the 2040- and 2050-time horizons which is aligned with TES 2023.

You can see we are planning in multiple time horizon to ensure the policy makers are better informed around the transition from now to 2030 and then on to 2050 and we are focused on delivering in the 2030 time horizon.

Conclusion

We have taken measures over the last two years to secure the system and we now need to ensure the right types of generation are delivered and that the needed network is in place. We have delivered the roadmap in the form of shaping our electricity future. It is essential that the energy ecosystem plays its role in the delivery of EirGrid's climate action targets. The role of government and elected representatives is critical. Support from local elected representatives for projects and activity is hugely important and very welcome. Trusted leaders in communities are essential as we seek to work together to build a cleaner energy future.