Energy for generations

Electricity Costs in Ireland – Drivers. Outlook and Potential Interventions

30/05/2025

Contents

Executive Summary

Ireland’s pathway to a net zero energy system will leverage (i) energy efficiency to reduce energy demand, (ii) deep electrification to switch from fossil fuels, and (iii) decarbonisation of electricity generation. Decarbonisation also requires a continued focus on electricity costs to maintain a competitive economy during the transition. This paper on electricity costs in Ireland provides an analysis of the costs that make up the electricity price, the key drivers of electricity prices, and potential interventions to manage costs.

Cost Breakdown The electricity delivered to customers in Ireland comprises several individual cost items arising from the generation of electricity and its transport to customer premises. More than half of the total cost is driven by the generated electricity, while the rest is made up of fixed costs such as electricity network, generation capacity costs, system operation costs, and renewables support.

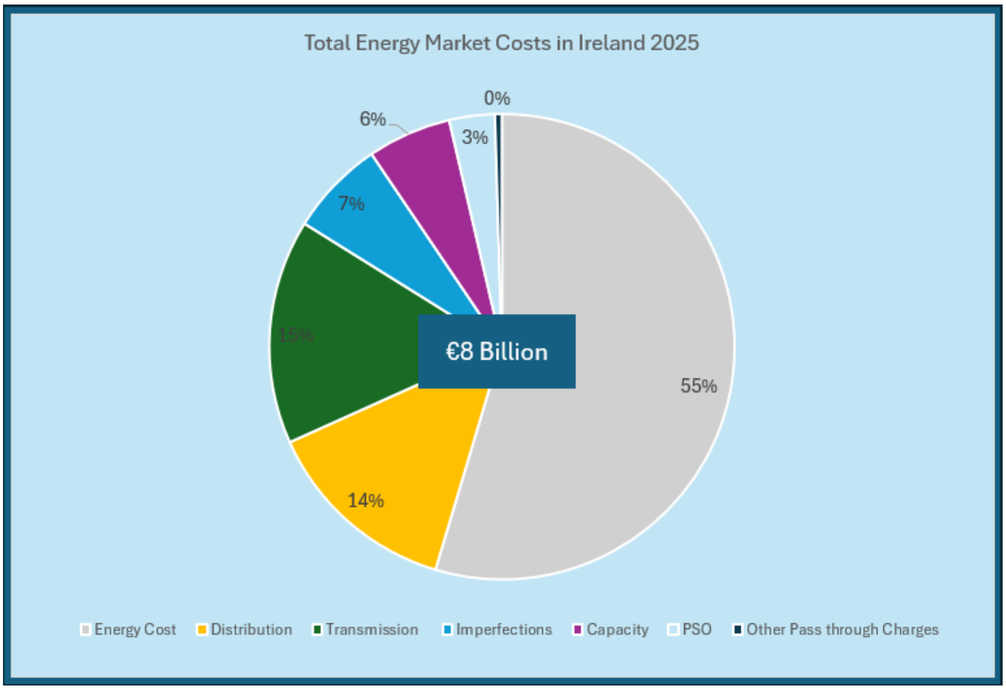
Drivers of Costs The price of natural gas is a key determinant of the price of electricity, and this correlation is driven by Ireland's reliance on natural gas for electricity generation, one of the highest in Europe. The pace of renewables rollout impacts the electricity price with increased rollout reducing wholesale prices. Demand is a key determinant of the average unit price of electricity; increasing flexible electricity demand offers opportunity to decarbonise the economy and reduce average unit prices.

Potential Interventions Several interventions could be made to manage electricity costs and average unit prices. Market interventions include engaging with the proposed EU Joint Gas Procurement Initiative to achieve better value for customers and increasing the deployment of two-way contracts for difference (CfDs) for renewables. There is a suite of direct exchequer funding interventions possible which could involve moving temporary emergency generation costs off the end user bill, universal or targeted customer credits, the exchequer funding of networks local authority rates, of the PSO levy or of certain new network investments. Other interventions include promoting additional electricity demand while supporting decarbonisation of the broader economy by increasing electric vehicle supports and increasing renewable heat deployment measures.

The selection of a subset of options in this paper in coordination with coordinated EU gas procurement could have significant downward impacts on electricity prices. Moving temporary emergency costs from transmission tariffs would reduce allowed transmission revenues by 27% while a 20% reduction in natural gas prices should see a similar reduction in wholesale electricity prices.

1. ELECTRICITY COST BREAKDOWN

The electricity delivered to customers in Ireland comprises many individual cost items arising from the generation of the electricity and its transport to the customer premises. The key cost items are illustrated in the figure below.

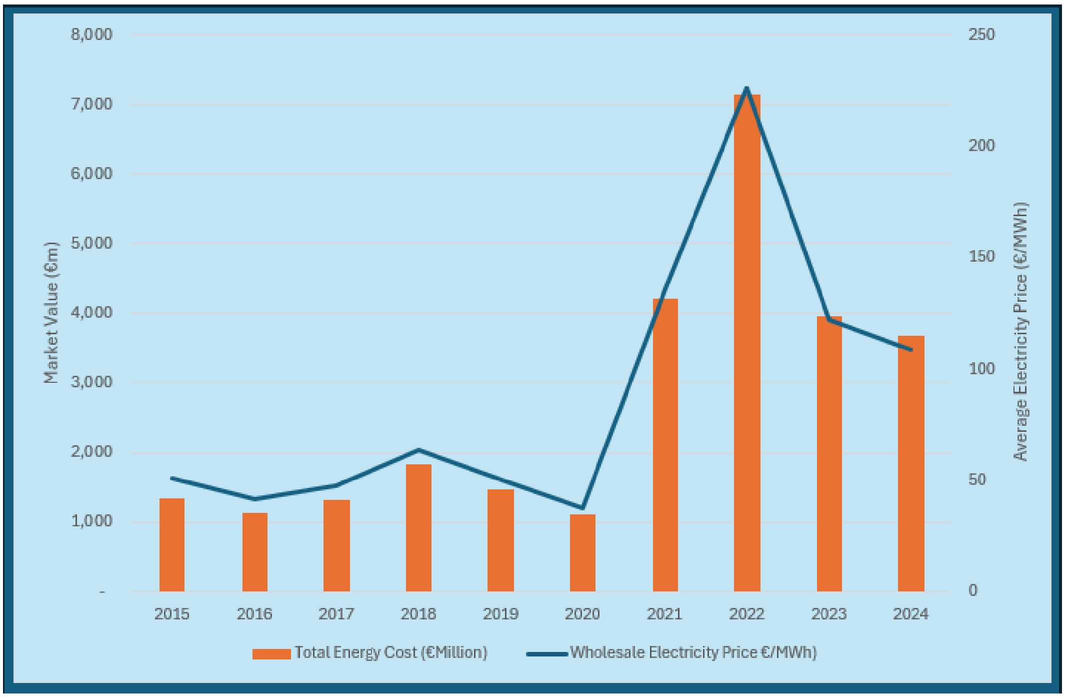


The figure above shows that more than half the total cost of electricity is driven by the generated electricity. The rest is made up of fixed costs such as electricity network, generation capacity costs, system operation costs and renewables support. The chart above does not include supplier costs as these are not publicly available; this is discussed in Section 1.4.1. Also, the above does not include VAT as a cost item. VAT is charged on electricity at the point of use. The remainder of this section provides a breakdown of the key electricity cost items and their historic trends.

1.1 Energy Costs

Energy costs refer to the cost for suppliers of purchasing electricity in the wholesale market. This is revenue that goes to generators for generating electricity either in Ireland (and Northern Ireland) or in interconnected markets. The competitive wholesale markets in Ireland and Northern Ireland are organised by the Single Market Operator (SEMO) and affiliates. There are many participant companies and multiple technologies participating in the wholesale market including thermal generators, renewable generators, batteries, assetless traders, interconnectors and demand side players, all of which bring competitive pressures to bear on the market clearing prices.

The graphic below sets out the historic total cost of electricity in Ireland using an average annual electricity price and outturn electricity demand.

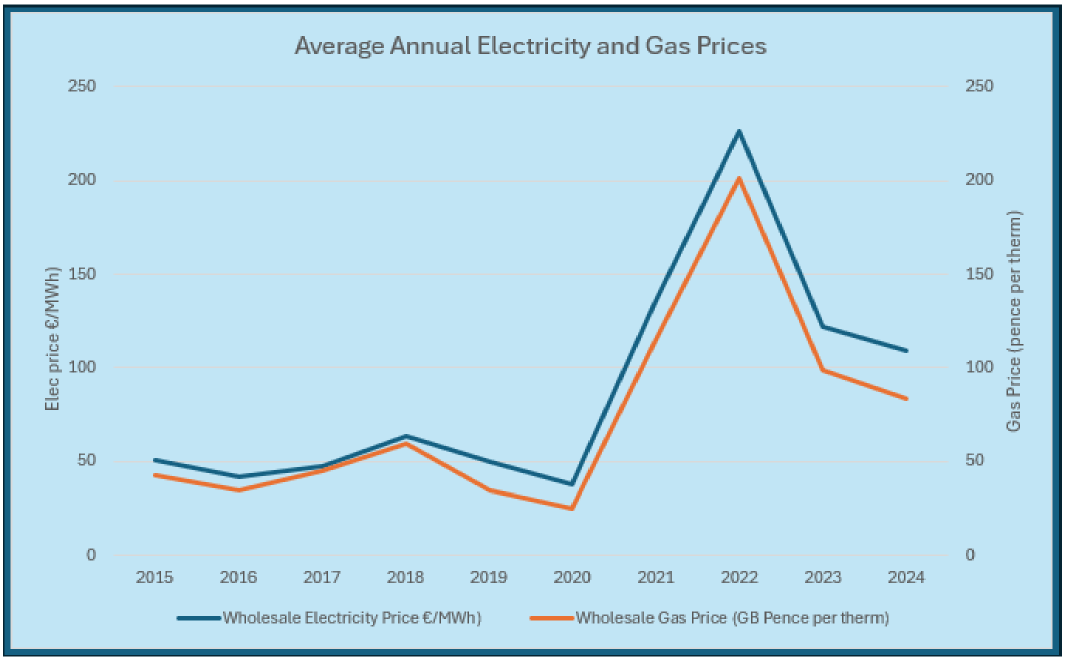


The figure above shows that as the wholesale electricity prices increases, the total amount of money to be recovered from customers increases. The figure also shows that post energy crisis in 2023 and 2024, electricity prices and total recoverable energy costs have settled at close to three times what they were pre crisis (2015-2020)[1]. The chart above does not capture the impacts of the Cap on Market Revenues (Windfall Gains in the Energy Sector) legislation under which €183 million was collected in electricity in 2023[2].

Wholesale electricity prices in Ireland are closely correlated to the price of natural gas and through the energy crisis, gas prices increased significantly. It is important to note that increasing renewables will reduce prices either directly through merit order impacts or indirectly where renewable generators in new Renewable Electricity Support Scheme (RESS) supports return monies through the PSO through two-way CfDs.

The correlation between gas and electricity prices is driven by the reliance on natural gas in the electricity mix in Ireland. Many other countries have greater diversity in their fuel mix and can rely on legacy nuclear power and hydropower which have lower marginal cost of generation than natural gas. The correlation between natural gas and electricity prices is set out in the figure below[3].

[1] Total recoverable energy costs have also increased due to increased electricity demand.
[2] Key Findings Environment Taxes 2023 - Central Statistics Office
[3] The figure contains simple averages of hourly SEM electricity prices and daily NBP gas prices.



The figure above shows a strong coalition between gas prices and electricity prices with very high gas prices since the start of the energy crisis driving higher electricity prices. Ireland's reliance on natural gas for electricity generation was highlighted in Mario Draghi's report on EU Competitiveness, published in September 2024[4]. In the report, it was highlighted that Ireland has the third largest reliance on natural gas for electricity and the fourth highest instance of gas setting the electricity price across Europe.

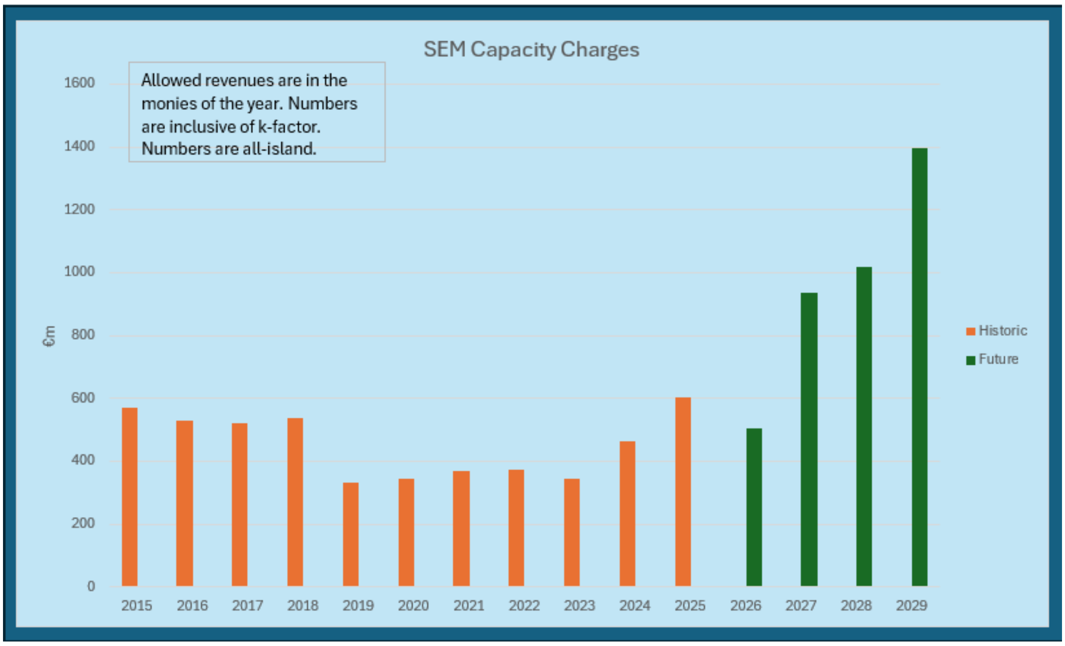
1.2 Capacity and Imperfection Costs

Capacity Charges and Imperfections Costs make up 6% and 7% respectively of total market costs and are described in more detail below.

1.2.1 Capacity Charges

The Single Electricity Market (SEM) Capacity Market operates in Ireland and Northern Ireland and is designed to ensure that there is enough electricity generation capacity to meet peak demand. Capacity contracts are awarded through competitive auctions where capacity providers bid to offer their generation capacity. The costs of the capacity mechanism are recovered from customers through capacity charges. The figure below sets out historic and already known future capacity mechanism costs in SEM[5]; therefore, the costs are total all-island costs, allocated based on electricity demand in the two jurisdictions, with more than 80% of total costs recovered from customers in Ireland.

[4] See Figure 5 on page 44. Link to Draghi Report
[5] Calendar year refers to tariff year – for example 2015 on graph refers to 2014/15 tariff year.



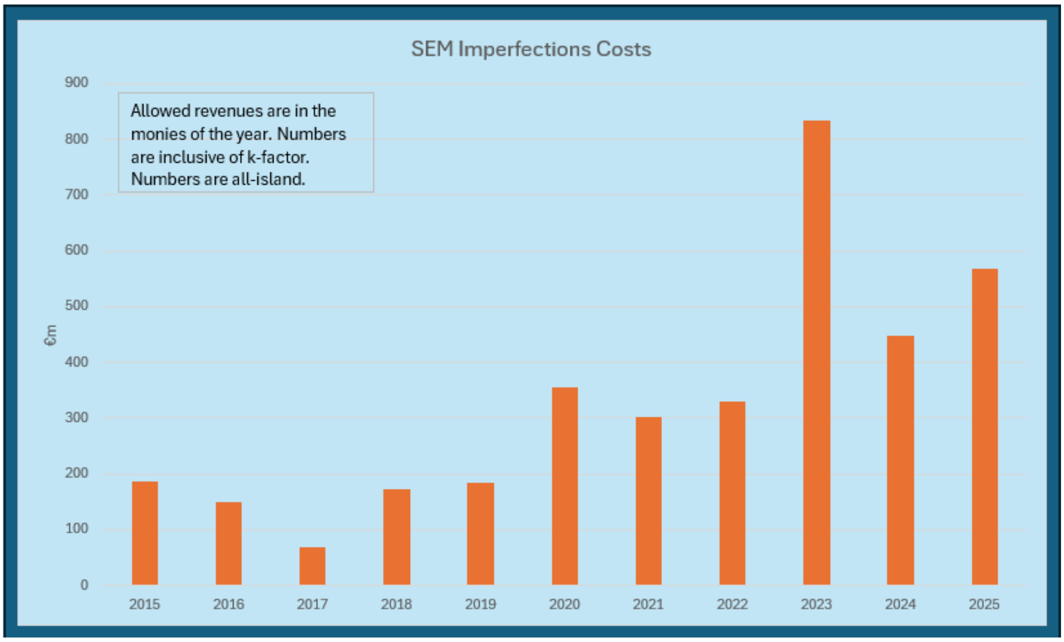
The figure above shows reasonably stable capacity charges up to 2018. Capacity charges reduced in 2019 with the move from SEM to the new I-SEM market but have increased since 2023 and will continue to increase in the coming years. The higher capacity costs are due to increased peak demand driving a requirement for new power stations to be built. It is also driven by the need to refurbish some existing power stations. The price of new power stations has increased since the 2018-2023 period owing to global demand for new equipment, increased interest rates and inflationary supply chain impacts. Based on the outcome for capacity auctions already held, the total capacity revenue will continue to increase until 2029.

1.2.2 Imperfections Costs

Imperfections Costs refer to the costs incurred by EirGrid and SONI when operating the electricity transmission network. These costs are highly influenced by natural gas prices and arise from various factors such as operational and network constraints, transmission outages, and the need to balance supply and demand in real-time. Imperfection costs are recovered from customers through imperfection charges.

The figure below sets out historic imperfections costs in SEM[6]; therefore, the costs are total all-island costs, allocated based on electricity demand in the two jurisdictions, with more than 80% of total costs recovered from customers in Ireland.

[6] Calendar year refers to tariff year – for example 2015 on graph refers to 2014/15 tariff year.



The increased imperfections charges in recent years are strongly linked to increased natural gas prices since the start of the energy crisis. This is because the price of gas feeds into the cost of redispatching gas plant for operational and network constraint reasons. The rollout of new system services and operational protocols in transmission system operation should help to reduce imperfections costs as should major network infrastructure such as the north south electricity interconnector.

1.3 Network Charges

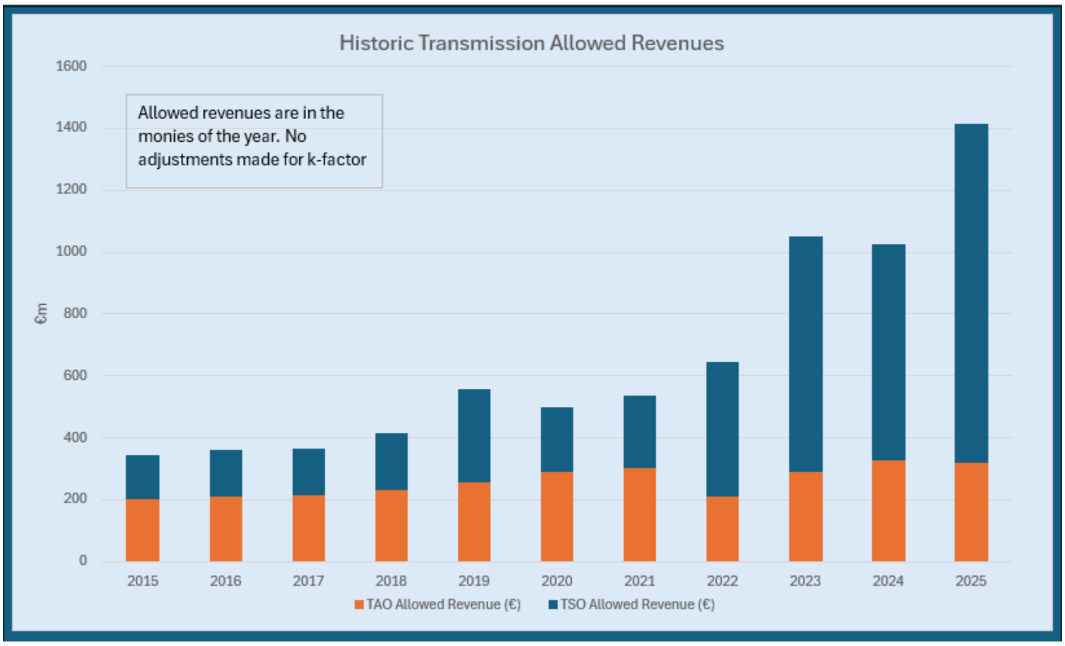
Network charges recover costs associated with building, maintaining and operating the electricity network. Ireland has an extensive electricity network with around twice the length of network per customer compared to peer countries in Europe; this is because Ireland has the highest proportion of rural population in Europe[7] which means more network is required per connection. This directly increases the per customer cost of providing networks infrastructure when compared to peer western European markets and is reflected in the network price charged to suppliers per customer. Networks activities are fully regulated, and all charges are approved by the Commission for the Regulation of Utilities (CRU). Increased investment in network infrastructure in the coming years is key to Ireland's society and economy as new homes and businesses are connected.

The sections below set out historic transmission and distribution charges in Ireland.

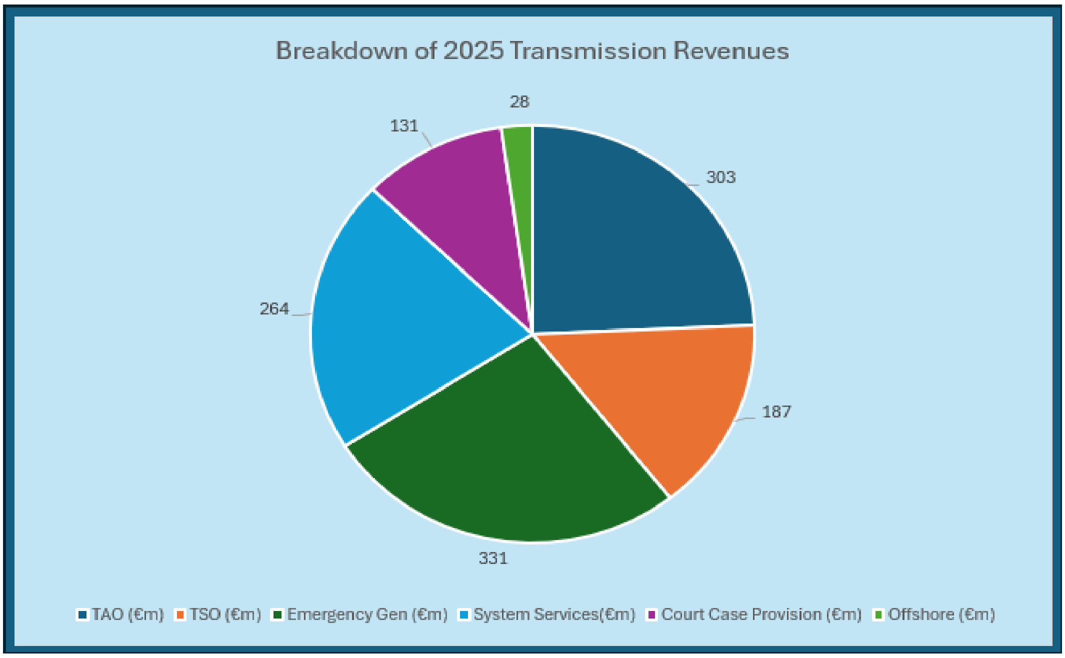
1.3.1 Transmission Charges

ESB Networks owns the electricity transmission network while EirGrid, another state-owned company plans and operates it. The transmission network comprises high voltage wires and pylons and transports the electricity at scale across the country, typically from large generators to the distribution network or to large customers. Using a transport analogy, the transmission network is like the motorways, carrying vehicles (electricity) at high speed (high voltage) across the island. The figure below sets out historic annual allowed revenues for electricity transmission.

[7] Link to webpage showing percentage share of total population and degree of urbanisation



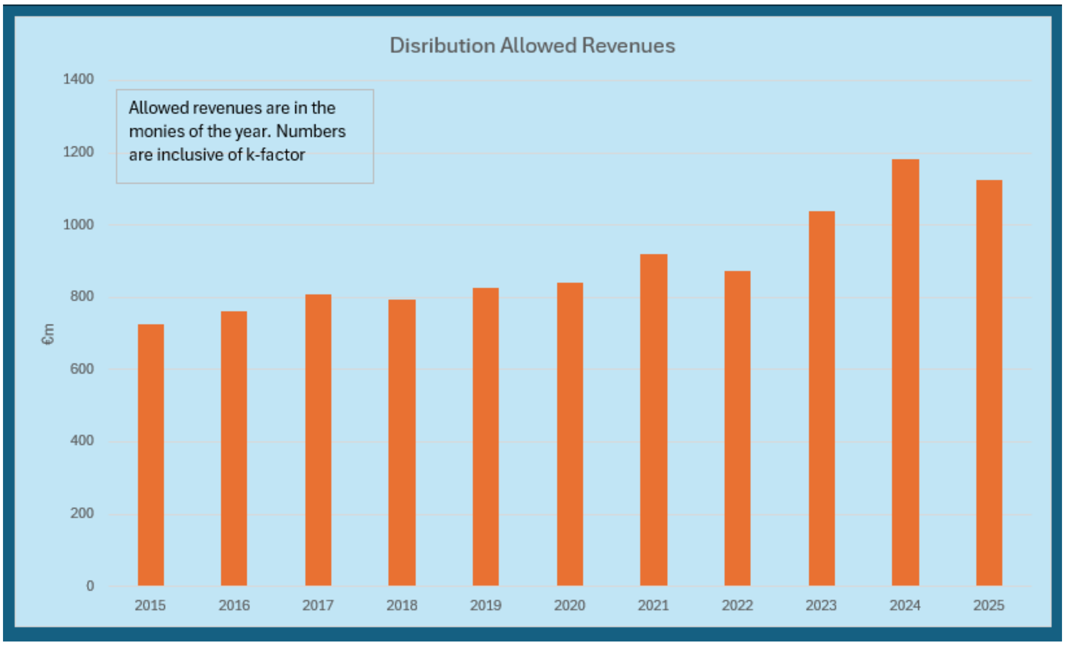
The figure above breaks down the allowed transmission revenue into Transmission System Operator (TSO) allowed and Transmission Asset Owner (TAO) allowed revenues. TSO refers to EirGrid operational charges while TAO relates to ESB Networks costs of owning and developing the transmission network. There has been an evolution of the breakdown of transmission charges since 2015. In 2025, TAO charges made up 23% of total transmission allowed revenues down from just under 60% in 2015. There has been significant investment in the transmission networks since 2014 with high levels of generation and demand connections as well as a transition to high levels of renewables. The Figure below provides a more detailed breakdown of 2025 transmission allowed revenue.



The figure above shows that there are several cost items within the transmission allowed revenue not directed related to the provision of electricity network. For example, the 650MWs of temporary emergency generation procured by EirGrid in recent years represents 27% of total allowed transmission revenues. These costs are expected to cease in 2028.

1.3.2 Distribution Charges

ESB Networks owns and operates the electricity distribution system which consists of low, medium and high voltage lines used typically to distribute electricity from the network and small generators to homes and businesses. Using a transport analogy, these are like regional/local roads on the road network connecting homes and businesses to the motorway network. The figure below sets out historic annual allowed revenues for electricity distribution.



The figure above shows that annual distribution required revenues have increased by around 50% since 2015 but there has been significant investment in the network in that time. For example, more than 200,000 houses, many of them with heat pumps and EV charge points and so higher usage, have connected to the distribution network as well as more than 2,000MWs of new renewables. This trend is expected to increase in the coming years as new homes, businesses, electrification demands, and new renewable generators are connected.

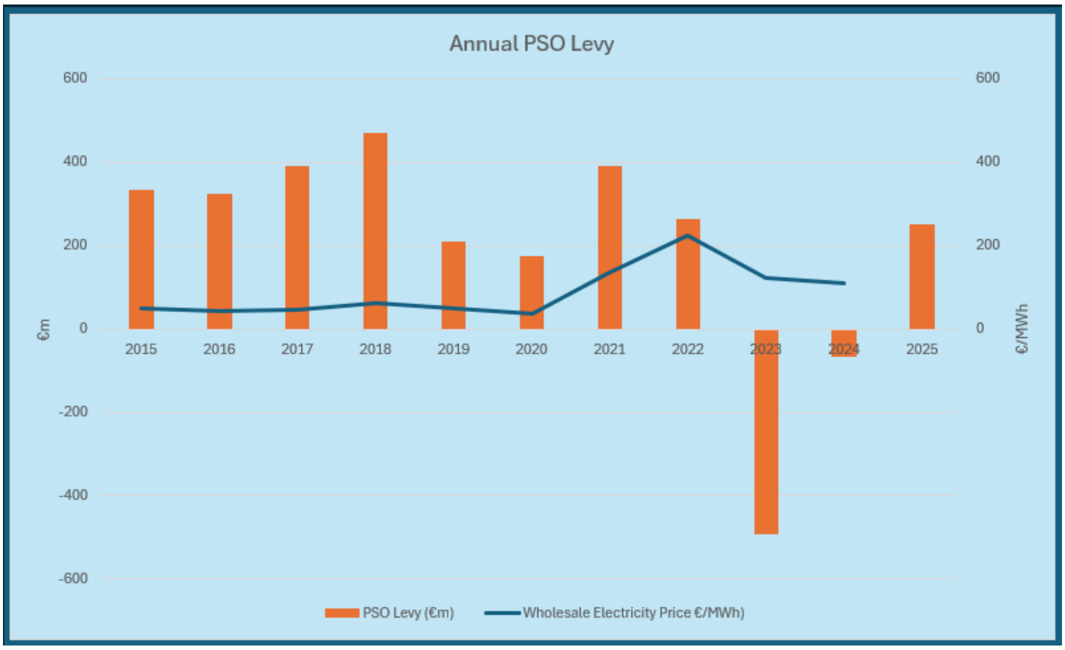
1.4 Other Charges

1.4.1 Supplier Costs

Supplier costs are those costs incurred by electricity suppliers and refer to staffing, billing, operations, marketing etc. Bad debt costs are also included in supplier costs and these costs have been rising since the energy crisis. Supplier costs also include costs of regulatory obligations such as the energy efficiency obligation scheme. There isn't a supply cost figure published on a regular basis and individual supplier costs to serve are confidential. However, in 2017, CRU estimated supplier costs to be around €200/customer[8]. There are likely to be upward drivers on the figure since 2017 including increased bad debt and regulatory obligation costs but there may have been downward drivers due to greater digitalisation etc.

1.4.2 PSO Levy

The Public Service Obligation (PSO) Levy in Ireland is a government-mandated charge applied to all electricity customers. This levy supports the generation of electricity from sustainable, renewable, and indigenous sources, such as wind, solar, and biomass. The PSO Levy is calculated annually by the Commission for Regulation of Utilities (CRU) and is collected by energy suppliers through customer bills. In general, the PSO levy is larger when it provides support to zero carbon generation when wholesale prices are lower while the levy is lower when wholesale electricity prices are higher. The historic PSO levy values for Ireland are set out below.



The figure above shows a strong link between wholesale electricity price and the level of the PSO pot albeit with a time delay. The very high wholesale electricity prices during the energy crisis saw a reduced and even negative PSO. Depending on the wholesale electricity price, the addition of new offshore wind may put upward pressure on the PSO in part because the cost of offshore transmission assets will be recovered through the PSO as opposed to transmission charges.

[8] Link to CRU Information Paper

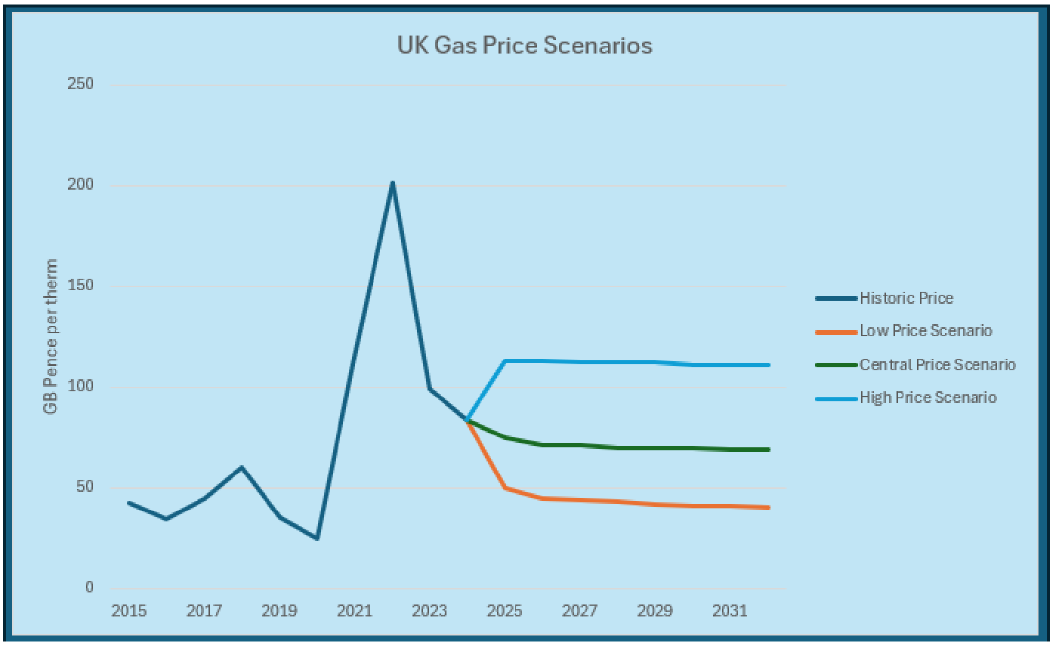
1.4.3 Other Market Charges

There are other market charges which make up the remainer of the total cost of electricity. These include primarily the market operator charges which is the cost to run the energy and capacity markets.

2. THE KEY COST DRIVERS AND OUTLOOK

2.1 Wholesale Gas Price

As set out earlier, the price of natural gas is a key determinant of the price of electricity, and this is expected to continue beyond 2030, at which point much higher levels of renewables will come onto the system including the commissioning of the first offshore wind farms. Gas prices are around three times pre-energy crisis levels and future prices are uncertain. This is linked to factors such as geopolitics, levels of gas demand, new LNG production facilities amongst others. The UK Government publishes the forecast fossil fuel prices[9] that it uses in its policy analysis. These forecasts, supplemented by historic price data, are reproduced in the figure below.



The figure above shows that in the central case, gas prices would be expected to settle well above their pre-energy crisis level but below where they are now. Depending on the price of carbon in 2030, the gas price reduction could result in noticeable reductions in wholesale electricity prices, possibly in the region of 10-20%.

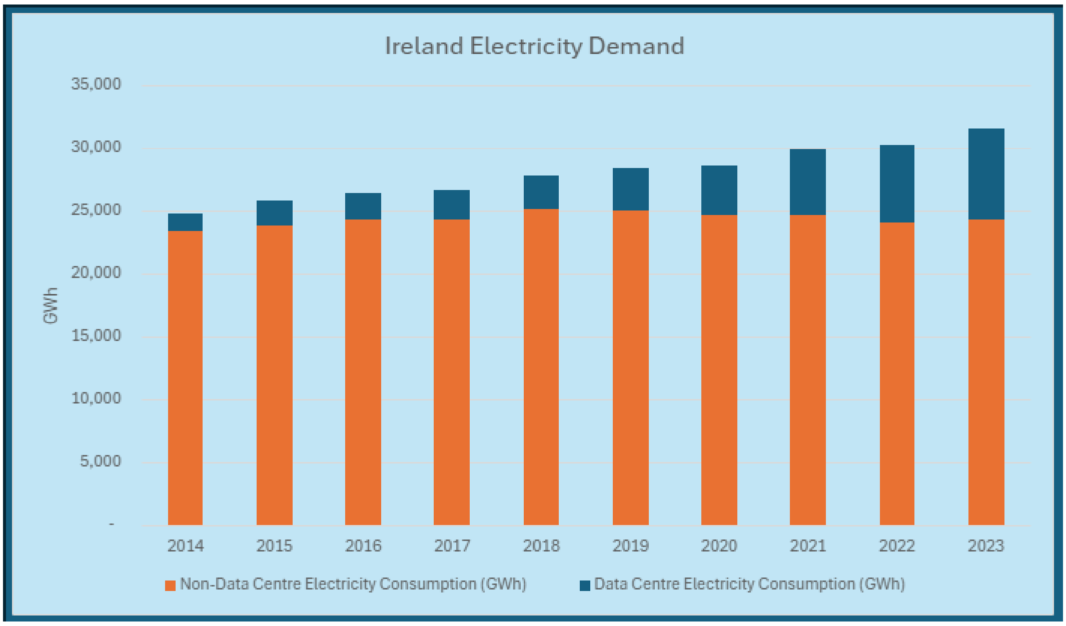
2.2 Renewables Deployment

The rollout of new renewables should put downward pressure on the wholesale electricity prices in the coming years once system operations practices allow the running of a system with high levels of renewables and once there is flexible demand to absorb the renewables. In a 2024 publication, ESRI found wholesale electricity prices are 10% higher than if renewables projects connected faster[10]. Similarly, the rollout of offshore wind at scale will have a downward impact on wholesale electricity prices.

[9] Fossil fuel price assumptions: 2024 - GOV.UK
[10] ESRI Academic Paper

2.3 Electricity Demand

After the natural gas price, the level of demand is one of the key determinants of the average unit cost of electricity. Higher levels of demand should result in lower average unit costs while lower demand will see higher average unit costs. The figure below sets out historic electricity demand in Ireland, sourced from SEAI's energy balance document[11].



The figure above uses data from the SEAI's energy balance which shows that electricity demand in Ireland increased by 22% between 2015 and 2023. However, when the information and communication category (this mostly consists of data centres) is removed, electricity demand increased just 2% in the same period. This is significant, especially considering circa 200,000 new homes (with new homes having higher consumption than older ones) were connected to the network as well as significant numbers of new businesses etc.

Energy efficiency has played a significant role in reducing electricity demand; lighting and household appliances are much more efficient than they were 20 years ago. This has allowed new connections onto the system without increasing demand. Rooftop solar PV installations have also reduced electricity demand from the network. SEAI reports that in 2023, 233GWhs was generated in these installations. As of March 2025, there was 780MWs of rooftop solar PV installed in Ireland. However, while total electricity usage has not increased significantly, adding new sites is adding to peak load which is the key driver of generation capacity and networks investment. This highlights the importance of time of use tariffs in moving demand from peak hours[12].

Electrification is the central pillar of decarbonising Ireland and provides a route to greatly reduce import dependency on fossil fuels by substituting them with indigenously generated wind and solar electricity. Accelerating electrification of heating and transport is essential both for

[11] National Energy Balance | Key Publications | SEAI
[12] See smart tariff explainer from SEAI

decarbonising the sector but also to have increasing demand to offset investment costs in the electricity system.

2.4 Non-Energy Costs

As described in Section 1, non-energy costs make up close to half of the total cost of electricity. Many of these costs are fixed and are based on the underlying investments needed in the electricity system. Most of these costs are directly regulated through revenue controls or through auctions overseen by Regulatory Authorities.

Imperfections costs (described in Section 1.2.2) are one cost item that warrants close consideration since it is a variable and relates to the cost of dispatching the electricity system to address system constraints etc. There are projects, already in train that can help to reduce imperfections costs and these should be completed as soon as possible.

- The North South electricity interconnector is a critical project and will have a real impact on the level of imperfection charges. Its completion will allow the all-island system to operate as one system and will remove some long-term system constraints and will reduce the amount of renewables that are turned down.
- The delivery of low carbon inertia services such as synchronous condensers[13] will remove significant system constraints. These will allow EirGrid operate the system with very high levels of renewables at any one time and will reduce the need to turn down renewables.
- More flexible demand will allow more renewables to be absorbed on the system when available and reduce their turn-down. Demand that can turn up when its windy and sunny is particularly useful especially when it does not add to peak capacity on the network. Identifying “turn-up” demand with low capital cost will help the system operate more efficiently.

[13] Synchronous Compensator – A key part of Ireland’s renewable energy future

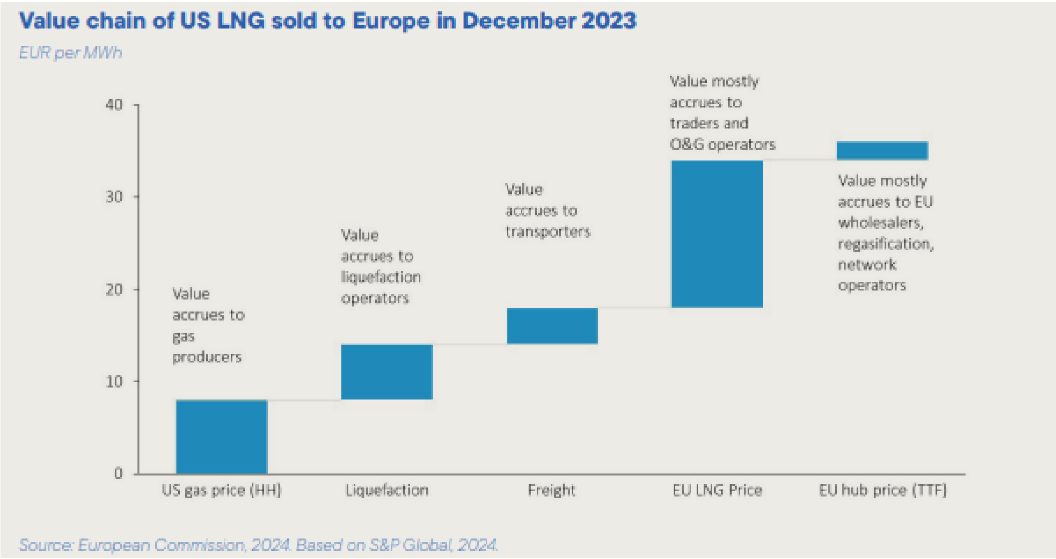
3. POTENTIAL INTERVENTIONS

This section sets out some of the interventions that could be made in relation to electricity costs and average unit prices. The interventions are broken down into market interventions, direct exchequer interventions and broader interventions.

3.1 Market Interventions

3.1.1 Engage with EU Joint Gas Procurement Initiative

In his report on EU Competitiveness, Mario Draghi has suggested that Europe should pursue a more coordinated approach to joint gas procurement to achieve better value for customers. The report examines LNG imports from the US and suggests that the bottom-up cost of US gas plus liquefaction costs plus transport costs to the EU are much lower than the price paid for gas by European consumers. This is illustrated in the figure below extracted from the published Draghi Report.



The figure above shows a significant gap between the bottom-up cost of imported LNG and the price that gas is traded at in EU hubs. Ireland should be supportive of any joint measures to procure gas at EU level if savings can be made for customers.

While the EU has run a gas aggregation service since the energy crisis, it's not clear that it has achieved lower prices for EU customers. In the Action Plan for Affordable Energy, the European Commission signalled that it would look to further harness the EUs purchasing power for natural gas.

As a country with significant reliance on natural gas and its price volatility, Ireland should look to benefit from joint procurement if lower prices can be achieved. There are barriers to be overcome not least the absence of an LNG terminal and not having a direct link with the EU gas market, but solutions should be explored if savings for customers here can be achieved.

3.1.2 Increased deployment of two-way CfDs for renewables

A key discussion point during the energy crisis EU market design was the move to increase the use of two-way contracts for difference for renewables. All RESS contracts in Ireland are two-way CfDs and in the current year are returning money to the customer through the PSO since wholesale prices are higher than the contracted RESS prices.

Consideration should be given to extending the two-way CfD deployment to existing wind farms which do not have such two-way CfDs. This could be done through auctions with participation by generators on a voluntary basis. There were more than 4,000MWs of renewables contracted through the REFIT scheme with these making up most of the renewable generation at present. The two-way CfDs could be made available to out of support generators and could even be considered for generators currently contracted in REFIT.

The two-way CFDs would have the effect of decoupling the electricity and gas prices for the contracted volumes and insulate the electricity customers against extreme natural gas prices. It also provides more options for windfarm owners as their assets come out of support.

3.1.3 Full Integration of batteries in markets systems

Ireland has more than 750MWs of battery storage connected to the network[14]. Batteries are flexible and can rapidly charge and discharge depending on system needs. At times of high levels of renewables, they can charge thereby reducing turn down of renewables.

However, batteries are not able to operate to their full potential due to market systems issues. This needs to be addressed without delay to ensure that the important battery technology is used to its full potential and in doing so a blocker for new investment is removed.

3.1.4 Network tariff review

The electricity network is changing as customers take more control of their energy through self-generation and through smart home applications. This means that customers interact with the system in different ways than traditionally seen. This requires a review of how the national electricity network is remunerated to ensure fairness across customer groups and importantly that the right signals are there to support customers to make low carbon choices and electrify more of their energy demand.

As well as network tariffs, there is a case to review all the charges that flow from the wholesale to retail market to ensure that they don’t discourage efficient electrification. For example, volumetric charges can have the effect of dulling the price signal between the wholesale and retail markets.

The CRU has commenced a review of network tariff structures, and its completion will be a key part of accelerating the low carbon transition.

[14] Electricity Grid – Wednesday, 19 Mar 2025 – Parliamentary Questions (34th Dáil) – Houses of the Oireachtas

3.2 Direct Exchequer Funding Interventions

There has been an increase in commentary regarding industry and business competitiveness and the role energy prices play in this. At EU level, Mario Draghi completed a report for the European Commission which examined Europe's competitiveness and decarbonisation. Draghi highlighted that Europe's energy prices are systemically higher than those in the USA and China, and that this is a significant inhibitor on European industry. Overall, the Draghi Report underscores the importance of a coordinated approach to decarbonising the energy system, which will enhance energy security and resilience while also making energy prices more competitive in the long term. In the short term however, Draghi emphasises the need to reduce taxes and charges on energy prices to support competitiveness and the transition to a longer-term sustainable model. Also, the recently agreed Programme for Government acknowledges the increased energy cost pressures on households and businesses, and committed to bringing forward taxation measures to help contain energy costs, including with regard to VAT.

Given the above, measures may be required to support the upfront costs of the transitions while seeking to retain a competitiveness in energy prices. There are many ways Government could make interventions in the energy system with exchequer funding. These range from subsidising the end price of electricity, like what has been seen with the residential customer credits to moving some revenue streams currently paid for by electricity customers to an exchequer funded revenue stream.

This section discusses potential interventions and assesses them at a high level against relevant criteria such as cost of electricity, impact on transition pace, impact on the regulatory model and the impact on networks companies to raise additional finance.

3.2.1 Universal Customer Credits

Customer credits have been employed since the energy crisis to offset the significant increases in energy prices. While wholesale energy prices have reduced, they remain at levels much elevated compared to before the crisis. Continued energy credits provide a means to relieve the impact of energy costs on customers. Alternatively, they could be targeted more closely to those who need them most as opposed universal application.

3.2.2 Expanded and Targeted Supports

If moving away from universal customer credits, it could be possible for the energy industry to work with relevant Government Departments to help identify those most in need and to target supports to them. Alternatively, it should be possible to expand other support schemes which provide retrofit supports and solar panels.

3.2.3 Exchequer funding of networks rates

ESB Networks currently pays significant monies in local authority rates. These are monies paid to local authorities relating to network assets such as depots, substations, wires, cables etc. In the last price control, PR5, there was a provision for €492m (€329.6m distribution and €162.4m transmission) for these rates. If these rates were funded from the exchequer rather than through network tariffs they would have a lowering effect on network tariffs.

3.2.4 Exchequer funding of PSO levy

The PSO levy is currently recovered from all electricity customers through their electricity bills. The current year PSO levy of €251.79m adds €38.74 to an annual residential customer bill and €154.87 to a small business electricity bill.

Recovery of the PSO levy could be moved from the electricity bill and onto the exchequer. This would provide relief to electricity customers and protects them from future increases when offshore wind is added to the support scheme.

It is important to consider the nature of 2-way CfDs when considering whether to move the PSO to exchequer funds. As discussed in section 1.4.1, when the wholesale electricity price is high, the generators with RESS two-way CfDs return monies to the PSO thereby providing relief to customers. This would need to be considered as part of a decision to exchequer fund the PSO.

3.2.5 Exchequer Funding to offset emergency generation cost

The costs of emergency generation are recovered through Transmission Use of System charges. €372m was recovered in 2024 with €331m being recovered in 2025 representing nearly 27% of total transmission charges.

Consideration could be given to finding other ways to fund the emergency generation cost either by directly offsetting the cost in transmission charges or other instruments where the state might take a stake in the assets. Recovering the costs of emergency generation outside of transmission tariffs would have a notable downward impact on transmission charges and customer bills. It would also have a natural sunset provision given the finite nature of the emergency generation contracts.

3.2.6 Exchequer funding of new network investment

There will be significant investment in electricity networks to support economic development and decarbonisation. The new networks assets are funded over long periods of time with the costs recovered over more than 40 years. To this end, the upfront costs of new networks are not seen by customers but rather their incremental cost is.

However, given the scale of investment required in the short term, there may be a potential to fund some of that network investment directly through exchequer funding as opposed to recovering those costs through network tariffs from customers. There may be certain projects which could be identified for this investment (e.g. transmission lines for high power EV charging or the North South Interconnector). This approach would allow pursuit of the long-term goal to electrify and decarbonise the energy system while ensuring energy prices don't rise too much upfront.

This approach is also under consideration by EU policy makers and in the recent Action Plan for Affordable Energy[15] the European Commission has committed to the following.

[15] Link to the EU Action Plan for Affordable Energy

“to *put forward guidance to explain how, where relevant in targeted cases, Member States could make use of their public budget to lower network charges to cover the additional costs resulting from measures to accelerate decarbonisation and market integration, notably such as interconnectors, major network upgrades or offshore grid connection infrastructure, in compliance with State aid rules and competition law”.*

3.3 Other Interventions

As referenced in Section 2.1, annual electricity demand has a significant impact on the average unit price of electricity. To this end, maximising efficiency and useful electricity demand, flexible demand in particular, is of critical importance. There are many initiatives that can be undertaken to promote additional electricity demand while supporting decarbonisation of the broader economy and reducing reliance on imported fossil fuels.

3.3.1 Increased Electric Vehicle Supports

Moving the vehicle fleet from fossil fuels to electric has many benefits for Ireland and it’s important that the move to EVs is accelerated.

- EVs reduce Ireland’s transport sector emissions and increase the share of renewable energy in transport. Each time a fossil fuel car is replaced by an EV, more than two tonnes of CO2 are reduced from Irelands transport emissions.
- EVs represent flexible electricity demand that can for the most part charge off peak and can take electricity from the system at times when it might otherwise have been turned down. According to EirGrid, 9% of renewable electricity was turned down last year equating to more than 1,000GWhs. This would be enough electricity to power more than 300,000 cars for one year.

3.3.2 Increased renewable heat deployment measures.

The electrification of heating loads is an important part of Ireland’s decarbonisation. At present, the depth of retrofit associated with a move to heat pumps is slowing down deployment and district heating solutions are not being deployed at scale.

It should be possible to increase renewable heat deployment through a targeted review of heating supports. This could consider why more heat pumps and other electric technologies are not supported through the Support Scheme for Renewable Heat (SSRH), whether a shallower retrofit will work in certain cases or whether there are short term measures that can be taken to increase district heating deployment.

3.3.3 Focus on increased flexible electricity demand

Further work should be undertaken with a view to increasing flexible demand on the network. It should be possible to identify energy demands currently served by fossil fuels that can be electrified and served off peak or at times of high levels of renewables. There are potential examples of this such as greater use of immersion water heaters at domestic level or electric boilers in industrial sites (for example Energy Cloud and Aughinish Alumina).

Unlocking increased flexible demand will require consideration of the charging structures for electricity and the compatibility of volumetric charges and flexibility.