



CLIMATE  
CHANGE  
ADVISORY  
COUNCIL

ANNUAL REVIEW 2026



**Electricity**

# Annual Review 2026: Electricity

Submitted to the Minister for Climate, Energy and the Environment  
on 12 May 2026

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## Summary for All

### Key observations

Emissions in the Electricity sector fell by approximately 8.9% in 2025 compared with 2024. The national grid became coal-free in June 2025 and net electricity imports increased by 21% year on year, with the share of supply met by imports now more than 23 times that in 2022.

Renewable generation capacity reached 7.7 GW by the end of 2025; however, only 0.8 GW of new solar and wind capacity was added, far below the 2 GW needed annually to meet the 2030 Climate Action Plan target of up to 23.6 GW. Targets were also missed for the share of electricity demand met by renewables, with rising data centre demand offsetting gains in renewable generation, and for dispatch-down, which reflects renewable electricity that is wasted due to grid limitations.

In January 2025, Storm Éowyn exposed the vulnerability of remote communities to prolonged electricity outages, with knock-on impacts for water supply, telecommunications and the Health sector. Ongoing instability in global energy markets, including conflict in the Middle East, continues to expose Ireland to fossil fuel price volatility and supply risks. This reinforces the need to deliver on the Government's commitment to end Ireland's reliance on fossil fuels by accelerating the transition to secure, domestically generated renewable electricity.

### Key recommendations

#### Electricity grid

To accelerate delivery of renewable energy and a more efficient electricity system, the Government should ensure that the Critical Infrastructure Bill prioritises electricity grid reinforcement projects, with clear timelines and accountability. The Council supports the acceleration of critical infrastructure for renewable electricity; however, enabled infrastructure must not undermine Ireland's ability to meet the National Climate Objective. Private wires legislation should also explicitly exclude fossil fuel infrastructure in all circumstances.

#### Planning

The Government and its agencies should accelerate the key planning and policy reforms needed in 2026 to deliver renewable energy. These include adoption of Regional Renewable Energy Strategies, transposition of the amended EU Renewable Energy Directive and designation of renewables acceleration areas, finalisation of the revised National Ports Policy and development of a coordinated process to support onshore wind repowering within protected areas.

#### Resilience

The impact of Storm Éowyn highlights future climate risk and the need to treat electricity resilience as a core element of the national climate adaptation strategy. The Government should urgently increase investment in electricity resilience across critical infrastructure, households and communities. This should include large-scale low-emissions backup electricity solutions for water, telecommunications and health infrastructure; community support centres; and targeted grants for domestic battery storage and installation of changeover switches. The Government should also urgently approve the Electricity (Supply) (Amendment) Bill to support the establishment and nature-friendly management of forestry corridors.



## Abbreviations

Abbreviation	Definition
CAP	Climate Action Plan
CBF	community benefit fund
CRU	Commission for Regulation of Utilities
CSO	Central Statistics Office
DCEE	Department of Climate, Energy and the Environment
DHLGH	Department of Housing, Local Government and Heritage
DMAP	Designated Maritime Area Plan
EGN	electricity and gas networks
EPA	Environmental Protection Agency
ESRI	Economic and Social Research Institute
ETS	Emissions Trading System
EV	electric vehicle
GNI	Gas Networks Ireland
HSE	Health Service Executive
IROPI	imperative reasons of overriding public interest
LEU	large energy user
LNG	liquefied natural gas
MEC	maximum export capacity
NESC	National Economic and Social Council
NPF	National Planning Framework
NPS	National Planning Statement
NPWS	National Parks and Wildlife Service
ORE	offshore renewable energy
ORESS	Offshore Renewable Electricity Support Scheme
PR6	Price Review 6



Abbreviation	Definition
PV	photovoltaic
RED III	Renewable Energy Directive III
RES	renewable energy share
SEAI	Sustainable Energy Authority of Ireland
SEC	sectoral emissions ceiling
SNSP	system non-synchronous penetration
SPA	Special Protected Area
VAT	value-added tax

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## Key observations

### Electricity emissions and main trends

- ▶ Electricity emissions decreased for the third consecutive year, with EU Emissions Trading System data indicating an 8.9% reduction in 2025.
- ▶ The Irish national grid became coal-free in June 2025. Despite only being in use for the first half of the year, coal still contributed 7% of the Electricity sector's annual carbon dioxide emissions, while accounting for only 1.3% of the electricity generated for the year.
- ▶ With the addition of 500 MW of interconnection capacity via the Greenlink interconnector, 2025 continued the trend of significantly increasing net electricity imports above the long-term average. Electricity imports accounted for 17.3% (6,130 GWh) of supply in 2025, a 21% (1,069 GWh) annual increase, and are now over 23 times higher than the 0.8% (252 GWh) contribution in 2022.
- ▶ Ongoing instability in global energy markets, including the impact of conflict in the Middle East, continues to expose Ireland to fossil fuel price volatility and supply risks. This reinforces the importance of delivering on the Government's Programme for Government commitment to end reliance on fossil fuels by accelerating the transition to secure, domestically generated renewable electricity.

### Renewable electricity and Climate Action Plan targets

- ▶ Ireland reached 7.7 GW of renewables generation capacity by the end of 2025, with 5.1 GW from onshore wind, 1.1 GW from grid-scale solar, 0.8 GW from domestic rooftop solar and 0.7 GW from other renewable sources (e.g. hydro).
- ▶ Only 0.6 GW of new solar capacity and 0.2 GW of new wind capacity were added in 2025, far less than the 2 GW that needs to be added each year until 2030 to hit Climate Action Plan targets.
- ▶ 2025 saw the failure of multiple key Climate Action Plan targets, including both onshore wind and solar capacity, dispatch-down and renewable electricity share of demand. The renewable electricity share of demand has stagnated in recent years due to any added renewable generation capacity being matched by increasing data centre electricity demand.

### Electricity sector resilience

- ▶ Storm Éowyn exposed the high vulnerability of Ireland's essential services and many remote communities to prolonged electricity outages, with cascading impacts across the Water, Telecommunications and Health sectors. This clearly signalled future climate risk and highlighted the need to treat electricity resilience as a core element of the national climate adaptation strategy.



- ▶ The National Climate Change Risk Assessment, published in June 2025, identifies disruption to energy distribution and transmission due to extreme wind as a high-priority climate risk. Strengthening resilience requires accelerated investment in backup power solutions, including battery storage and longer term storage, alongside targeted improvements to the electricity infrastructure to ensure it can better withstand future extreme weather events.

## Key recommendations

### Expanding grid infrastructure to accelerate deployment of renewables

1. To accelerate renewables delivery and improve system efficiency, the Government should ensure that the Critical Infrastructure Bill, due for adoption in 2026, designates electricity grid reinforcement projects as critical for prioritisation. The Government should also provide clarity on the schedule of programmes and projects that are to be designated for prioritisation in the short term. The Council supports the accelerated development of critical infrastructure to enable the transition to renewables; however, the infrastructure that is enabled must not undermine Ireland's ability to meet climate change mitigation and adaptation targets.
2. The Council recommends that the technical drafting of legislation on private wires, following the approval of the general scheme of the Private Wires Bill, exclude fossil fuel infrastructure outright under all circumstances.

### Coordinating planning to accelerate renewable development

3. The revision of the Regional Spatial and Economic Strategies and adoption of Regional Renewable Energy Strategies should be prioritised for delivery by the end of 2026 at the latest. This will ensure much-needed alignment between local plans and national policy, as these Regional Renewable Energy Strategies will translate regional allocations into local authority-level targets, which will inform city and county development plans.
4. The Department of Climate, Energy and the Environment (DCEE) should urgently prioritise the transposition of the amended EU Renewable Energy Directive III (RED III), specifically the designation of renewables acceleration areas, by Q4 2026. In addition, DCEE should conduct an implementation assessment with impacted public bodies as part of the legislative drafting to ensure that the necessary resources are in place to implement RED III.
5. An Coimisiún Pleanála, local authorities and the National Parks and Wildlife Service should have comprehensive and coordinated processes in place for the provision of derogations, imperative reasons for overriding interest and assessment of compensation measures to facilitate the repowering of onshore wind developments within European protected areas, in line with the timelines set out in RED III.



6. Belfast remains the only port on the island of Ireland with the required facilities and capabilities to assist with the delivery of offshore renewable energy targets. Urgent finalisation of the revised National Ports Policy by the end of 2026 remains essential to support the necessary investment for offshore renewable energy deployment at scale.

### Delivering a resilient electricity system

7. The Health Service Executive, Uisce Éireann and telecommunications operators should urgently increase investment in large-scale low-emissions backup electricity solutions for water, telecommunications and health infrastructure, which are especially vulnerable to cascading risks from power outages during extreme weather events.
8. To support household resilience and grid stability, the Government should reintroduce a grant for domestic battery storage and the installation of changeover switches as part of Budget 2027, prioritising low-income households, people registered as medically vulnerable and those most exposed to power outages.
9. In 2026, the Sustainable Energy Authority of Ireland should begin piloting the retrofitting of selected Community Support Centres to install renewable electricity generation capacity and electricity storage, equipping them with reliable and environmentally sustainable backup power solutions. These centres should act as leading examples of effective backup power deployment during electricity outages.
10. The Government should urgently approve the Electricity (Supply) (Amendment) Bill to provide for the establishment and maintenance of forestry corridors and strengthened vegetation management measures, improving the resilience and operational safety of the electricity networks. ESB Networks should also ensure the urgent implementation of a transparent national programme of afforestation and hedgerow renewal and nature friendly management of forestry corridors to mitigate (both on- and off-site) the loss to biodiversity and habitat disturbance caused by its timber clearance programme and support its goal of being nature positive by 2030.



## 1. Introduction

The Electricity sector's emissions come from a total of 15 electricity generating stations, 1 natural gas production platform and 1 natural gas refinery. The sector is the third largest by emissions in Ireland. 2025 was a critical year for the Electricity sector as it marked the conclusion of the 2021–2025 sectoral emissions ceiling (SEC) as well as the deadline for reaching the national renewable targets set out in Ireland's Climate Action Plan (CAP). Electricity emissions decreased for the third consecutive year, with EU Emissions Trading System (ETS) data indicating an 8.9% reduction in 2025. Environmental Protection Agency (EPA) provisional greenhouse gas inventory data due to be published later this year will confirm whether the sector has remained within its SEC limit for the first carbon budget period.

Ireland has now phased out peat- and coal-fired electricity generation and in 2025 achieved a 40% reduction in annual emissions compared with 2018 levels, despite a 26% growth in annual electricity consumption over the same period.<sup>[1]</sup> Ireland also made good progress on offshore wind in 2025, completing most actions in its national Offshore Wind Industrial Strategy, procuring 900 MW of future offshore wind capacity in the State's second offshore wind auction<sup>[2]</sup> and advancing the national Designated Maritime Area Plan (DMAP)<sup>[3]</sup>, which provides clearer development zones and accelerates future projects.

Despite this progress, all of the five key CAP targets for the sector were missed due to slow renewables deployment since the start of the decade, particularly the stagnation of onshore wind deployment, which has put SEC compliance for the second carbon budget period in jeopardy. Furthermore, this has left Ireland increasingly vulnerable to the recent global energy price increases triggered by the war in Iran, exposing Ireland's dependence on imported fossil fuels, along with societal and economic exposure to volatile and high prices, with implications for the security of electricity supply. This reinforces the importance of delivering on the Government's Programme for Government commitment to end reliance on fossil fuels by accelerating the transition to secure, domestically generated renewable electricity.

In addition, Storm Éowyn in January 2025 exposed Ireland's vulnerability and lack of resilience across a range of critical infrastructure and demonstrated cascading impacts across the Electricity, Water, Transport and Health sectors, highlighting the interdependencies between these systems. A sustainable, resilient and secure supply of electricity is essential for the economy and society, especially as, in order to meet emissions targets in other sectors, dependency on electrification for heat, transport and other vital systems will likely increase.

To reduce reliance on imported fossil fuels and enhance energy independence, security and economic competitiveness, Ireland must significantly increase renewable generation and grid capacity – particularly for onshore renewables in the short term – transform the flexibility of the electricity system and greatly improve coordination between planning and State bodies.

## 2. Sectoral emissions ceilings and Climate Action Plan targets

The Electricity sector has an SEC of 40 Mt CO<sub>2</sub> eq for the first carbon budget period (2021–2025), with the EPA's 2024 finalised greenhouse gas inventory<sup>[4]</sup> (latest data available) reporting that 85.2% of the SEC was used in the first 4 years of the first carbon budget (Table 1).



**Table 1: Reported emissions for 2021–2025 in the context of the SEC for the first carbon budget (2021–2025).**

(Source: EPA Final Greenhouse Gas Emissions 1990–2024.<sup>[4]</sup>)

Carbon budget period	SEC	Reported emissions, 2021–2024	SEC used, 2021–2024
2021–2025	40 Mt CO <sub>2</sub> eq	34.1 Mt CO <sub>2</sub> eq	85.2%

The EPA's latest quarterly indicators report, which provides an early estimate for 2025 emissions, calculated that CAP Electricity sector emissions were 4.5 Mt CO<sub>2</sub> eq for Q1 to Q3 in 2025, a 1% reduction from 2024 levels during the same period. While SEC compliance is to be confirmed in the EPA's provisional greenhouse gas inventory report in July 2026, what precisely will happen in the event of an exceeded SEC is currently unclear from either legislation or government policy.

2025 saw Ireland fail to achieve multiple key CAP targets including capacity for both onshore wind and solar, the system non-synchronous penetration (SNSP) limit, dispatch-down and the renewable electricity share of demand (Table 2). The failure to meet the target of 50% renewable electricity share of demand was caused by stagnation of installed renewable capacity coupled with a significant increase in electricity demand nationally, which was almost entirely driven by data centres (see Section 3.3). Despite having an achievable target of 6 GW, given its strong starting point of 4.3 GW at the end of 2020, onshore wind capacity has only averaged an approximate annual increase of 0.16 GW, less than half of the minimum of 0.34 GW needed to reach the onshore wind capacity goal during this period.

**Table 2: Progress on key CAP targets as at the end of 2025.**

(Sources: EirGrid System and Renewable Data Report 2025,<sup>[5]</sup> ESB Networks Renewable Distribution Connected Generation – Summary Report,<sup>[6]</sup> Climate Action Plan 2025.<sup>[7]</sup>) \*Microgeneration, predominantly comprising rooftop solar, is contained within the installed capacity values for solar.

Year	Cumulative installed capacity (GW)				Renewable electricity share of demand	SNSP limit	Dispatch-down
	Onshore wind	Offshore wind	Solar*	Microgeneration ≤ 50 kW (GW)			
2021	4.3	< 0.1	0.1	< 0.1	35%	70%	6%
2022	4.5	< 0.1	0.2	0.2	39%	75%	7%
2023	4.7	< 0.1	0.7	0.3	41%	75%	8%
2024	4.9	< 0.1	1.3	0.5	40%	75%	9%
2025	5.1	< 0.1	1.9	0.8	41%	75%	10%
2025 target	6	No target	Up to 5	No target	50%	85%	< 7%
2030 target	9	At least 5	8	1.6	80%	95–100%	< 7%



While solar has seen promising growth in recent years for both residential and grid-scale electricity capacity, its slow roll-out at the start of the decade (the first grid-scale solar farm did not start generating electricity until April 2023) affected the achievement of its capacity goal of at least 5 GW by 2025, although solar admittedly started from a much smaller base than other CAP targets. Dispatch-down, a measure of Ireland's wasted renewable energy due to grid constraints and curtailments, has experienced a progressively worsening trend since 2021 and is now at its highest level since records began in 2016. While significant grid improvements were made to increase the SNSP limit from 50% in 2015 to 75% in 2025, the 85% target was still missed.

### 3. Indicators

#### 3.1. Electricity emissions and main trends

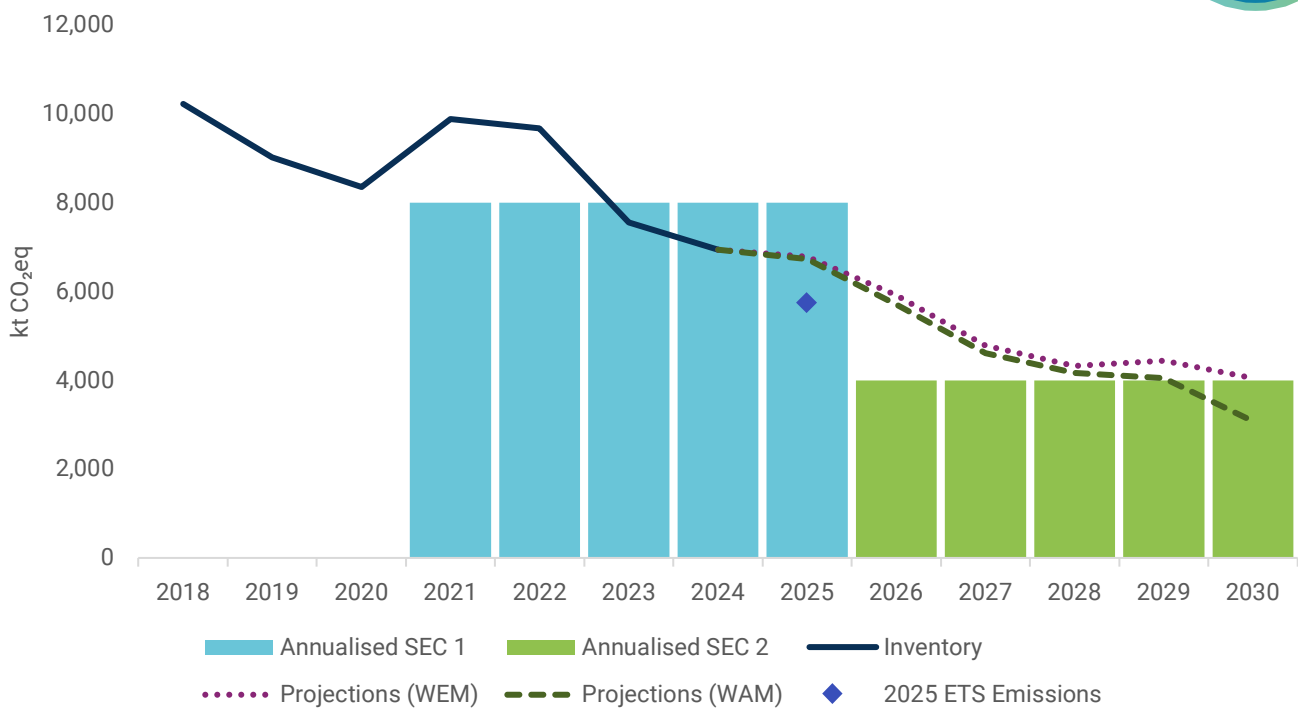
Ireland's electricity demand rose by 2.6% in 2025, outpacing the annual European increase of 1%,<sup>[8]</sup> and is now 30.2% higher than in 2015.<sup>[5]</sup> This growth is almost entirely driven by data centre expansion in Ireland, with data centres experiencing an average year-on-year growth rate of 23% since 2015 while all other Irish customer demand has increased by 0.5% per annum on average during the same period. This means that, using the latest Central Statistics Office (CSO) data,<sup>[9]</sup> consumption directly from data centres has risen by 463% since records began in 2015 and by 220% since 2018. All other non-data centre demand in Ireland has increased by only 7% since 2015 and by 2% since 2018.

In 2025, renewables accounted for 41% of electricity generation, a minor increase from 40% in 2024, with total wind generation at 11.3 TWh in 2025, constituting 33% of electricity generated in Ireland. However, solar saw the largest year-on-year percentage increase of any electricity generation source, increasing by 62%, or 0.4 TWh, in 2025, and now accounting for 1.1 TWh or 3.1% of national electricity generation.<sup>[5]</sup> Grid-scale battery storage has seen significant growth in recent years, increasing from 0 GW in 2020 to 0.76 GW in 2025, and helps in decarbonising the power system as it displaces potential fossil fuel generation during times of high demand and replaces it with stored renewables. EirGrid's system planning has repeatedly signalled the need for much more storage to integrate increasing levels of variable renewable energy, with Ireland's energy storage industry growing rapidly with projects of almost 4 GW having secured planning and projects of 2.5 GW having grid connection offers, according to Energy Storage Ireland's Pipeline Survey published in June 2025.<sup>a</sup>

EU ETS emissions include carbon dioxide emitted from electricity generation stations only and therefore do not fully capture all greenhouse gas emissions reported under the Electricity sector as defined in the CAP. The EPA provisional inventory data for 2025 are not yet available; however, the latest EU ETS data suggest that electricity emissions reduced by about 8.9% in 2025, to 5.7 Mt CO<sub>2</sub>, compared with 2024 and are now 39% lower than 2018 levels.<sup>[10,11]</sup>

The EPA's latest greenhouse gas emissions inventory<sup>[4]</sup> and projections<sup>[12]</sup> reports estimate a cumulative overshoot by 2.5 Mt CO<sub>2</sub> eq (4.1%) of the Electricity sector's SEC by 2030, achieving a 65% reduction on 2018 levels against a target of 75% in the most ambitious scenario (Figure 1, with additional measures). As these SECs assist in keeping Ireland aligned with its international obligations, this overshoot contributes to the expected compliance costs of between €8 billion and €26 billion, primarily through missing European targets as outlined in last year's joint paper between the Council and the Irish Fiscal Advisory Council.<sup>[13]</sup>

<sup>a</sup> Please note that Energy Storage Ireland's pipeline results are all-island, with projects from both the Republic of Ireland and Northern Ireland.



**Figure 1: Inventory and projected greenhouse gas emissions for the Electricity sector, 2018–2030, with annualised SECs.**

2025 ETS emissions are for carbon dioxide emitted from electricity generation stations only and therefore do not fully capture all greenhouse gas emissions reported under the Electricity sector as defined in the CAP. WAM, with additional measures; WEM, with existing measures.

(Sources: EPA Final Greenhouse Gas Emissions 1990–2024,<sup>[4]</sup> EPA Greenhouse Gas Emissions Projections 2024–2055<sup>[12]</sup> and EU ETS 2025 Emissions.<sup>[11]</sup>)

As new renewable deployment has ultimately been matched or exceeded by increasing data centre demand, recent reductions in Electricity sector emissions are largely driven by a substantial increase in net electricity imports and the reduction in coal-fired power generation. Although only in use for the first half of the year before Ireland became a coal-free power system in June 2025, coal still contributed 1.3% of Ireland’s electricity generation and 7% of the Electricity sector’s carbon dioxide emissions for the year,<sup>[14]</sup> with Moneypoint (Ireland’s only coal-fired plant) becoming an ‘out-of-market generator of last resort’ running on oil intended as a backup for the national grid until approximately 2029.<sup>[15]</sup> Net imports of electricity contributed a total of 17.3%<sup>[5]</sup> to the overall electricity generation mix in 2025, up from 13.9% in 2024,<sup>[16]</sup> with recent import levels running significantly higher than the long-term average.

The Greenlink interconnector added a further 500 MW of capacity and, alongside the East–West interconnector (500 MW between Ireland and Great Britain) and the Moyle interconnector (500 MW between Northern Ireland and Great Britain), brought the total import/export capacity to 1.5 GW.<sup>[17]</sup> This increase, alongside the future 700 MW from the Celtic interconnector between Ireland and France, may prove crucial in determining how close the sector gets to reaching its SEC, as emissions associated with electricity generation are accounted for in the territory where the electricity is generated, not where it is used (i.e. imported electricity has zero emissions associated with it for



the purposes of national SEC compliance).<sup>b</sup> However, the Council notes with concern the potential for delays in the delivery of the Celtic interconnector and their knock-on effects for SEC compliance.<sup>[18]</sup> Despite these recent increases in interconnection capacity, the critical North–South interconnector project has experienced continued unacceptable delays and has still not reached its construction phase, with an estimated completion date of 2031.<sup>[19]</sup>

### 3.2. Electricity resilience

The second iteration of the electricity and gas networks (EGN) sectoral adaptation plan was published on 11 December 2025.<sup>[20]</sup> It includes an action to define indicators for monitoring the resilience of the EGN sector to weather events by Q3 2026. The plan notes that potential indicators could include the number of climate-adapted EGN assets and reductions in overhead line damage during extreme wind events.

Targets regarding unplanned power outages were not achieved during each year of the Commission for Regulation of Utilities' (CRU's) Price Review 5 period, which resulted in penalties of €37.1 million being imposed on ESB Networks.<sup>[21]</sup>

The CRU published Price Review 6 (PR6) in December 2025.<sup>[22]</sup> The CRU proposes enhancing the reporting and monitoring framework during the 2026–2030 PR6 period to strengthen regulatory oversight. This includes performance metrics and indicators for both ESB Networks and EirGrid, as set out in the PR6 regulatory framework, that both organisations are required to report on annually to the CRU. In addition, this will include the continued publication by the CRU of performance reports on the network companies, along with the introduction of a PR6 dashboard summarising key metrics and indicators.

The CSO's Household Environmental Behaviours – Energy Use 2024 summary, published in November 2025,<sup>[23]</sup> indicates that approximately 10% of all households have solar photovoltaic (PV) panels and around 32% of those households also have a domestic battery for electricity storage. Installations were more common in rural locations, with 13% of rural dwellers reporting that they had solar PV panels and 5% reporting that they had a battery compared with 9% and 3%, respectively, among urban dwellers. Beyond this, there is very little oversight of data on domestic battery installations to date; the current total capacity in megawatts is not available, nor is the total amount of power utilised by household batteries, as these systems are behind the solar inverter and therefore not included in ESB Network's records. There are also no available data on the installation or prevalence of changeover switches, which enable batteries and solar PV systems to be used effectively during power outages, despite their importance for emergency preparedness and for understanding the resilience capacity of the residential sector. To address this gap, the CSO should consider introducing dedicated indicators covering domestic battery installations, associated storage capacity and the presence of changeover switches.

### 3.3. Renewable capacity

Ireland reached 7.7 GW of renewables installed by the end of 2025, with 5.1 GW from onshore wind, 1.1 GW from grid-scale solar, 0.8 GW from domestic rooftop solar and 0.7 GW from other renewable sources (e.g. hydro).<sup>[5,6]</sup> An additional 0.5 GW (0.2 GW of wind and 0.3 GW of solar) of new utility-scale renewable capacity was connected during 2025, equalling the capacity added in 2024. In addition

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**b** It is important to note that the average emissions intensity (g CO<sub>2</sub>/kWh) in the UK and France is significantly lower than in Ireland, with 2024 values of 226 g CO<sub>2</sub>/kWh in Ireland, 124 g CO<sub>2</sub>/kWh in the UK and 22 g CO<sub>2</sub> eq/kWh in France.



to the 0.3 GW of utility-scale solar capacity connected, 2025 saw the continued increase in small-scale renewable generation, mainly comprising domestic rooftop solar PV panels, with a total of 0.8 GW connected by the end of 2025. This included a 46% year-on-year increase in rooftop solar PV, which rose from 0.5 GW to 0.7 GW.

In total, Ireland added an impressive 0.8 GW of additional wind and solar capacity in 2025. However, this was still significantly below the 1.8 GW that was required for the year to be able to meet targets due to slow deployment at the start of the decade, bringing the new annual average increase in capacity required to meet 2030 targets to 2.0 GW (0.8 GW of wind and 1.2 GW of solar).

While delays remain prevalent in the planning system, 2025 saw approximately 0.6 GW of wind and 1.6 GW of grid-scale solar approved in 2025 (Table 3). If all these projects progress through to development, they could deliver 23% of the increase in onshore renewable capacity required to achieve the 2030 targets.

**Table 3: Number and capacity of wind and solar projects in the planning process for 2025.**

(Sources: 1, Wind Energy Ireland news release;<sup>[24]</sup> 2, EirGrid Renewable Electricity Support Scheme ORESS 1 Final Auction Results;<sup>[25]</sup> and 3, Construction Information Services database, 2025.<sup>[26]</sup>) \*Many solar projects do not state capacity on planning submissions to allow design flexibility; therefore, reported capacity is a Council Secretariat estimate and is subject to change.

Status	Onshore wind <sup>1</sup>		Offshore wind <sup>2,3</sup>		Solar <sup>3</sup>	
	Number of projects	Capacity (GW)	Number of projects	Capacity (GW)	Number of projects	Capacity (GW)
Awaiting decision	36	2.1	5	3.8	33	1.1*
Plans granted permission	15	0.6	0	0	40	1.6*
Plans refused permission	2	0.1	0	0	8	1.2*

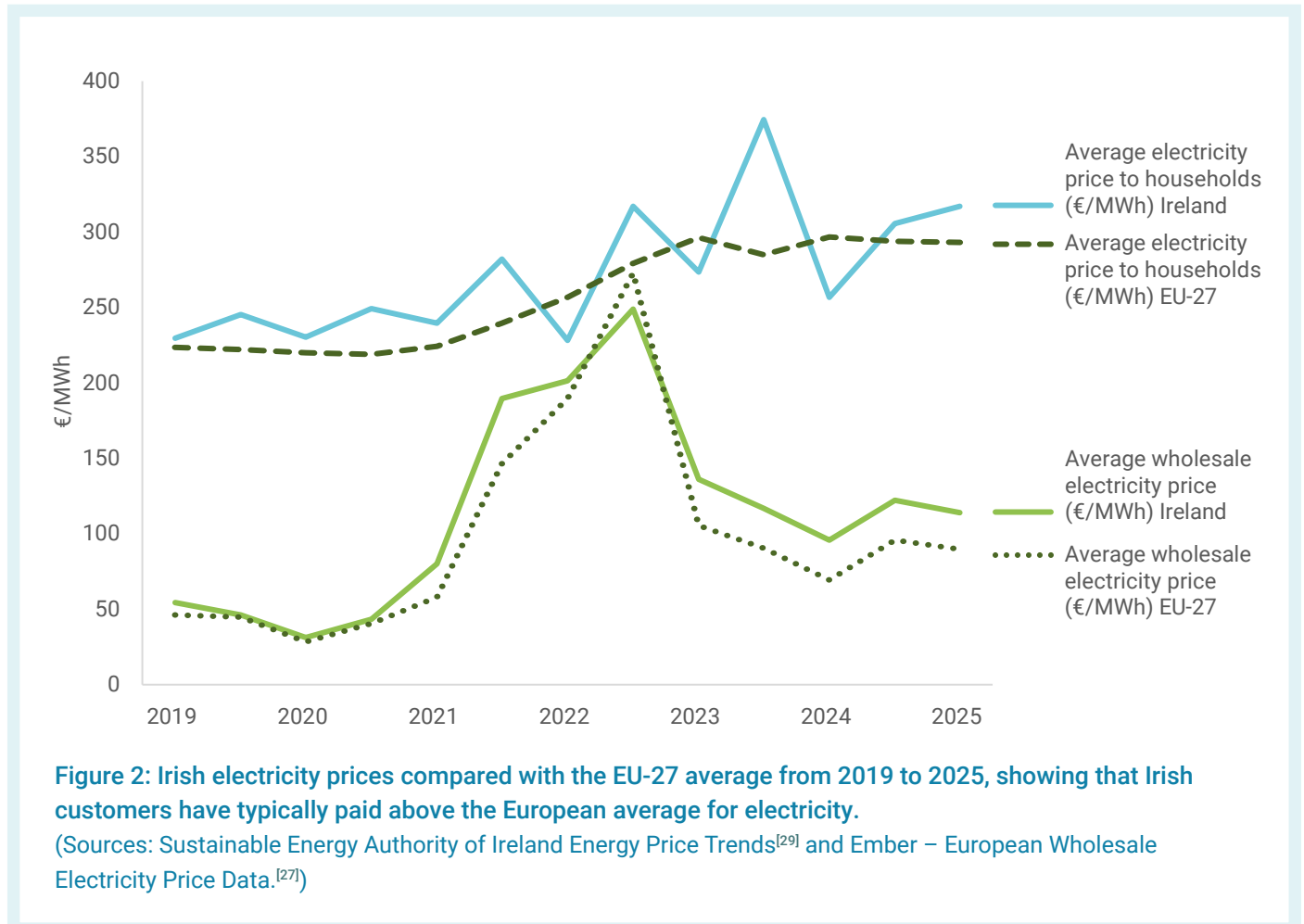
Ireland has only 0.03 GW of offshore wind capacity currently, with a target of 5 GW installed by 2030. A total of four offshore wind farm applications were submitted to An Bord Pleanála (now An Coimisiún Pleanála) in 2024 and are still awaiting a decision, with wait times exceeding a year and a half. As a result, although the measure came into effect in August 2025, each project would exceed the new revised RED III statutory deadline of 65 weeks that was transposed into Irish law via S.I. No. 274/2025 (see Section 5.3).

### 3.4. Electricity prices

Ireland has continued to experience extreme volatility in electricity prices in recent years, with the Irish Integrated Single Electricity Market recording the second-highest wholesale electricity prices in Western Europe and the fourth-highest overall in Europe in 2025, averaging €114.24/MWh for the year<sup>[27]</sup>



versus an annual EU-27 average of €87.95/MWh (Figure 2). While currently approximately 50% below the 2022 peak triggered by the Russo-Ukrainian war (€225.17/MWh), wholesale electricity prices are still more than double the 2020 average (€37.35/MWh). This is because gas-fired plants often set the market price; the price of electricity is not based on the average cost of all generation but on the marginal price of the very last unit needed to meet demand. Thus, high global gas prices maintain expensive electricity prices in Ireland.<sup>[28]</sup>



Greater renewable generation generally corresponds to lower wholesale electricity prices, as renewables can push the most expensive gas plants out of the needed pool of generators to meet current demand.<sup>[30]</sup> For example, in June 2025 the average wholesale price of electricity was €95.21/MWh, but this fell to just €67.15/MWh on days with notably high wind energy generation, which pushed expensive gas out of the market. When there was very little wind energy available, much more gas generation was required and the average price rose to €115.06/MWh. However, 2025 saw the continuing trend of worsening dispatch-down (Table 2), which resulted in approximately 10%, or €523 million, in surplus wind energy wasted that could have otherwise been effectively utilised to deliver cleaner, cheaper electricity to Irish homes and businesses (see Section 5.4).

The current energy crisis, triggered by war in Iran in February 2026, has brought high instability to international oil markets and greatly affected petrol and diesel prices, but has had a more limited effect on international gas prices and, thus, a subdued impact on electricity prices to date. However, the



situation around electricity prices remains volatile and it is likely that suppliers will announce price increases (and reductions in the availability of discount plans to customers) as cost increases are absorbed into customers' bills.<sup>[31]</sup> While this will be further explored later in the year in the Council's Cross-sectoral Review, early data indicate that the average wholesale price in March 2026 was €128.77/MWh. It is notable that this was the highest average wholesale price since March 2025, when prices averaged at €131.80/MWh, and is up 19% on February 2026's price of €107.97/MWh.<sup>[32]</sup>

The wholesale price provides a clear example of how renewables help to protect Irish households and businesses, with prices in March 2026 falling to an average of €94.20/MWh on the days with the most wind energy and doubling to €179.10/MWh when the system was forced to rely on expensive imported fossil fuels. Our continued exposure to fossil fuel price volatility and supply risks reinforces the importance of delivering on the Government's Programme for Government commitment to end reliance on fossil fuels by accelerating the transition to secure, domestically generated renewable electricity.

## 4. Progress on previous Climate Change Advisory Council recommendations

### 4.1. Accelerating renewables

The Council has repeatedly urged the Government to accelerate deployment of renewable energy infrastructure and to ensure adequate resourcing of planning, consenting and regulatory processes. The number of onshore wind projects awaiting a decision grew from 27 (1399 MW) at the end of Q1 2025<sup>[33]</sup> to 36 projects (2081 MW) at the end of Q4 2025<sup>[34]</sup> (Wind Energy Ireland, personal communication, April 2026). Only 185 MW of new wind capacity was connected in 2025,<sup>[24]</sup> representing only a fraction of the 780 MW required to meet CAP targets. The Council therefore welcomes the commitment in Budget 2026 to fund additional staff at An Coimisiún Pleanála,<sup>[35]</sup> but stresses that this must be accompanied by active monitoring of the backlog of applications in the system and the allocation of further resources where necessary to ensure that statutory timelines for planning decisions are met (see the discussion in *Section 5.3*).

Accelerating the roll-out of renewable energy is increasingly urgent, particularly in the context of repowering existing onshore wind sites, one-fifth of which (> 850 MW) will reach the end of their planning permission or require decommissioning by 2030. Key permitting provisions in RED III were finally transposed into Irish law in August 2025 through the European Union (Planning and Development) (Renewable Energy) Regulations 2025.<sup>[36]</sup> These include provisions that aim to speed up the permit granting process by providing mandatory timelines for various types of renewable energy projects, as well as provisions concerned with environmental protection directives and how they are applied to certain renewable energy projects. This includes Article 16f of RED III, which provides for imperative reasons of overriding public interest (IROPI) in renewable projects under specific conditions, limiting the application of Article 6(4) of the Habitats Directive, and is particularly relevant to the area of repowering onshore wind sites. The publication of the Accelerating Infrastructure Report and Action Plan<sup>[37]</sup> in December 2025 is welcome, and the Council urges its full and swift implementation to remove previously identified barriers to infrastructure development and reduce project timelines.

The Council has previously highlighted the critical role of offshore wind in the decarbonisation of the Electricity sector and called on the Government to take the necessary steps to develop the sector at pace. Ireland is not on track to meet its 5 GW offshore wind target by 2030. Some progress was made



in 2025, including the publication in September of a proposal for a national DMAP intended to designate sufficient maritime area to deliver a target of 20 GW offshore renewable energy (ORE) by 2040,<sup>[3]</sup> taking into account sites already designated by the South Coast DMAP following its approval in October 2024. In November 2025, an auction successfully procured 900 MW of capacity for a 20-year period from the first of four sites under the South Coast DMAP.<sup>[2]</sup>

However, the revised National Ports Policy, which had been due for publication in 2025, has been further delayed. It is now expected to be released for public consultation in the first half of 2026, with no firm timeline in place for finalisation.<sup>[38]</sup> Belfast remains the only port on the island of Ireland with the required facilities and capabilities to assist with delivery of ORE targets. The urgent finalisation of the revised National Ports Policy remains essential to support the necessary investment for ORE deployment at scale.

### 4.2. Demand management and flexibility

The Council has consistently called for an enhanced emissions reporting framework and stronger incentives for large energy users (LEUs) to participate in flexible demand initiatives designed to shift electricity consumption to times when carbon emissions are low. In July 2025, an EU report criticised Ireland for failing to effectively capture data on the sustainability and energy performance of its data centres, with only 18 (15%) of the estimated 123 data centres supplying information, which is well below the EU average of 36%.<sup>[39]</sup> The CRU finalised its Large Energy Users Connection Policy in December 2025, which regrettably mandated that new data centres only be required to meet 80% of their annual demand with additional renewable capacity,<sup>[40]</sup> contrary to the Council's previous recommendation that this demand be entirely met with new additional renewable generation (see *Section 5.2.3* for further details).

Additionally, the policy does not introduce a general requirement for data centres to provide demand flexibility or to shift demand to periods of high renewable output. Instead, system operators may require demand flexibility on a case-by-case basis. The Large Energy User Action Plan, published in January 2026,<sup>[41]</sup> sets out the Government's approach to planning for sustainable new energy-intensive industrial developments and, notably, includes an action for delivery in 2026 to establish and mandate LEU efficiency reporting aligned with EU legislation and to review the opportunity for a real-time emissions reporting framework.

The CRU is undertaking a review of the National Energy Demand Strategy in 2026 and, as an action under the Large Energy User Action Plan, this will assess reforms to network tariffs, market operation and grid code design to deliver LEU demand flexibility.<sup>[41]</sup> Further actions for delivery in 2027 include the design of flexible contracts and hybrid connections for LEUs that maximise utilisation of available grid capacity and renewable electricity use. The Council welcomes these developments but stresses the need for coordinated and timely implementation across Government, regulators and systems operators.

The Council has also previously stressed the importance of access to smart meter data, dynamic price contracts and effective consumer engagement measures to enable households and businesses to shift electricity use away from peak periods. The CRU published its Decision on the Smart Meter Data Access Code in February 2025,<sup>[42]</sup> highlighting legislative changes that are required to establish the basis for the distribution system operator to collect and process smart meter data for its specific use cases and specifying an 18-month timeline for implementation of the code. S.I. No. 589/2025 was signed in December 2025 and completed the legislative requirements needed to enable implementation of the code, mandating that ESB Networks manage smart meter data and that the CRU implement interoperability standards and act as the enforcement authority for smart meter data access.



Following a consultation in June 2025, the CRU published its decision on Smart Meter Upgrade – Access to Near Real Time Metering Data<sup>[43]</sup> in November 2025. The decision confirms that provision of near-real-time metering data services, including in-home displays, will be market led. The CRU has removed the requirement for ESB Networks to provide a ‘backstop’ physical in-home display to any customer who requests one and has decided not to require ESB Networks to provide an accessible near-real-time metering data service to customers on the Vulnerable Customer Register. Instead, the CRU will continue to work with ESB Networks to bring about more opportunities for suppliers to provide near-real-time metering data access to all customers. CAP 2025 included an action to assess measures to encourage uptake of domestic and commercial flexible demand technologies. However, the latest National Energy Demand Strategy biannual update<sup>[44]</sup> confirmed that action to develop and publish a plan to drive consumer participation in flexibility initiatives, originally due for completion in Q1 2025, has been delayed and is now to be incorporated into the work of the National Energy Affordability Taskforce.<sup>[45]</sup> The Council remains concerned that the legislative, regulatory and consumer-facing measures needed to support the widespread use of smart meter data and time-of-use pricing are not being delivered with sufficient urgency. In particular, the extension of the deadline for standard dynamic price contracts to 1 June 2026 represents a further delay in giving practical effect to rights already provided for in the legislation and is preventing households and businesses from participating fully in demand flexibility and reducing their electricity costs.

### 4.3. Resilience of the electricity network

The Council has repeatedly stressed the need for a more systemic approach to electricity network resilience, including the integration of future climate projections into project planning and appraisal, stronger adaptation of network infrastructure to withstand extreme weather and flooding and improved preparedness for wider disruption risks including cyber threats. Some progress is evident in this area. EirGrid has completed a climate change risk assessment<sup>[46]</sup> and identified five priority transmission sites for adaptive measures to mitigate flood risk. The final Electricity and Gas Networks Climate Change Sectoral Adaptation Plan was published in December 2025<sup>[20]</sup> and draws on the National Climate Change Risk Assessment, incorporating both observed and projected climate risks across electricity generation, transmission and distribution. It includes commitments to establish a climate impact register, to mainstream resilience to weather extremes and longer term climate adaptation needs into relevant energy policy, and for Gas Networks Ireland (GNI), ESB Networks and EirGrid to develop adaptation plans.

Increased capital investment in the network is a further welcome development, including the €3.5 billion in equity funding to ESB Networks and EirGrid announced in the National Development Plan review in July 2025;<sup>[47]</sup> the Electricity (Supply) (Amendment) Act 2025 that supports investment in ESB Networks and expands borrowing capacity;<sup>[48]</sup> and the CRU’s PR6 determination,<sup>[22]</sup> which provides up to €18.9 billion for the electricity grid and network over the 2026–2030 period and explicitly commits to an annual network resilience programme to meet the challenges of climate change and storms.

However, the Council remains concerned that implementation is not yet proceeding at the pace or scale required. While flood risk at critical transmission sites has been identified, implementation of adaptive measures at the five priority sites is not expected until 2028, subject to planning approval. A recent rapid attribution study undertaken by the Weather Attribution Science Irish Operational User Service project highlights that climate change is increasing flood risks associated with winter rainfall on the east coast of Ireland, reinforcing the urgency of timely adaptation at vulnerable infrastructure sites.<sup>[49]</sup>



Important gaps also remain following finalisation of the sectoral adaptation plan, which does not include any actions on rural community-based microgeneration or microgrid storage in the context of outage resilience, as previously recommended by the Council, despite the potential role such measures could play in building consumer confidence in electrification and improving resilience in vulnerable areas and for medically vulnerable consumers. The expansion in October 2025 of the Solar PV for the Medically Vulnerable Scheme<sup>[50]</sup> is welcome; however, a broader assessment of renewable microgeneration and storage opportunities across a range of scales is still required to bolster community-level resilience, particularly in rural areas.

## 5. Analysis and discussion

### 5.1. Delivering a resilient electricity system

#### 5.1.1. Large-scale backup power solutions for essential services operators

In January 2025, Storm Éowyn severely impacted the Electricity sector, with 768,000 customers losing power at the height of the storm and some customers remaining without power for 18 days.<sup>[51]</sup> This led to cascading impacts across other sectors:<sup>[52]</sup>

- ▶ Uisce Éireann confirmed that 130,000 customers (51,000 properties) were without water, with a further 750,000 customers (295,000 properties) at risk if power outages continued. Uisce Éireann is progressing work to increase its stock of standby and mobile generators and is working to make more plants generator ready.
- ▶ No interruption to the national gas supply occurred. However, some GNI installations switched to backup diesel or gas generators due to loss of mains electricity.
- ▶ The Commission for Communications Regulation estimates that Storm Éowyn had the largest impact on the national telecommunications user base in its recorded history. Mobile networks were heavily affected by widespread power loss. Backup battery systems did not last the duration of the outages, and operators experienced physical access issues when deploying generators to some sites.
- ▶ Parts of the Health Service Executive (HSE) estate were impacted by power loss, but backup generators ensured continuity of patient care throughout the storm. Following a review of the HSE's primary backup power generation infrastructure, HSE estates have initiated planning for a replacement programme for older generators.

The cascading impacts caused by the loss of electricity supply during Storm Éowyn demonstrate the importance of ensuring that all operators of essential services have adequate backup power storage and generation in place to withstand extended periods of electrical outages. The National Climate Change Risk Assessment identifies the risk of disruption to energy distribution infrastructure due to extreme wind as one of Ireland's highest priority climate risks, noting that such disruption can trigger cascading impacts that compromise other critical services and, in turn, give rise to impacts on human health, biodiversity and the financial system.<sup>[53]</sup>

The HSE, Uisce Éireann and telecommunications operators should urgently increase investment in large-scale low-emissions backup electricity solutions (including on-site generation and storage) for water, telecommunications and health infrastructure, which are especially vulnerable to cascading impacts from power outages during extreme weather events. To support this, DCEE should establish



a coherent national policy framework to clarify responsibilities, investment expectations and regulatory oversight for backup power resilience across critical infrastructure sectors.

A report reviewing the Storm Éowyn<sup>[52]</sup> response was published by the National Directorate for Fire and Emergency Management review steering group. It analyses the main impacts experienced during the storm and outlines recommendations to strengthen the resilience of coordination structures, communities and critical infrastructure for future events. The review notes that detailed guidance on backup power generation should be developed for essential service operators. This work is expected to be progressed through the sectoral groups led by the Department of Defence and the National Cyber Security Centre. The Council stresses that wherever possible renewable generation and storage should be used as (part of) the solution.

### 5.1.2. Household and community resilience

The Council recommends that, to support household resilience and grid stability, the Government reintroduce a grant for domestic battery storage with installation of changeover switches as part of Budget 2027, prioritising low-income households, people registered as medically vulnerable and those most exposed to power outages. Battery storage combined with a changeover switch can serve as a backup system during extreme weather events, allowing customers to maintain electricity supply during power outages. At the same time, this solution provides a mitigation co-benefit by reducing peak demand and grid drawdown, thereby avoiding or reducing the need to activate gas-fired power plants. Domestic batteries shift peak-loading and relieve stress on the national grid, particularly when paired with smart tariffs and solar PV generation via increased self-consumption.

Ireland previously had a domestic battery grant of up to €1,000, first introduced in 2018, when paired with solar PV installation, which was later discontinued as part of designing the Microgeneration Support Scheme in 2021, where analysis by the Sustainable Energy Authority of Ireland (SEAI) found that continuing this battery grant did not represent efficient use of Exchequer funds at that time due to a combination of battery cost, low storage capability and relatively short lifetime.<sup>[54]</sup>

However, the Minister for Climate, Energy and the Environment confirmed in February 2025 that DCEE is currently reviewing the use of microgeneration and battery storage solutions (including electric vehicle (EV) batteries) as an opportunity to increase cost savings for households and businesses as well as to provide flexibility and resilience for the grid. Work is under way to assess the feasibility of supporting smart energy solutions such as battery storage, changeover switches and EV batteries with vehicle-to-home/-grid capabilities.<sup>[54]</sup>

In January 2026, SEAI confirmed that more than 102,000 homes have received grant aid for solar PV installations since the scheme launched in 2018, with around one-third of these happening in 2025,<sup>[55]</sup> which points to a recent acceleration in deployment. However, when set against the Census 2022 figure of 1.85 million occupied households,<sup>[56]</sup> this suggests that grant-aided solar PV has reached only a small share (approximately 5.5%) of homes to date.

The CSO's latest energy use survey for households<sup>[23]</sup> suggests that battery uptake remains significantly below solar PV uptake overall, indicating substantial scope to incentivise deployment of additional resilience-enhancing measures such as batteries and changeover switches alongside solar PV installations.

There is a potential barrier to the uptake of these technologies in relation to how value-added tax (VAT) is applied, and this particularly impacts those who are least able to afford significant upfront investment. In response to a parliamentary question on 4 February 2026, the Minister for Finance confirmed that the zero rate of VAT on the supply and installation of solar panels only applies when the supply of solar panels and their installation are contracted to one business in the same supply



(i.e. a supply and install contract).<sup>[57]</sup> If they are installed as part of the same initial supply, then the zero rate also applies to ancillary equipment such as batteries and changeover switches. However, where such equipment is supplied separately it is then subject to VAT at either the standard rate of 23% or a reduced rate of 13.5% depending on the cost of the equipment relative to the installation cost.<sup>[58]</sup> This means that households able to afford battery storage and changeover switches upfront as part of their solar PV installation can benefit from the zero VAT rate, whereas more financially constrained households that need to phase works over time and add batteries or changeover switches later will eventually pay more for the same resilience outcomes through the VAT system. The Minister also confirmed that Ireland has no discretion under EU tax law to apply a VAT exemption outside a single supply and install contract.

In this context, there is a strong case for targeted grant support to offset this additional VAT cost burden and to incentivise the installation of resilience-enhancing technologies, particularly for low-income and vulnerable households and those most exposed to power outages. The Council recommends that, to support household resilience and grid stability, the Government reintroduce a grant for domestic battery storage with installation of changeover switches as part of Budget 2027, prioritising low-income and vulnerable households (including those registered as medically vulnerable) and those most exposed to power outages.

Battery storage systems can increase self-consumption of solar PV and relieve low-voltage grids by using a flexible grid-serving mode of operation and, thus, supplement grid expansion.<sup>[59]</sup> A growing cohort of customers with microgeneration capacity also have batteries installed in their homes and/or vehicle-to-grid capability that may allow them some control over when they export surplus electricity to the grid and reduce grid stress. However, the single fixed-rate Clean Export Guarantee tariff does not provide an incentive for these customers to optimise their combination of electricity self-consumption and export.<sup>[60]</sup> Time-of-use tariffs and dynamic-price import tariffs provide impactful economic signals to customers, encouraging them to move electricity consumption away from times associated with high prices to times when prices are lower and there is more renewable electricity generation.

Similarly, on the export side, time-of-export tariffs and dynamic export tariffs incentivise customers to schedule their exports to coincide with periods in the day when there is a greater need on the system and prices are higher. This could have benefits for the electricity system and for customers in terms of the payments they could receive for their export and would also facilitate greater flexibility in the system by strengthening price signals on the export side. In line with the introduction of dynamic import tariffs in June 2026,<sup>[61]</sup> the introduction of innovative and competitive export tariffs such as time-of-export tariffs and dynamic export tariffs would be a progressive step in this regard.

During Storm Éowyn, emergency hubs were established in local businesses and community centres, providing charging points, food and hot water to neighbours left without power and water. The operation of these hubs was led by local authorities, with support from community and voluntary groups at the local level. Local authorities are finalising lists of designated Community Support Centres to act as emergency hubs and provide a consistent approach to humanitarian response during future severe weather emergencies. It should be ensured that Community Support Centres are rapidly rolled out and accessible to all communities.

Mobile emergency diesel generators will be available in each local authority area for use during extreme weather events or other potential emergencies.<sup>[62,52]</sup> The Council recommends that, in 2026, the SEAI begin piloting the retrofitting of selected Community Support Centres to install renewable electricity generation capacity and electricity storage, equipping them with reliable and environmentally sustainable backup power solutions. Existing SEAI community grants and funding mechanisms<sup>[63]</sup> could be used to support early pilots before a wider national roll-out. These centres



should act as leading examples of effective backup power deployment during electricity outages.

The forthcoming private wires legislation<sup>[64]</sup> could further strengthen the energy resilience dimension of these centres. By allowing direct connections between Community Support Centres and nearby renewable generators, such as local wind farms or solar installations, the centres could continue to receive electricity even when the wider grid is down. The legislation also proposes enabling hybrid connections, where multiple entities share storage and generation assets.

Lastly, the Council welcomes that the Office of Emergency Planning, which is part of the Department of Defence, is preparing an emergency preparedness booklet to be sent to all households.<sup>[52]</sup> The booklet will include a practical preparedness checklist outlining steps that households and communities can take to strengthen their readiness for emergencies, including power outages during extreme weather events.

### 5.1.3. Vegetation management and forestry corridors legislation – Electricity (Supply) (Amendment) Bill

During Storm Éowyn, ESB Networks' pole-based infrastructure suffered significant damage, with poles and lines brought down by high winds and falling trees. It is estimated that hedgerow timber and forestry accounted for over 59% of electrical faults during Storm Éowyn.<sup>[65]</sup> The Storm Éowyn review report<sup>[52]</sup> highlights the need for strengthened vegetation and forestry management to protect critical electricity and telecommunications infrastructure from future storm impacts. Proposed legislative measures include enhanced proactive vegetation management, enforceable height limits for roadside vegetation and the creation and maintenance of dedicated forestry corridors to improve network resilience and operational safety.

ESB Networks has established an annual multi-year corridor clearance programme as part of its Winter 2025 Grid Resilience Plan,<sup>[66]</sup> which is informed by detailed overhead line surveys identifying high-risk windblow areas. Under PR6,<sup>[22]</sup> a total of €0.89 billion has been allocated to improve storm resilience across the electricity network. This investment will enable ESB Networks to build on the Winter 2025 Grid Resilience Plan and expand key resilience activities, including enhanced vegetation management.

The Government has already approved the initial heads of a bill<sup>[67]</sup> to support these measures; the forthcoming legislation would clarify ESB Networks' longstanding land access rights, originally set out in the 1929 Electricity Act, ensuring that both State-owned and privately owned forests are managed appropriately and in line with resilience requirements. The Council recommends that the Government urgently approve the Electricity (Supply) (Amendment) Bill to provide for the establishment and maintenance of forestry corridors and strengthened vegetation management measures, improving the resilience and operational safety of the electricity networks.

While these measures are essential to reduce future storm-related outages, they carry significant biodiversity implications that must be considered in parallel. Large-scale clearance of trees, hedgerows and other vegetation within forestry corridors may lead to habitat loss, fragmentation and reduced ecological connectivity, potentially undermining Ireland's broader biodiversity commitments. The National Biodiversity Action Plan 2023–2030<sup>[68]</sup> requires all public bodies to have regard to biodiversity outcomes in decision-making and mandates whole-of-government responsibility for conservation and restoration actions.

ESB Networks' Biodiversity Strategy (2024–2029)<sup>[69]</sup> commits ESB Networks to biodiversity net gain from its operations by 2025 and to incorporating a nature-positive approach in its business strategies, decision-making, design, planning, construction and maintenance activities. Therefore,



the Council recommends that ESB Networks ensure the urgent implementation of a transparent national programme of native species afforestation and hedgerow renewal to mitigate (both on- and off-site) the loss to biodiversity and habitat disturbance caused by its timber clearance programme and support its goal to be nature positive by 2030. There may also be opportunities to manage forestry corridors for alternative biodiversity-positive habitats such as semi-natural grasslands or heathlands. The programme should include clear targets and annual public reporting on outcomes achieved, such as the area restored or afforested. The approach should prioritise native tree and hedgerow species and align with Ireland's national afforestation targets of 8,000 hectares per year under the CAP<sup>[7]</sup> and the forthcoming National Restoration Plan under the EU Nature Restoration Regulation.<sup>[70]</sup>

## 5.2. Expanding grid infrastructure to accelerate deployment of renewables

### 5.2.1. Critical grid infrastructure delivery

In order to deliver a decarbonised electricity system as part of the broader energy transition, Ireland's national electricity grid must be significantly strengthened. The Council welcomes the final PR6 determination published by the CRU in December 2025,<sup>[71]</sup> which confirmed record levels of investment in the national grid and approved the proposed investment plans of ESB Networks and EirGrid from 2026 to 2030, reaching an allocated total of €13.6 billion to be invested into network infrastructure over this 5-year period. PR6 identifies 29 major grid infrastructure projects designed to modernise and reinforce the national grid to meet rapidly rising electricity demand (see *Section 3.1*), support renewable energy targets and strengthen resilience.<sup>[22]</sup> These PR6 projects include increasing grid capacity to take on new renewable generation, strengthening transmission nodes for upcoming offshore wind delivery and upgrading pre-existing lines and substations. The Council reiterates its recommendation for full transparency and regular reporting on the progress of critical grid infrastructure projects.<sup>[72]</sup> With adequate funding in place via the PR6 regulatory framework, it is paramount that the delivery of these identified projects is as fast as possible to meet Ireland's impending 2030 national targets, which are severely at risk of overshoot.

The Critical Infrastructure Bill<sup>[73]</sup> is a vital lever for accelerating infrastructure development in Ireland, with the Government having secured approval of the general scheme of the Bill in March 2026<sup>[73]</sup> and the Bill being published in April.<sup>[74]</sup> The Bill aims to create a legal obligation for State bodies (e.g. An Coimisiún Pleanála, local authorities) to recognise and accelerate key projects through planning, licensing and other consenting stages if so designated under the Bill. This Bill could provide a pivotal opportunity for increasing coordination of and minimising the administrative or procedural delays embedded in the planning system, with the Council recommending that the Government ensure the Critical Infrastructure Bill designates electricity grid reinforcement projects in line with the aforementioned PR6 grid infrastructure programme of projects.

The Government should also provide clarity on the schedule of programmes and projects that are to be designated for prioritisation in the short term, with clear accountability, time-bound delivery milestones and regular outcome reporting for these projects that is publicly available being critical, such that time-to-decision by planning authorities can easily be tracked for such projects and, thus, the efficacy of the Bill will be properly verifiable by stakeholders and the public. Additionally, transparency with regard to the designation of specific infrastructure projects or programmes that the Government considers to be critical is of significant public interest. However, the Council notes with concern that Section 7 of the Critical Infrastructure Bill disapplies Section 15 of the Climate Action and Low Carbon Development Act 2015 entirely in respect of any relevant public body exercising functions in relation to a designated critical infrastructure project or programme. The Council supports the acceleration



of critical infrastructure to enable the transition to renewables; however, the infrastructure that is enabled must not undermine Ireland's ability to meet the National Climate Objective.

Section 15 of the Climate Act 2015<sup>[75]</sup> requires every public body to perform its functions, so far as practicable, in a manner consistent with the CAP, the National Long-term Climate Action Strategy, the National Adaptation Framework and Ireland's climate objectives. The Council has previously stressed the importance of Section 15 and recommended that the Government immediately align the legal mandate and strategy for all public bodies to act in conformity with the Climate Action and Low Carbon Development (Amendment) Act 2021 (see *Section 5.2.3*).<sup>[72]</sup> On 4 February 2026, the Supreme Court, in its decision on the Coolglass wind farm,<sup>[76]</sup> confirmed for the first time that Section 15 of the Climate Act 2015 is a substantive, outcome-focused obligation that is enforceable by the courts. Chief Justice O'Donnell was explicit in stating that the duty extends to all public bodies, including those not normally concerned with climate change. However, Section 7 of the subsequently published Critical Infrastructure Bill disapplies Section 15 of the Climate Act entirely in respect of any relevant public body exercising functions in relation to a designated critical infrastructure project or programme.

The Council has noted with concern that the Government has moved to disapply Section 15 of the Climate Act entirely from the Critical Infrastructure Bill, published in April, just 2 months after the Supreme Court's judgment confirming the enforceable requirement on public bodies to properly engage with this very obligation. Furthermore, this coincides with similar moves by the Government to bypass the Climate Act in Head 20 of the Strategic Gas Emergency Reserve Bill 2025<sup>[77]</sup> and Head 12 of the Dublin Airport Passenger Cap Bill 2026.<sup>[78]</sup> This removal of climate consistency obligations is in contrast to the Programme for Government,<sup>[79]</sup> which explicitly 'recognises that delivery of essential infrastructure is a key driver in attracting and retaining investment in Ireland, growing our economy, fostering regional development, delivering on our housing targets and achieving our ambitious climate goals'.

Public acceptance and community engagement are essential to electricity grid development in Ireland because early, inclusive involvement of local communities leads to better project outcomes, builds trust and enables the timely delivery of critical grid infrastructure.<sup>[80]</sup> Support for energy infrastructure projects is often higher when people perceive that projects will improve energy security, deliver environmental benefits and provide personal or community compensation.<sup>[80]</sup> Compensation schemes have often been used to build acceptance for renewable energy projects, but they have also been criticised for not involving citizens or communities meaningfully in decision-making and, in some cases, leading to negative local effects.<sup>[81]</sup>

A community benefit fund (CBF) is a fund that renewable energy projects supported under the Renewable Electricity Support Scheme must establish, financed through mandatory contributions by the project, to support local initiatives and payments to households located near the project.<sup>[82]</sup> Recent research on CBFs for electricity grid infrastructure in Ireland has highlighted the significant potential for CBFs to support sustainable local development and move beyond the narrower view of CBFs as solely tools for securing community acceptance of energy projects.<sup>[81]</sup>

Across Europe, community payments for electricity grid infrastructure are becoming more common, but approaches vary widely, guidance on good practice remains limited and there are concerns that such schemes may be seen as attempts to buy consent if they are not well designed. In Ireland, EirGrid has implemented a six-step public engagement process<sup>[80]</sup> in which community forums play an important and early participatory role in grid development projects, with CBFs providing finance for local projects and a further means of supporting local involvement<sup>[81]</sup> and benefit. The Steps for Public Engagement with Energy Transitions in an Era of Climate Crisis project<sup>[83]</sup> led by MaREI, the Research Ireland Centre for Energy, Climate and the Marine, examined how three successive



fund designs sought to strengthen community participation and local benefit and found that communities were generally positive about the value of CBFs and their local benefits. However, additional support is needed to build local capacity, strengthen participation and ensure that wider sustainability objectives and co-benefits can also be realised.

The research presents policy implications, including the need to establish a set of principles and guidance notes on the fair and transparent design and delivery of CBFs and to provide schemes that respond proactively to the needs and capacities within a community. Furthermore, providing support for communities to develop grant proposals and deliver community projects can ensure that vulnerable and less-equipped community groups can benefit, given that many local community groups do not have access to the required time, skills and money to access and use funding effectively. The Government, ESB Networks and EirGrid should establish clear principles and guidance for community benefit funding, paired with stronger capacity-building supports, so that communities can meaningfully access, manage and use these funds to advance both local development and wider sustainability goals.

### 5.2.2. Private wires legislation and hybrid grid connections

The Council has repeatedly recommended the prioritisation of private wires and hybrid grid connections to maximise the use of the existing grid infrastructure and to accelerate the connection of new renewable generation and associated storage, highlighting in its 2023 Annual Review that ‘action to facilitate hybrid technology grid connections and private wire networks has been delayed and must be prioritised and delivered by Q4 2023’.<sup>[84]</sup>

In December 2025 the Cabinet approved the much-delayed general scheme of the Private Wires Bill,<sup>[37]</sup> which cleared the way for detailed drafting to allow private ownership of electricity lines in four specific, limited circumstances:

- ▶ when directly connecting a generation source (e.g. wind farm) to a single electricity user (e.g. data centre) and bypassing the grid,
- ▶ when allowing separate legal entities to share a single grid connection,
- ▶ for on-street EV charging,
- ▶ when a firm that self-supplies electricity provides that electricity to a neighbouring or contiguous customer without crossing third-party land.

The introduction of private wires has been repeatedly called for by the Council in previous Annual Reviews<sup>[72,85]</sup> as a critical measure to maximise existing infrastructure efficiency and accelerate renewable deployment by bypassing the planning system for grid connections. Therefore, the Council welcomes the specification of the four circumstances in which private ownership is allowed and the increased resourcing provided by the Government to get this much needed and long under-prioritised piece of legislation passed.

DCEE set out in their policy statement in July 2025<sup>[86]</sup> that private wires are ‘particularly associated with accelerating the roll out of renewable generation’, offering a key role in ‘accelerating the rollout of renewable energy projects to help Ireland achieve its renewable electricity (RES-E) targets’. The statement notes that ‘if not appropriately regulated such a policy could see an increase in fossil fuel generation’. However, within the general scheme of the Private Wires Bill there is no preclusion of private wires being used for the development of further fossil fuel infrastructure and, as a result, it is difficult to reconcile the general scheme published in December 2025 and the policy statement published in July 2025. DCEE stated in February 2026<sup>[87]</sup> that no provisions are currently being



made within private wires legislation to explicitly exclude further fossil fuel infrastructure buildout via private wires, as 'natural gases are being considered as a transitional fuel, given the variability of renewables, in order to get more renewables on the system to meet our decarbonisation targets'. In addition, DCEE noted that planning requirements and obligations under the Climate Act are expected to prevent developments that undermine climate goals, pointing to the Supreme Court's recent ruling on Coolglass wind farm.

It is imperative that any legislation drafted for private wires sets out provisions to avoid the proliferation of privately owned fossil fuel infrastructure, which would bring Ireland's climate commitments into further jeopardy. This legislation must ensure that private wires become a critical tool for relieving grid congestion and further renewables deployment. It would be unacceptable if the long-delayed private wires legislation in fact leads to further fossil fuel investment, given the years of significant discussion surrounding private wires legislation in the context of accelerating and expanding the deployment of renewables, including the policy statement from DCEE itself. It is clear that increased coordination between Government departments and State bodies is needed with regard to delivering private wires that benefit the Irish public via renewable deployment, with the Council recommending that the detailed, technical drafting of legislation, following the approval of the general scheme of the Private Wires Bill, exclude fossil fuel infrastructure outright under all circumstances. This is critical given the context of the Council's repeated calls for a legislative mechanism to ensure that new data centre connections align with renewable capacity expansion and restrict new gas-powered 'islanded' data centres.<sup>[72]</sup>

Hybrid electricity generation projects are projects that combine two or more types of electricity generation and/or storage units that have a single connection point, presenting the opportunity to increase the production of renewable electricity and making more efficient use of grid infrastructure. The Benefits of Hybrid Sites<sup>[88]</sup> report commissioned by Energy Storage Ireland in April 2025 showed that renewables generation sites co-located with battery storage would offer major benefits for grid stability, cost-efficiency and renewables utilisation in Ireland. In the context of dispatch-down, sites with 2-hour battery integration yield a 16% dispatch-down reduction; sites with 4-hour battery increases lead to 37% more solar and 47% more wind generation being captured instead of curtailed; and in scenarios of dispatch-down reaching 30% (e.g. Northern Ireland 2024), batteries enable utilisation of 81% of otherwise curtailed renewables.

Three major barriers were identified that need to be addressed to effectively enable hybrid connections in Ireland: the capacity cap, multiple legal entities being behind a single grid connection and the dynamic sharing of a maximum export capacity (MEC). The capacity cap, which prevented developers from installing more than 120% of their MEC, was removed in January 2024 by the CRU.<sup>[89]</sup> Multiple legal entities being behind a single grid connection refers to the 'one customer per connection' approach, which does not allow a wind or solar farm and a battery owned by two separate companies to share a grid connection, fragmenting investment and ineffectively utilising grid infrastructure. This is to be addressed in the ongoing drafting of the private wires legislation. A consultation by CRU on sharing of MEC was launched in March 2025<sup>[90]</sup> after years of delays, with CAP 2025 progress reports noting the delayed publication of the policy to Q4 2025,<sup>[91]</sup> and the policy published in April 2026.<sup>[92]</sup> The decision enables a single contracted MEC at a connection point to be dynamically shared between multiple generation and/or storage units within an onshore hybrid co-located project, provided that the combined export from all units never exceeds the contracted MEC and that appropriate control/tripping arrangements are in place to ensure this. In the decision paper, the CRU requires the system operators to facilitate implementation of this decision, including the development and delivery of an implementation roadmap and continued engagement with industry and the CRU on actions and timelines, while seeking to accelerate delivery and minimise complexity where possible. With the



identified barriers removed and necessary policy in place, it is critical that momentum be maintained with a focus on delivery, as outlined in the implementation roadmap.

### 5.2.3. Large energy users and future data centre growth

Priority should be given to ensuring the aforementioned legislative and regulatory requirements for the implementation of both private wires and hybrid connections are in place by the end of 2026. This is particularly important in the context of the recently published Large Energy Users Connection Policy, which will require data centres to meet at least 80% of their annual demand with additional renewable electricity.<sup>[93]</sup> The Council reaffirms its 2024 recommendation that the Government ensure that the electricity demand of new data centres be entirely met with new renewable generation and that new data centre connections be permitted only when the developer can guarantee that sufficient new renewable capacity in excess of the maximum electricity demand of the data centre will be connected to the grid in advance of commissioning.<sup>[94]</sup> Furthermore, while the 6-year glide path for renewables to be developed and start generating that is outlined in the decision paper acknowledges the timelines associated with developing renewable energy projects, there is no requirement for renewables at the outset and no interim milestones, jeopardising national and EU commitments by not accounting for the emissions that may arise during the second carbon budget period and beyond.

As new data centres will be required to provide on-site or proximate generation and/or storage capacity to match their import capacity and participate in the wholesale market, fossil gas use for on-site power of data centres is expected to increase dramatically as approximately 5.8 GW of new data centre capacity is added.<sup>[95]</sup> This is of particular concern, as this additional 5.8 GW of data centre demand will continue the well-established trend of data centres cannibalising any increase in Irish renewable capacity, causing stagnation of the share of renewable electricity meeting demand while ensuring a guaranteed increase in emissions from fossil fuel use for on-site generation. As outlined in *Section 5.2.1*, Section 15 of the Climate Act is crucial for ensuring that the statutory remits of public bodies are in line with essential decarbonisation. The Council has repeatedly recommended that the Government immediately align the legal mandate and strategy for all public bodies in conformity with the Climate Act 2021, particularly for those operating in the energy sphere, such as An Coimisiún Pleanála, the Maritime Area Regulatory Authority, the CRU, EirGrid, ESB Networks and GNI.<sup>[72]</sup>

## 5.3. Coordinating planning to accelerate renewable development

### 5.3.1. Amended Renewable Energy Directive

RED III (Directive (EU) 2023/2413)<sup>[96]</sup> is the primary legislation underpinning the growth and deployment of renewable energy across the EU. It includes provisions relating to permit granting for renewable energy projects, as well as to increasing the share of renewable energy across the Electricity, Heat, Transport, Industry and Built Environment sectors. Adopted in 2023, RED III increased the binding EU-wide target for overall renewable energy share (RES) to 42.5% by 2030.

Under RED III, Member States are required to transpose key permitting provisions by 1 July 2024, with full transposition due by 21 May 2025. Following a letter of formal notice from the European Commission in September 2024, and a subsequent reasoned opinion in July 2025,<sup>[97]</sup> the Government finally transposed the permitting provisions through the European Union (Planning and Development) (Renewable Energy) Regulations 2025 (S.I. No. 274 of 2025) in August 2025.<sup>[96]</sup> However, further action is needed to transpose the remaining RED III provisions intended to increase the share of renewables across sectors. Article 15b requires Member States to carry out coordinated national territory mapping to identify the domestic potential and the land, sea, inland water, surface and sub-surface areas necessary for the deployment of sufficient renewable energy plants and related



infrastructure, including grid and storage, to meet Ireland's contributions to the EU 2030 renewable energy target. Article 15c requires Member States, by 21 February 2026, to adopt one or more plans designating renewables acceleration areas as a subset of those mapped areas.<sup>[96]</sup> RED III defines a renewables acceleration area as 'a specific location or area, whether on land, sea or inland waters, which a Member State designated as particularly suitable for the installation of renewable energy plants.'

The Government launched a public consultation on national territory mapping for renewable electricity in September 2025, which closed in October 2025.<sup>[98]</sup> This consultation sought input on the national territory mapping undertaken under Article 15b and on any key considerations that should be taken into account in preparing a draft plan for the designation of renewables acceleration areas under Article 15c. However, no draft plan was published following this consultation.

On 4 February 2026, the Minister for Climate, Energy and the Environment confirmed that work was under way to transpose and implement the remaining RED III requirements.<sup>[99]</sup> The Minister reported some progress in relation to transport- and heat-related provisions,<sup>[99,100]</sup> but no further update was provided on the requirements under Articles 15b and 15c beyond the earlier public consultation, and Ireland has now missed the deadline of 21 February 2026 for the designation of one or more renewables acceleration areas.

Full transposition of RED III is urgently needed, not only from a legal compliance perspective, but also to support Ireland's 2030 target of achieving 43% RES.<sup>[101]</sup> Having achieved only 16% RES in 2024, a marginal increase on just 15.2% in 2023,<sup>[102]</sup> renewable energy deployment must be accelerated at pace in order to close the gap to the 2030 target. DCEE should urgently prioritise the transposition of RED III, in particular the designation of renewables acceleration areas, by the end of 2026. In addition, DCEE should conduct an implementation assessment with public bodies required to implement RED III as part of the legislative drafting to ensure that the necessary resources are in place.

### 5.3.2. Regional and local renewable capacity targets

County development plans that restrict or limit the available land for onshore wind developments have been pointed to as a significant barrier to increasing renewables capacity in Ireland in recent years, with anti-wind county development plans named as the driver of the increased refusal rate of projects by An Coimisiún Pleanála.<sup>[33]</sup> These restrictions limit the overall space zoned for development of onshore wind, allocate poor-wind areas for development that would be uneconomical or allocate areas for development that are too close to housing, making it unfeasible that any wind development would pass the assessment stage in planning applications. This undermines national renewable targets and reduces project investment confidence among industry stakeholders. It is vital that decisions at the local level reflect and complement the national climate ambition set out in the Climate Act, not hinder it. As such, aligning these county development plans with the renewable targets set out in the CAP is a long overdue step towards achieving a much-needed acceleration in renewables deployment, particularly onshore wind, that has significantly lagged in recent years (see *Section 3.3*).

The revised National Planning Framework (NPF) published in April 2025<sup>[103]</sup> set a range of regional renewable electricity capacity allocations (**Table 4**), with each regional assembly now required to commence a revision of their Regional Spatial and Economic Strategies. As part of this revision, regional assemblies need to adopt a Regional Renewable Energy Strategy, which will translate the regional allocations into local authority-level targets informing city and county development plans.<sup>[103,104]</sup> The completion of this process will align local plans and national policy with the clear goal of aiding short-term onshore renewable deployment, as highlighted in the NPF, 'in order to facilitate, at a minimum, the 2030 national renewable electricity generation targets'.



**Table 4: Regional renewable electricity capacity allocations as set out in the NPF.**

(Source: National Planning Framework, 2024.<sup>[103]</sup>) It is essential that these allocations are translated into regional plans to provide renewable county targets and make national CAP targets significant in the decision-making process at the local level.

Region	Onshore wind		Solar PV	
	Renewable capacity allocations (MW)	Total % of national share in 2030	Renewable capacity allocations (MW)	Total % of national share in 2030
Eastern and Midlands	2250	25%	3600	45%
Northern and Western	3150	35%	960	12%
Southern	3600	40%	3440	43%
Total	9000	100%	8000	100%

Due to the 5- to 8-year cycle for updating county development plans, it is absolutely imperative that the publication of the Regional Spatial and Economic Strategies and associated Regional Renewable Energy Strategies with county targets is properly prioritised and delivered by Q3 2026 at the latest. It has now been over a year since the regional renewable electricity capacity allocations were published, with the methodology for this translation process at the local level, commissioned by DCEE and the Department of Housing, Local Government and Heritage (DHLGH), already completed.

Each regional strategy will have to undertake public consultations and strategic environmental assessments before the regional plans can be updated to include the county targets and have significance in the decision-making processes of planning bodies. There is no timeline set out for the regional assemblies to conclude this work and, if it has not been appropriately prioritised for delivery this year, there is a significant risk that these capacity allocations will not deliver any of the necessary acceleration in onshore renewable deployment in time to meet the 2030 targets as intended. There must be a particular focus on coordination between State bodies due to the nature of the significant background work required. Additionally, while the methodology commissioned by DCEE and DHLGH that was used in creating the regional allocations has been passed on to regional planners for the development of the Regional Spatial and Economic Strategies, it has yet to be published. The Council also recommends that DCEE and DHLGH publish the methodology that was used for the creation of the regional and county targets to increase the transparency of the process.

DHLGH must also conclude the long-running review of the 2006 Wind Energy Development Guidelines and publish the National Planning Statement (NPS) on Wind Energy in 2026. The draft revised guidelines were published in 2019<sup>[105]</sup> with an estimated publication date for the finalised review of Q2 2020. Finalisation of this review has been frequently postponed; most recently, CAP24 set a delayed publication date of Q1 2025 that was then missed, almost 5 years after the original deadline.<sup>[106]</sup> The significant delays have meant that the legislative context for the Wind Energy Guidelines has since evolved, and they are now to be superseded by the NPS on Wind Energy under the amended Planning and Development Act 2024.



A strategic environmental assessment is currently being carried out on the draft NPS on Wind Energy with a public consultation due as part of this review process. The NPS on Wind Energy, once approved, will complement county-level targets in providing alignment with national strategy and climate ambitions in the decision-making process at the project level. Following this, an NPS on Solar Energy will be published, with initial scoping already under way to identify factors such as European obligations (RED III) and consider any findings of the soon-to-be-published Land Use Review.

### 5.3.3. Repowering and derogation of Article 6(4) of the Habitats Directive

Repowering, the process of upgrading existing wind turbines or replacing them with newer, more efficient technology, has become a growing issue for onshore wind farms in recent years. With ca 20% of current national wind capacity to be decommissioned by 2040,<sup>[107]</sup> Ireland could potentially experience further stagnation of onshore wind capacity if the current connection rates of new wind farms continue (only ca 170 MW per annum since 2020) and the existing fleet of wind farms is not repowered or extended. Critically, projects covering up to 700 MW of installed onshore wind capacity that will have to renew their planning permission or secure planning permission for repowering within the next two decades are located within four of the six hen harrier Special Protected Areas (SPAs) under the EU Birds Directive, with a further 347 MW installed within five kilometres of these same SPAs.<sup>[107]</sup>

Repowering within an SPA requires a planning application and that the project undergo an appropriate assessment, and if this assessment concludes that the project will have an adverse effect on the integrity of the SPA, the project can only proceed if it qualifies for a derogation of Article 6(4) of the Habitats Directive. A derogation of Article 6(4) of the Habitats Directive requires that two conditions are met: there must be no less-damaging alternative available and IROPI must apply. Subsequently, compensatory measures must be provided to address the negative impact of the project on the SPA as highlighted in the appropriate assessment.

While this process has been established for some time in the Irish planning system, there is significant potential for delays due to the rarity in its application, with just two projects that were subject to IROPI pursuant to Article 6(4) of the Habitats Directive processed to date.<sup>c</sup> As such, the impending rise of repowering planning applications within hen harrier SPAs seeking derogation of Article 6(4) will cause significant strain on the resources of the planning system, which could lead to ineffective management of pre-existing renewable infrastructure if not properly prepared for.

The Council recommends that An Coimisiún Pleanála, local authorities and the National Parks and Wildlife Service (NPWS) have comprehensive and coordinated processes in place for derogations, compensation measures and IROPI to facilitate the repowering of onshore wind developments within SPAs that ensure decision-making complies with the timelines set out in RED III (as brought into legislation by S.I. No. 274/2025; see [Table 5](#)). While Sligo County Council and Galway County Council have previously processed two instances where projects were subject to IROPI with An Coimisiún Pleanála and NPWS, many more local authorities will have to interact with this procedure. As such, any process must be very clear on the role of local authorities and the establishment of key points of contact and their interactions with other State bodies to comply with RED III statutory timelines.

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- c** Lough Talt Regional Water Supply Scheme (Co. Sligo) in 2019 was the first and only project in Ireland to successfully avail of IROPI, which secured water supply for over 13,000 residents and the proposed extension of Galway Harbour, with planning initiated in 2014, but no planning decision yet made.



**Table 5: RED III permit granting timelines that were transposed into Irish legislation via S.I. No. 274/2025.**

(Source: Renewable Energy Directive (RED) III Information Guide.<sup>[108]</sup>) The repowering timelines are at risk of not being achieved for projects within SPAs under the EU Birds Directive for hen harriers, which constitute approximately 750 MW of onshore wind capacity.

Type of development	Permit granting timeline
Onshore	52 weeks
Onshore repowering	30 weeks
Offshore	65 weeks
Offshore repowering	52 weeks

Research has been commissioned by DCEE and NPWS to review how the requirements of Article 6(4) of the Habitats Directive will impact operations across the Irish planning system, which should be published as external advice for competent authorities, plan makers and project applications by Q2 2026 at the very latest. Additionally, significant resources have been expended by Government to develop offshore wind energy, with progress in Offshore Renewable Electricity Support Scheme (ORESS) auctions, DMAP development and the establishment of the Offshore Wind Energy Clearing House, all of which are welcome developments. However, internal and informal reviews of resource allocation within State bodies (e.g. DCEE, NPWS) to ensure that onshore wind resources are still correctly weighted and deployment does not lag behind any further may be necessary, particularly in light of the increasing volume of onshore wind applications, as experienced in 2025 (see Section 3.3), and the additional expected derogations of Article 6(4) of the Habitats Directive.

#### 5.3.4. Offshore renewable energy development and the National Ports Policy

Ireland has ambitious ORE goals of 5 GW of wind capacity by 2030, 20 GW by 2040 and at least 37 GW by 2050, which would be more than six times Ireland's current peak electricity demand.<sup>[109]</sup> To date, however, Ireland has just 0.03 GW of offshore wind capacity from the Arklow Bank Wind Park, installed in 2003, with no additional increase in capacity expected by 2030 as the five offshore wind farm applications from the first ORESS (ORESS-1), which amount to approximately 3.8 GW, are currently waiting for approval from An Coimisiún Pleanála following additional information requests.

The national DMAP<sup>[3]</sup> for ORE, currently under development, will designate sufficient maritime area to deliver a target of 20 GW of ORE by 2040, taking into account the phase 1 projects and sites already designated by the South Coast DMAP. The South Coast DMAP is Ireland's first forward spatial plan for ORE,<sup>[110]</sup> and identifies four maritime areas in the Irish part of the Celtic Sea within which proposed future ORE projects may be located, of which Tonn Nua is the first. The ORESS-2 auction for the Tonn Nua site off the Waterford coast was held in late 2025, with an ESB Networks and Ørsted joint venture winning the auction for 0.9 GW in capacity.<sup>[111]</sup> DCEE is currently developing proposals for an auction of the second site, Lí Ban, which has a potential capacity of between 900 MW and 1.5 GW, with the expectation that the auction will take place in 2027.<sup>[112]</sup>



It is clear that, while there is significant commitment to advancing ORE in Ireland, bottlenecks for deployment of offshore wind at scale must be tackled immediately. The latest greenhouse gas projections<sup>[12]</sup> from the EPA estimate that the Electricity sector will still overshoot the SEC for 2026–2030 even with the assumption of 2.7 GW of offshore wind by 2030 within the most ambitious scenario and, thus, the ongoing delays to ORE deployment have significant impact on both SEC 2026–2030 and SEC 2031–2035 compliance.

Ireland's ports have a crucial role to play in facilitating the development of ORE; however, currently no port (with the exception of Belfast) has the required facilities and capabilities to assist in delivering ORE targets. The Department of Transport's policy statement on the facilitation of ORE by commercial ports in Ireland emphasises the need for a multi-port approach to ORE developments.<sup>[113]</sup> A number of ports are already progressing plans to provide the facilities and infrastructure required including the Port of Cork, which has secured a €38.4 million grant from the EU's Connecting Europe Facility and €88.5 million through the Ireland Strategic Investment Fund,<sup>[114]</sup> and Rosslare Europort, which is implementing plans to develop the necessary infrastructure to support the construction, operation and maintenance of ORE.<sup>[115]</sup>

However, the National Ports Policy Issues Paper identifies challenges around financing the necessary investment in port infrastructure (including prohibitions on State financing) and ensuring that ports are stress tested and resilient to climate change risks.<sup>[72]</sup> This is of key importance, and the National Ports Policy must provide clear strategic direction and coordination to ensure the necessary investment is made for multiple Irish ports to service the ORE sector on a phased basis. As outlined in the Council's 2025 Electricity sectoral review,<sup>[72]</sup> the long-term development of multiple maritime ports to facilitate the construction, operation and maintenance of ORE infrastructure should be prioritised through a systemic approach. The delayed (revised) National Ports Policy provides an opportunity for the Department of Transport to set the imperative strategic directions to ensure the necessary investment in multiple port infrastructure projects to support ORE deployment at scale.

## 5.4. Addressing energy security and energy poverty in an energy crisis

### 5.4.1. Security of supply

The Council has repeatedly stressed that ensuring the security of the energy supply through the development of renewable resources, demand measures and energy efficiency is a no-regrets policy.<sup>[116,117]</sup> In the wake of the volatility of gas supply in recent years, there has been mounting pressure to secure supply via an offshore liquefied natural gas (LNG) terminal in Ireland and the Government has recently published the General Scheme of the Strategic Gas Emergency Reserve Bill 2025 regarding the development of a State-led LNG terminal.<sup>[77]</sup> In its winter outlook, GNI projects that Ireland will receive 86% of its natural gas supply from two subsea interconnector pipelines to a single-entry point in Scotland, with just under 14% of demand being met by the Corrib gas field off the County Mayo coast and a small contribution of 0.4% from biomethane.<sup>[118]</sup> Critically, Ireland has no domestic gas storage, leaving it vulnerable in terms of security of supply. In addition, both the electricity and gas interconnectors are a critical part of the country's infrastructure that are at risk of both deliberate damage and negligence and are difficult to repair.

It is clear from a submission to the Department of Defence that GNI is concerned about the vulnerability of the interconnectors and wants the Government to take action to improve the security of this infrastructure. In its report Pre-Legislative Scrutiny of the General Scheme of the Strategic Gas Emergency Reserve Bill 2025,<sup>[119]</sup> the Joint Committee on Climate, Environment and Energy recommended that such a facility be time-limited, with the Bill clearly defining a phase-out plan, a 'sunset clause' and the conditions for decommissioning. The committee also questioned the



relevance of the EU N-1 security standard as a rationale for the proposed terminal, given that the N-1 standard can already be met through demand-side management and relates to a single day, while the wider concern is the significant time it may take to repair gas pipelines and the associated impacts.

Given the important role that natural gas currently plays in the Electricity, Industry and Built Environment sectors in Ireland, the Council recognises that disruption to Ireland's gas supply would have very severe consequences for the economy. However, the Council reiterates<sup>[72]</sup> its position that expansion of fossil fuel infrastructure through an LNG terminal will commit Ireland to further fossil fuel emissions, with particular concern given to the upstream emissions of methane where LNG is sourced via fracking and the associated environmental damage caused by fracking to communities around the globe. The energy systems modelling that informed the Council's 2024 Carbon Budget Proposal involved, in effect, phasing out fossil fuel use as early as 2039 within the Electricity, Industry, Built Environment and Transport sectors, with limited to no opportunity for new investments in fossil fuel systems.<sup>[120]</sup> The construction of an LNG terminal in Ireland is only necessary for security of supply if Ireland does not successfully and rapidly phase out fossil fuels and fails to meet its climate targets. If the country can rapidly phase out fossil fuels, the need for LNG would diminish, making such an investment unnecessary and less cost-effective than accelerating the transition to renewables.

The electricity system will need solutions for backup generation and electricity storage for times when the wind is not blowing and the sun is not shining. ESB Networks recently published a report on Ireland's pathway to a net zero energy system by 2050 that highlighted zero-/low-carbon dispatchable generation as particularly crucial for a secure net zero electricity system in Ireland, in combination with large-scale interconnection and electricity storage.<sup>[121]</sup> In particular, the report demonstrated the potential benefits of using renewable energy to generate hydrogen in an optimised system, which would result in a zero-carbon fuel, and concluded that without hydrogen a zero-carbon electricity system that is resilient to prolonged periods of low wind/solar is not likely to be possible. The National Economic and Social Council (NESC) has previously recommended developing a long-term national plan for strategic clean energy reserves based on zero-carbon fuels<sup>[122]</sup> and has more recently recommended that this ambition be expanded to address the whole energy transition and the roles of different parts and layers of the Government in its delivery.<sup>[123]</sup> An overarching cross-government energy framework that is consistent with the CAP is needed to resolve the disparate objectives of and constraints placed on the Energy sector and its transition to a future sustainable system.

There are several geological storage solutions that could offer a long-duration storage solution for decarbonised gas (e.g. green hydrogen) including salt caverns, depleted gas fields, aquifers and lined rock caverns. Geological storage solutions offer the most promising and least costly solution to the long-durational storage of energy needed to support a future hydrogen economy.<sup>[124]</sup> However, the safety and regulatory frameworks needed to allow geological storage of hydrogen are not yet in place and need to be addressed in the context of a strategic energy reserve. For example, the Islandmagee facility currently under development is the only large-scale gas storage project on the island of Ireland and lends itself naturally to boosting the security of energy supply and supporting renewable energy generation throughout the UK and Ireland.<sup>[125]</sup> The National Biomethane Strategy<sup>[126]</sup> commits to supporting delivery of up to 5.7 TWh of indigenously produced biomethane by 2030 and acknowledges the potential immediate role for biomethane in electricity backup generation in Ireland, as well as its role in improving gas security and diversification of supply, stating that biomethane 'will help to diversify sources of gas, improve energy security, and help shield against possible price instability or volatility in international energy markets'.



Accelerating the uptake of biomethane production in Ireland would not only provide timely and critical support for the sector, but strengthen security of supply by providing an indigenously produced renewable energy source as an alternative to fossil gas. The Government has agreed to the introduction of the Renewable Heat Obligation and approved the general scheme of the proposed legislation, which will obligate suppliers over a certain threshold to ensure that a proportion of the energy they supply for heating purposes is renewable. However, the market for biomethane and the viability of projects remain unclear as a result of the delay in introducing the Renewable Heat Obligation.<sup>[127]</sup> The Government must act to accelerate the implementation of the National Biomethane Strategy, with significant focus on creating a market for suppliers via the Renewable Heat Obligation. This will ensure that Ireland is less vulnerable to gas supply volatility while limiting the avoidable importation of more fossil fuels.

### 5.4.2. Energy poverty

Similarly to how war in Ukraine highlighted the incentives to accelerate Ireland's decarbonisation efforts, the recent global energy price increases triggered by war in Iran have again exposed the country's dependence on imported fossil fuels, which has left Ireland increasingly vulnerable to the societal and economic impacts of exposure to volatile and high prices (Figure 2). In 2022, the Economic and Social Research Institute (ESRI) estimated that, due to energy inflation observed from January 2021 to April 2022, the share of households in energy poverty had risen from 13.2% in 2015 to 29.4% in 2022.<sup>[128]</sup> This set a new record high for the share of Irish households in energy poverty – defined as household spending more than a tenth of their net income on energy (including electricity but excluding motor fuel) – surpassing its previous recorded high of 23% in 1994/95 before the economic growth of the Celtic Tiger period. There is no updated estimate for the share of households in energy poverty in 2025/26, but the latest figures from the CRU show that 14% of domestic electricity customers were in arrears in December 2025, which is a 1% increase on the previous month of November 2025 and 2% higher than in December 2024.<sup>[129]</sup>

Following the outbreak of the war in Iran, the ESRI has forecast an increase in the expected Consumer Price Index inflation, from the previous estimate of 2.1% to 3.2% in 2026, noting that a more prolonged conflict would imply higher rates, with energy price rises leading to price rises across a wide range of goods and services. Based on previous ESRI research that was undertaken at the start of the Ukraine crisis in 2022, which found that high-income households accounted for most of the cost to the Exchequer of the measures introduced to address the impact of increased energy costs, the ESRI has again recommended against cutting indirect taxes on energy products due to poor targeting and adverse incentives. Flat-rated energy credits are better targeted than indirect tax cuts, but increases to welfare payments are more targeted because they are means-tested and increasing the Pay-Related Social Insurance (PRSI) credit is more targeted at lower earners and renters. The Council recommends that any support measure should be targeted to those in vulnerable circumstances, in fuel poverty and with low incomes, as well as those in rental properties without the option to avail of grants for retrofit.

The establishment of the National Energy Affordability Taskforce in 2025 to identify and implement measures to enhance energy affordability for households and businesses was a welcome initiative. The taskforce was formed to identify cost drivers within the Energy sector and to prepare an energy affordability action plan incorporating recommendations for structural reforms that will benefit consumers in the medium (2026–2030) and longer term (post 2030). The first report of the taskforce was published in November 2025<sup>[45]</sup> and helped to inform key aspects of Budget 2026, including an extension of the 9% VAT rate that applies to gas and electricity. In May 2025, NESC published Energy Transition as an Opportunity to Eliminate Energy Poverty,<sup>[130]</sup> which highlights the need to work towards the elimination of energy poverty in the energy transition. This report presented the need



for a collaborative approach involving the public and private sectors and non-governmental organisations to co-designing and co-implementing solutions to energy poverty, along with the need for short-term (to 2030) and longer term (to 2050) perspectives to inform the implementation of appropriate measures to alleviate energy poverty and support people towards a fossil-free future.

Research published earlier in 2026 has highlighted that renewable energy utilisation is significantly uneven, with people in the most deprived communities about five times less likely to use renewable energy in their houses than those in the most affluent communities.<sup>[131]</sup> This research found that renewable energy can exacerbate existing inequalities whereby, rather than bridging the gap, renewable energy now serves as an extra layer of protection for affluent households. Low adoption in disadvantaged communities reduces energy resilience, leaving an already at-risk population the most exposed to rising energy costs. Communities with low renewable energy adoption levels are more vulnerable to energy poverty and have greater risk of financial pressure and poorer health outcomes due to inadequate heating. NESC has also described how low-income households are disproportionately impacted by energy poverty and consideration should be given to strengthening income supports to assist low-income households to transition.

The Programme for Government includes a commitment to explore ways to use surplus renewable energy to help reduce energy poverty, ensuring that renewable energy benefits all communities.<sup>[79]</sup> Given that increasing volumes of surplus wind and solar energy were dispatched-down in 2025 (Section 2), while in the same year the number of domestic customers in arrears rose from 268,000 to more than 319,000, initiatives like EnergyCloud (Box 1) demonstrate how addressing energy poverty alongside renewable energy waste is essential to delivering a fair, effective and socially Just Transition to a low-carbon energy system. In this regard, it is critical that the National Energy Affordability Taskforce make a policy statement on utilising wasted (dispatched down) renewables to alleviate energy poverty in Ireland to drive further initiatives like EnergyCloud alongside ESB Networks and EirGrid pilot projects in the near term.

### Box 1: EnergyCloud

More than 550,000 households in Ireland are affected by energy poverty, while over €520 million of renewable energy was dispatched down (wasted) in 2025 alone.<sup>[128,135]</sup> This stark imbalance highlights a key challenge in Ireland's energy transition: renewable generation is expanding rapidly, but its benefits are not yet shared equitably.

EnergyCloud is a registered charity focused on ensuring that wasted renewable energy reaches those most in need. Specifically, EnergyCloud works nationwide to provide free hot water to hundreds of homes experiencing energy poverty by redirecting surplus renewable electricity to heat water tanks through smart immersion controllers. In addition, EnergyCloud is working on new projects with new technologies that will provide longer-duration benefits to residents, heating their homes as well as their water. These projects concern heat pumps, thermal batteries and smart storage heaters.

While its initial efforts focused on over 150,000 homes in local authority housing and approved housing body accommodation, EnergyCloud is expanding support to the private sector, including through a pilot with Age Friendly Ireland in Cork.<sup>[135]</sup> In its addresses to the Joint Committee on Housing, Local Government and Heritage, in November 2025,<sup>[136]</sup> the



Joint Committee on Climate, Environment and Energy, in December 2025,<sup>[137]</sup> and the Joint Committee on Social Protection, Rural and Community Development, in February 2026,<sup>[135]</sup> EnergyCloud outlined its policy recommendations. These included ensuring that all devices fitted in new builds, such as heat pumps, batteries and immersion controllers, be connected devices that can support demand flexibility and expanding government policy so that, in addition to large upgrades, the Government also supports smaller measures such as installing batteries, immersion controllers, heat pumps and cladding with minimal red tape.

EnergyCloud also called on the Government to introduce a social tariff designed specifically for households experiencing energy poverty that would utilise the growing volumes of wasted wind energy. In practice, a social tariff could take the form of bill credits, rebates or free electricity during curtailment periods, typically overnight, with eligibility based on existing criteria such as Fuel Allowance receipt, social welfare status or energy arrears. This targeted approach is favoured over universal energy credits as it focuses resources on those most in need and uses public funding more efficiently. The NESC has also supported further examination of social tariffs, noting their use in other countries to protect vulnerable households.<sup>[130]</sup>

The implementation of the Smart Meter Data Access Code will enable suppliers to deliver value to customers through the development and introduction of new smart services and products. In addition, the provision of smart meter data will create new opportunities to offer additional services to customers, such as more accurate and personalised price comparisons, better tailored tariffs and analysis of customers' energy consumption, and has the potential to assist those in energy poverty to move their electricity use to cheaper off-peak times to save money on their energy bills. The introduction of legislation in December 2025, which provides the necessary basis for ESB Networks to collect and process smart meter data, is a very welcome, long-awaited milestone for the smart meter programme and paves the way for full implementation of the Smart Meter Data Access Code by October 2026.

Peer-to-peer energy trading offers a promising pathway towards a more decentralised, flexible and community-driven electricity system by providing a new model where households and communities can directly exchange electricity, creating local and flexible energy systems.<sup>[132]</sup> Private wires will likely have a role in enabling peer-to-peer energy trading, particularly in commercial and industrial settings. However, building and maintaining private wires can be expensive and complex, making them less practical for smaller communities or residential areas. In contrast, the Local Virtual Private Network project in North Wales, UK, demonstrates how similar objectives can be achieved using existing public distribution networks and virtual trading between solar PV plants and nearby public buildings, such as schools and offices, without constructing new infrastructure.<sup>[132]</sup> Furthermore, 80% of the pilot projects for residential peer-to-peer energy trading in Europe have used the public power grid.<sup>[133]</sup> Building on existing support schemes like the Microgeneration Support Scheme and the Clean Export Guarantee, peer-to-peer trading can empower prosumers and consumers alike by enabling local energy exchanges that reflect real-time value and promote renewable integration. However, research has noted that scaling peer-to-peer trading requires addressing critical policy, regulatory and technical challenges, such as by clarifying market rules, ensuring secure and accessible data sharing, involving electricity suppliers constructively and enhancing grid visibility and management.<sup>[132]</sup>

In the short term, the introduction of dynamic pricing in June 2026 and supporting community energy pilots is crucial to unlocking the full potential of peer-to-peer trading while delivering tangible benefits to households, communities and the wider electricity system. The UK Government has



recently announced the roll-out of 'plug-in' solar panels (low-cost panels that families can put on their balconies or outdoor space) to be available in shops within months and save people money on their bills as the Government vows to go further and faster on clean energy in response to conflict in the Middle East.<sup>[134]</sup> Plug-in solar is already widely used by households across Europe, with Germany seeing around half a million new devices plugged in per year. The free solar power can be used directly through a mains socket like any other device, without an installation cost, thereby reducing the amount of electricity taken from the grid and cutting energy bills. A similar initiative should be implemented in Ireland to save many households significant amounts on their energy bills and help reduce reliance on volatile global fossil fuel markets.



## References

- 1 Brian Ó Gallachóir, 'Ireland's emissions remained almost within limit during first carbon budget', The Irish Times. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.irishtimes.com/environment/climate-crisis/2026/03/19/emissions-remained-almost-within-limit-during-first-carbon-budget/>
- 2 Department of Climate, Energy and the Environment, 'ORESS Tonn Nua Offshore Wind Auction'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/oress-tonn-nua-offshore-wind-auction/>
- 3 Department of Climate, Energy and the Environment, 'National Designated Maritime Area Plan (DMAP) for offshore renewable energy'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/national-designated-maritime-area-plan-dmap-for-offshore-renewable-energy/>
- 4 Environmental Protection Agency, 'Ireland's Final Greenhouse Gas Emissions 1990–2024', Mar. 2026. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-final-greenhouse-gas-emissions-1990-2024.php>
- 5 EirGrid, 'System and renewable data reports – Grid information'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.eirgrid.ie/grid/system-and-renewable-data-reports>
- 6 ESB Networks, 'Renewable distribution connected generation – Summary report'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.esbnetworks.ie/services/get-connected/renewable-connection/generator-statistics>
- 7 Government of Ireland, 'Climate Action Plan 2025', Apr. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/climate-action-plan-2025/>
- 8 International Energy Agency, 'Electricity 2026 – Analysis and Forecast to 2030', 2026. Accessed: Apr. 14, 2026. [Online]. Available: [https://iea.blob.core.windows.net/assets/b73798cb-e452-42b9-9d8a-07542de7a041/Electricity\\_2026.pdf](https://iea.blob.core.windows.net/assets/b73798cb-e452-42b9-9d8a-07542de7a041/Electricity_2026.pdf)
- 9 Central Statistics Office, 'Data centres metered electricity consumption 2024'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cso.ie/en/releasesandpublications/ep/p-dcmec/datacentresmeteredelectricityconsumption2024/>
- 10 Environmental Protection Agency, 'News release: Ireland's greenhouse gas emissions from power generation and industry down by 5.5 per cent in 2025'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.epa.ie/news-releases/news-releases-2026/irelands-greenhouse-gas-emissions-from-power-generation-and-industry-down-by-55-per-cent-in-2025.php>
- 11 European Commission, 'News release: EU Emissions Trading System sustains downward trend in covered emissions'. Accessed: Apr. 15, 2026. [Online]. Available: [https://climate.ec.europa.eu/news-other-reads/news/eu-emissions-trading-system-sustains-downward-trend-covered-emissions-2026-04-10\\_en](https://climate.ec.europa.eu/news-other-reads/news/eu-emissions-trading-system-sustains-downward-trend-covered-emissions-2026-04-10_en)
- 12 Environmental Protection Agency, 'Ireland's Greenhouse Gas Emissions Projections 2024–2055', May 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-greenhouse-gas-emissions-projections-2024-2055.php>



- 13 Irish Fiscal Advisory Council and Climate Change Advisory Council, 'A Colossal Missed Opportunity: Ireland's Climate Action and the Potential Costs of Missing Targets', Mar. 2025. Accessed: Mar. 26, 2025. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/otherpublications/Ireland's%20climate%20action%20and%20the%20potential%20costs%20of%20missing%20targets%20FINAL.pdf>
- 14 Sustainable Energy Authority of Ireland, 'Monthly electricity statistics'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.seai.ie/data-and-insights/seai-statistics/monthly-energy-data/electricity-monthly>
- 15 ESB Networks, 'News release: After 40 years, ESB announces that coal generation has ended at Moneypoint Power Station'. Accessed: Apr. 14, 2026. [Online]. Available: <https://esb.ie/news--insights/press-releases/article/2025/06/20/after-40-years--esb-announces-that-coal-generation-has-ended-at-moneypoint-power-station>
- 16 Sustainable Energy Authority of Ireland, 'Energy in Ireland – 2025 Report', Dec. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.seai.ie/sites/default/files/publications/Energy-in-Ireland-2025.pdf>
- 17 Green Collective, 'A year in review: The Irish grid in 2025'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.greencollective.io/post/annual-recap-2025>
- 18 Irish Examiner, 'Celtic Interconnector delayed until 2028, deepening energy concerns'. Accessed: May. 01, 2026. [Online]. Available: <https://www.irishexaminer.com/news/munster/arid-41835056.html>
- 19 RTÉ, 'Resistance to Interconnector remains strong'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.rte.ie/news/2026/0329/1565610-north-south-interconnector/>
- 20 Government of Ireland, 'Electricity and Gas Networks: Climate Change Sectoral Adaptation Plan', 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://assets.gov.ie/static/documents/dc3088bd/DCEE\\_EGN\\_SAP\\_2025\\_FINAL\\_Rev\\_1.pdf](https://assets.gov.ie/static/documents/dc3088bd/DCEE_EGN_SAP_2025_FINAL_Rev_1.pdf)
- 21 Commission for Regulation of Utilities, 'Electricity Networks Incentives and Reporting Information Paper (2023)', Feb. 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU2024120\\_Electricity\\_Networks\\_Incentives\\_and\\_Reporting\\_Information\\_Paper\\_2023.PDF](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU2024120_Electricity_Networks_Incentives_and_Reporting_Information_Paper_2023.PDF)
- 22 Commission for Regulation of Utilities, 'Price Review Six: Investing in Ireland's Energy Future', Dec. 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU2025193\\_-\\_Price\\_Review\\_Six\\_-\\_Final\\_Determination\\_-\\_Summary\\_Paper.pdf](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU2025193_-_Price_Review_Six_-_Final_Determination_-_Summary_Paper.pdf)
- 23 Central Statistics Office, 'Household environmental behaviours – Energy use 2024: Installations linked to energy efficiency'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cso.ie/en/releasesandpublications/ep/p-hebeu/householdenvironmentalbehaviours-energyuse2024/installationslinkedtoenergyefficiency/>
- 24 Wind Energy Ireland, 'Irish wind farms provided a third of our power in 2025'. Accessed: Apr. 14, 2026. [Online]. Available: <https://windenergyireland.com/blog/irish-wind-farms-provided-a-third-of-our-power-in-2025>
- 25 EirGrid, 'Renewable Electricity Support Scheme: ORESS 1 Final Auction Results', Jun. 2023. Accessed: Apr. 15, 2026. [Online]. Available: [https://cms.eirgrid.ie/sites/default/files/publications/ORESS-1-Final-Auction-Results-\(OR1FAR\).pdf](https://cms.eirgrid.ie/sites/default/files/publications/ORESS-1-Final-Auction-Results-(OR1FAR).pdf)
- 26 Hubexo Ireland, 'Construction Information Services'. Accessed: Apr. 15, 2026. [Online]. Available: <https://www.cisireland.com/>
- 27 Ember, 'European wholesale electricity price data'. Accessed: Apr. 14, 2026. [Online]. Available: <https://ember-energy.org/data/european-wholesale-electricity-price-data/>



- 28 B. Wade, N. Farrell, M. Lynch and M. T. Reaños, 'A Descriptive Comparison of Irish and European Electricity Prices: 2018–2024', Apr. 2026. <https://doi.org/10.26504/sustat138>
- 29 Sustainable Energy Authority of Ireland, 'Energy price trends'. Accessed: Apr. 15, 2026. [Online]. Available: <https://www.seai.ie/data-and-insights/seai-statistics/prices>
- 30 Wind Energy Ireland, 'Breaking up with gas? It's a bit more complicated'. Accessed: Apr. 14, 2026. [Online]. Available: <https://windenergyireland.com/blog/breaking-up-with-gas-its-a-bit-more-complicated>
- 31 P. Deane, 'Paul Deane's LinkedIn post'. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.linkedin.com/posts/thinkingenergy\\_ireland-the-average-wholesale-electricity-activity-7447959020256309248-01k7/?rcm=ACoAAFQaKAKBspodnWx2FGYjxeCYtFB9BpQN6I](https://www.linkedin.com/posts/thinkingenergy_ireland-the-average-wholesale-electricity-activity-7447959020256309248-01k7/?rcm=ACoAAFQaKAKBspodnWx2FGYjxeCYtFB9BpQN6I)
- 32 Wind Energy Ireland, 'Imported fossil fuels push up wholesale electricity prices by 19 per cent'. Accessed: Apr. 27, 2026. [Online]. Available: <https://windenergyireland.com/blog/imported-fossil-fuels-push-up-wholesale-electricity-prices-by-19-per-cent>
- 33 Wind Energy Ireland, 'Wind energy planning dashboard'. Accessed: Apr. 14, 2026. [Online]. Available: <https://windenergyireland.com/about-wind/more-resources/planning-dashboard>
- 34 Wind Energy Ireland, 'Just one new wind farm approved by An Coimisiún Pleanála in Q3 2025'. Accessed: Apr. 14, 2026. [Online]. Available: <https://blog.windenergyireland.com/just-one-new-wind-farm-approved-by-an-coimisi%C3%BAn-plean%C3%A1la-in-q3-2025>
- 35 Department of Housing, Local Government and Heritage, 'Budget 2026: Department of Housing, Local Government and Heritage announces record budget package of over €11 billion'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-housing-local-government-and-heritage/press-releases/budget-2026-department-of-housing-local-government-and-heritage-announces-record-budget-package-of-over-11-billion/>
- 36 Department of Housing, Local Government and Heritage, 'European Union (Planning and Development) (Renewable Energy) Regulations 2025 CEPP 1/2025'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-housing-local-government-and-heritage/circulars/european-union-planning-and-development-renewable-energy-regulations-2025/>
- 37 Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation, 'Accelerating Infrastructure Report and Action Plan', Dec. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-public-expenditure-infrastructure-public-service-reform-and-digitalisation/publications/accelerating-infrastructure-report-and-action-plan/>
- 38 Houses of the Oireachtas, 'Tuesday, 10 Feb 2026 – Written answers Nos. 336–355'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-02-10/section/194/>
- 39 E. A. and B. European Commission: Directorate-General for Energy, 'Assessment of the Energy Performance and Sustainability of Data Centres in EU', Jul. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://op.europa.eu/en/publication-detail/-/publication/83be4c3e-5c79-11f0-a9d0-01aa75ed71a1>
- 40 Commission for Regulation of Utilities, 'The CRU publishes its decision on new electricity connection policy for data centres'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cru.ie/about-us/news/the-cru-publishes-its-decision-on-new-electricity-connection-policy-for-data-centres/>
- 41 Department of Enterprise, Tourism and Employment, 'LEAP – Large Energy User Action Plan'. Accessed: Apr. 14, 2026. [Online]. Available: <https://enterprise.gov.ie/en/publications/leap.html>
- 42 Commission for Regulation of Utilities, 'Smart Meter Data Access Code: Decision on the Smart Meter Data Access Code', Feb. 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU202516\\_-\\_Decision\\_on\\_the\\_Smart\\_Meter\\_Data\\_Access\\_Code.pdf](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU202516_-_Decision_on_the_Smart_Meter_Data_Access_Code.pdf)



- 43 Commission for Regulation of Utilities, 'Smart meter upgrade – Access to near real time metering data'. Accessed: Apr. 14, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/Access\\_to\\_Near\\_Real\\_Time\\_Metering\\_Data\\_Smart\\_Meters\\_Decision\\_Paper.pdf](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/Access_to_Near_Real_Time_Metering_Data_Smart_Meters_Decision_Paper.pdf)
- 44 Commission for Regulation of Utilities, 'National Energy Demand Strategy'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cru.ie/about-us/news/national-energy-demand-strategy/>
- 45 Department of Climate, Energy and the Environment, 'National Energy Affordability Taskforce'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/national-energy-affordability-taskforce/>
- 46 Climate Change Advisory Council, 'Fourth Climate Change Adaptation Scorecard Report', 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/otherpublications/Final%20Adaptation%20Scorecard%20Assessment%20Report%202024.pdf>
- 47 Department of the Taoiseach, 'Government publishes updated National Development Plan'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-the-taoiseach/press-releases/government-publishes-updated-national-development-plan/>
- 48 Houses of the Oireachtas, 'Electricity (Supply) (Amendment) Act 2025'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.oireachtas.ie/en/bills/bill/2025/63/>
- 49 C. Bergin, L. Swan, C. Kelly and P. Moore, 'Climate Change Increases Flood Risk Associated with Winter Rainfall on East Coast of Ireland', 2026. Accessed: Apr. 14, 2026. [Online]. Available: <https://wasitus.ie/events/climate-change-increases-flood-risk-associated-with-winter-rainfall-on-east-coast-of-ireland/>
- 50 Department of Climate, Energy and the Environment, 'News release: Minister O'Brien welcomes extension of Solar PV Scheme for Medically Vulnerable Customers'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/press-releases/minister-obrien-welcomes-extension-of-solar-pv-scheme-for-medically-vulnerable-customers/>
- 51 ESB Networks, 'For Future Us', 2025. Accessed: Apr. 15, 2026. [Online]. Available: [https://cdn.esb.ie/media/docs/default-source/investor-relations-documents/esb-annual-report-and-financial-statements-2025.pdf?sfvrsn=ac0b6e42\\_1](https://cdn.esb.ie/media/docs/default-source/investor-relations-documents/esb-annual-report-and-financial-statements-2025.pdf?sfvrsn=ac0b6e42_1)
- 52 Department of Housing, Local Government and Heritage, 'Review of Storm Éowyn', Oct. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-housing-local-government-and-heritage/publications/review-of-storm-%C3%A9owyn/>
- 53 Environmental Protection Agency, 'National Climate Change Risk Assessment: Main Report', Jun. 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.climateireland.ie/media/epa-2020/monitoring-amp-assessment/climate-change/climate-ireland/EPA\\_NCCRA\\_Main-Report\\_Published\\_June\\_2025.pdf](https://www.climateireland.ie/media/epa-2020/monitoring-amp-assessment/climate-change/climate-ireland/EPA_NCCRA_Main-Report_Published_June_2025.pdf)
- 54 Houses of the Oireachtas, 'Thursday, 20 Feb 2025 – Written answers Nos. 133–143'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2025-02-20/section/141/>
- 55 Sustainable Energy Authority of Ireland, 'Blog: Solar panels during a power cut'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.seai.ie/blog/solar-panels-power-cut>
- 56 Central Statistics Office, 'Census of Population 2022 Profile 2 –Housing in Ireland: Housing stock'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cso.ie/en/releasesandpublications/ep/p-cpp2/censusofpopulation2022profile2-housinginireland/housingstock/>
- 57 Houses of the Oireachtas, 'Tax reliefs – Dáil Éireann debate'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-02-04/399/>



- 58 Revenue, 'Supply and Installation of Solar Panels', 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.revenue.ie/en/tax-professionals/tdm/value-added-tax/part03-taxable-transactions-goods-ica-services/Services/solar-panels.pdf>
- 59 R. Reibsch, P. Blechinger and J. Kowal, 'The importance of battery storage systems in reducing grid issues in sector-coupled and renewable low-voltage grids', *Journal of Energy Storage*, vol. 72, 108726, Nov. 2023, <https://doi.org/10.1016/J.EST.2023.108726>
- 60 Commission for Regulation of Utilities, 'Clean Export Guarantee: Enduring Arrangements to Remunerate Customers for Microgeneration Exports – Decision Paper', Jun. 2024. Accessed: Apr. 14, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/Clean\\_Export\\_Guarantee-Enduring\\_Arrangements\\_to\\_Remunerate\\_Customers\\_for\\_Microgenerati.pdf](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/Clean_Export_Guarantee-Enduring_Arrangements_to_Remunerate_Customers_for_Microgenerati.pdf)
- 61 Commission for Regulation of Utilities, 'Dynamic Electricity Price Tariffs: Decision Paper', Sep. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cru.ie/publications/28339/>
- 62 Carlow County Council, 'Ireland: Generators. EU-25-2368 – Single Party Framework Agreement for the Supply, Delivery, Commission and Maintenance of Emergency Generators to Local Authorities across the Republic of Ireland', 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.etenders.gov.ie/epps/cft/downloadNoticeForAdvSearch.do?resourceId=6636756>
- 63 Sustainable Energy Authority of Ireland, 'Community grants and funding'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.seai.ie/grants/community-grants>
- 64 Department of Climate, Energy and the Environment, 'News release: Government approves the drafting of the Private Wires Bill'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/press-releases/government-approves-the-drafting-of-the-private-wires-bill-2026/>
- 65 ESB Networks, 'Storm Éowyn Review', Oct. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://esbnetworksprdsastd01.blob.core.windows.net/media-staging/docs/default-source/publications/esb-networks-storm-eowyn-review-final-version-oct-15th.pdf>
- 66 ESB Networks, 'Winter 2025 grid resilience plan', Mar. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.esbnetworks.ie/about-us/projects/winter-2025-grid-resilience-plan>
- 67 Department of Climate, Energy and the Environment, 'News release: Minister O'Brien secures government approval for legislation to bolster the storm resilience of our electricity grid'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/press-releases/minister-obrien-secures-government-approval-for-legislation-to-bolster-the-storm-resilience-of-our-electricity-grid/>
- 68 National Parks & Wildlife Service, 'Ireland's 4th National Biodiversity Action Plan – 2023–2030'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.npws.ie/legislation/national-biodiversity-action-plan>
- 69 ESB Networks, 'Networks for Nature: Biodiversity Strategy', Sep. 2024. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.esbnetworks.ie/docs/default-source/publications/esb-networks\\_biodiversity\\_strategy\\_2024\\_29\\_final.pdf](https://www.esbnetworks.ie/docs/default-source/publications/esb-networks_biodiversity_strategy_2024_29_final.pdf)
- 70 European Commission, 'Nature Restoration Regulation'. Accessed: Apr. 14, 2026. [Online]. Available: [https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-regulation\\_en](https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-regulation_en)
- 71 Commission for Regulation of Utilities, 'CRU approves record investment in Ireland's electricity grid and network'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cru.ie/about-us/news/cru-approves-record-investment-in-irelands-electricity-grid-and-network/>



- 72 Climate Change Advisory Council, 'Annual Review 2025: Electricity', Apr. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/annualreviewandreport/CCAC-AR2025-Electricity-FINAL.pdf>
- 73 Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation, 'News release: Minister Chambers announces government approval for development of Critical Infrastructure Bill'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-public-expenditure-infrastructure-public-service-reform-and-digitalisation/press-releases/minister-chambers-announces-government-approval-for-development-of-critical-infrastructure-bill/>
- 74 Houses of the Oireachtas, 'Critical Infrastructure Bill 2026'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.oireachtas.ie/en/bills/bill/2026/37/>
- 75 Law Reform Commission, 'Climate Action and Low Carbon Development Act 2015 (Revised)'. Accessed: Apr. 14, 2026. [Online]. Available: <https://revisedacts.lawreform.ie/eli/2015/act/46/front/revised/en/html>
- 76 Columbia Law School, 'Coolglass Windfarm Limited v. An Bord Pleanála – judgment'. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.climatecasechart.com/documents/coolglass-windfarm-limited-v-an-bord-pleanala-judgment\\_29ab](https://www.climatecasechart.com/documents/coolglass-windfarm-limited-v-an-bord-pleanala-judgment_29ab)
- 77 Houses of the Oireachtas, 'General Scheme of the Strategic Gas Emergency Reserve Bill 2025'. Accessed: Apr. 14, 2026. [Online]. Available: [https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint\\_committee\\_on\\_climate\\_environment\\_and\\_energy/submissions/2026/2026-01-22\\_general-scheme-of-the-strategic-gas-emergency-reserve-bill-2025\\_en.pdf](https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint_committee_on_climate_environment_and_energy/submissions/2026/2026-01-22_general-scheme-of-the-strategic-gas-emergency-reserve-bill-2025_en.pdf)
- 78 Government of Ireland, 'General Scheme: Dublin Airport (Passenger Capacity) Bill 2026'. Accessed: Apr. 14, 2026. [Online]. Available: [https://assets.gov.ie/static/documents/46379587/20260203\\_General\\_Scheme\\_Passenger\\_Cap\\_FINAL.pdf](https://assets.gov.ie/static/documents/46379587/20260203_General_Scheme_Passenger_Cap_FINAL.pdf)
- 79 Department of the Taoiseach, 'Programme for Government 2025 – Securing Ireland's Future', Jan. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-the-taoiseach/publications/programme-for-government-2025-securing-irelands-future/>
- 80 E. Boyle *et al.*, 'Public participation in the development of electricity grid infrastructure: Early engagements and community forums', *Energy Research & Social Science.*, vol. 120, 103878, Feb. 2025, <https://doi.org/10.1016/J.ERSS.2024.103878>
- 81 E. Boyle, A. Revez, D. Carr, C. I. Reid, A. Deane and B. Ó Gallachóir, 'Community benefit funds for energy infrastructure: Paving the way for public engagement and sustainable development?', *Energy Policy*, vol. 208, 114873, Jan. 2026, <https://doi.org/10.1016/J.ENPOL.2025.114873>
- 82 Department of Climate, Energy and the Environment, 'Renewable Electricity Support Scheme 1 (RESS 1)'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/renewable-electricity-support-scheme-ress-1/#community-benefit-funds-cbf>
- 83 B. Ó Gallachóir, A. Deane, E. Boyle and A. Revez, 'Steps for Public Engagement with Energy Transitions in an Era of Climate Crisis', 2021. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.marei.ie/project/public-engagement-with-energy-transitions-in-an-era-of-climate-crisis/>
- 84 Climate Change Advisory Council, 'Annual Review 2023', Jul. 2023. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/annualreviewandreport/CCAC-AR-2023-postfinal.pdf>
- 85 Climate Change Advisory Council, 'Annual Review 2024: Electricity', May 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/annualreviewandreport/AR2024-Electricity-final.pdf>



- 86 Department of Climate, Energy and the Environment, 'Private Wires Policy Statement', Jul. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/private-wires-policy-statement/>
- 87 Joint Committee on Climate, Energy and the Environment, 'General Scheme of the Private Wires Bill 2025: Discussion'. Accessed: Apr. 14, 2026. [Online]. Available: [https://data.oireachtas.ie/ie/oireachtas/debateRecord/joint\\_committee\\_on\\_climate\\_environment\\_and\\_energy/2026-02-25/debate/mul@/main.pdf](https://data.oireachtas.ie/ie/oireachtas/debateRecord/joint_committee_on_climate_environment_and_energy/2026-02-25/debate/mul@/main.pdf)
- 88 L. Foley, R. Sengupta, A. Asher and J. Cunningham, 'Benefits of Hybrid Sites', Apr. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.energystorageireland.com/wp-content/uploads/2025/04/Benefits-of-hybrid-sites-FINAL-CLEAN.pdf>
- 89 Commission for Regulation of Utilities, 'Installed Capacity Cap: Decision Paper', Jan. 2024. Accessed: Apr. 14, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU202402\\_Installed\\_Capacity\\_Cap\\_Decision\\_paper\\_2024\\_378881.PDF](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU202402_Installed_Capacity_Cap_Decision_paper_2024_378881.PDF)
- 90 Commission for Regulation of Utilities, 'Consultation on sharing of Maximum Export Capacity (MEC) behind a single connection point'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.cru.ie/about-us/news/consultation-on-sharing-of-maximum-export-capacity-mec-behind-a-single-connection-point/>
- 91 Department of the Taoiseach and Department of Climate, Energy and the Environment, 'Climate Action Plan progress reports'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-the-taoiseach/publications/climate-action-plan-progress-reports/#climate-action-plan-2025>
- 92 Commission for Regulation of Utilities, 'Sharing of maximum export capacity (MEC) behind a single connection point'. Accessed: May 04, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU202643\\_Sharing\\_of\\_MEC\\_Decision\\_Paper.pdf](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU202643_Sharing_of_MEC_Decision_Paper.pdf)
- 93 Commission for Regulation of Utilities, 'Large Energy Users Connection Policy', Dec. 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU2025236\\_Large\\_Energy\\_User\\_connection\\_policy\\_decision\\_paper.pdf](https://cruie-live-96ca64acab2247eca8a850a7e54b-5b34f62.divio-media.com/documents/CRU2025236_Large_Energy_User_connection_policy_decision_paper.pdf)
- 94 Climate Change Advisory Council, 'Annual Review 2024: Industry and Waste', May 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/annualreviewandreport/AR2024-IndustryWaste-FINAL.pdf>
- 95 The Irish Times, 'Data centre expansion policy prolongs reliance on fossil fuels'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.irishtimes.com/environment/climate-crisis/2026/04/02/data-centre-expansion-policy-prolongs-reliance-on-fossil-fuels/>
- 96 EUR-Lex, 'Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023'. Accessed: Apr. 14, 2026. [Online]. Available: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L\\_202302413](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202302413)
- 97 European Commission, 'European Commission urges Ireland, Latvia and Portugal to fully transpose EU rules accelerating permitting procedures for renewable energy projects'. Accessed: Apr. 14, 2026. [Online]. Available: [https://ireland.representation.ec.europa.eu/news-and-events/news/european-commission-urges-ireland-latvia-and-portugal-fully-transpose-eu-rules-accelerating-2025-07-17\\_en](https://ireland.representation.ec.europa.eu/news-and-events/news/european-commission-urges-ireland-latvia-and-portugal-fully-transpose-eu-rules-accelerating-2025-07-17_en)
- 98 Department of Climate, Energy and the Environment, 'Public consultation on National Territory Mapping for Renewable Electricity'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/consultations/public-consultation-on-national-territory-mapping-for-renewable-electricity/>



- 99 Houses of the Oireachtas, 'EU Directives – Dáil Éireann debate'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-02-04/210/>
- 100 Government of Ireland, 'European Union (Renewable Energy) (Amendment) Regulations 2026'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.irishstatutebook.ie/eli/2026/si/36/made/en/print>
- 101 Department of Climate, Energy and the Environment, 'National Energy and Climate Plan (NECP) 2021–2030', Jul. 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/national-energy-and-climate-plan-necp-2021-2030/>
- 102 Sustainable Energy Authority of Ireland, 'National energy balance'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.seai.ie/data-and-insights/seai-statistics/key-publications/national-energy-balance>
- 103 Government of Ireland, 'National Planning Framework: First Revision', Apr. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.npf.ie/wp-content/uploads/National-Planning-Framework-First-Revision-April-2025-1.pdf>
- 104 Houses of the Oireachtas, 'Renewable energy generation – Dáil Éireann debate'. Accessed: Apr. 15, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2025-11-06/138/>
- 105 Department of Housing, Local Government and Heritage, 'Draft Revised Wind Energy Development Guidelines December 2019', Dec. 2019. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-housing-local-government-and-heritage/publications/draft-revised-wind-energy-development-guidelines-december-2019/>
- 106 Department of Climate, Energy and the Environment, 'Climate Action Plan 2024', Dec. 2023. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/climate-action-plan-2024/>
- 107 Wind Energy Ireland, 'Repowering Ireland: How We Stay Global Leaders in Onshore Wind Energy', Jun. 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://windenergyireland.com/images/files/final-repowering-ireland-report-june-2024.pdf>
- 108 An Coimisiún Pleanála, 'Renewable Energy Directive (RED) III Information Guide'. Accessed: Apr. 15, 2026. [Online]. Available: <https://www.pleanala.ie/getmedia/3c4bc4-2863-4c6f-b1a7-fff5793366a9/RED-III-Information-Guide.pdf?ext=.pdf>
- 109 Department of Enterprise, Trade and Employment, 'Offshore wind energy'. Accessed: Apr. 14, 2026. [Online]. Available: <https://enterprise.gov.ie/en/what-we-do/the-business-environment/offshore-wind-energy/>
- 110 Department of Climate, Energy and the Environment, 'The South Coast Designated Maritime Area Plan for Offshore Renewable Energy', Oct. 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/the-south-coast-designated-maritime-area-plan-for-offshore-renewable-energy-sc-dmap/>
- 111 ESB Networks, 'ESB and Ørsted joint venture wins the provisional rights to develop the Tonn Nua site in offshore wind auction'. Accessed: Apr. 14, 2026. [Online]. Available: <https://esb.ie/news--insights/press-releases/article/2025/11/26/esb-and-%C3%B8rsted-joint-venture-wins-the-provisional-rights-to-develop-the-tonn-nua-site-in-offshore-wind-auction>
- 112 Houses of the Oireachtas, 'Wind energy generation – Dáil Éireann debate'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-02-24/146/>
- 113 Department of Transport, 'Facilitation of offshore renewable energy by commercial ports in Ireland'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/policy-information/facilitation-of-offshore-renewable-energy-by-commercial-ports-in-ireland/>



- 114 National Management Treasury Agency, 'Ireland Strategic Investment Fund and Port of Cork Company announce unique partnership enabling Ireland's future as a major renewable energy hub'. Accessed: Apr. 14, 2026. [Online]. Available: <https://isif.ie/news/port-of-cork-company-and-ireland-strategic-investment-fund-announce-unique-partnership-enabling-irelands-future-as-a-major-renewable-energy-hub>
- 115 Iarnród Éireann, 'Rosslare Europort – Offshore renewable energy hub'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.irishrail.ie/en-ie/about-us/iarnrod-eireann-projects-and-investments/rosslare-europort-ore>
- 116 M. Donnelly, 'Letter re: Energy security and climate action', 2022. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/councilcorrespondenceandadvice/Letter%20regarding%20Energy%20Security%20and%20Climate%20Action%20PDF.pdf>
- 117 Climate Change Advisory Council, 'Annual Review 2022', 2022. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/media/climatechangeadvisorycouncil/contentassets/publications/CCAC-ANNUAL-REVIEW-2022.pdf>
- 118 Gas Networks Ireland, '2025/26 winter outlook'. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.gasnetworks.ie/sites/default/files/2025-11/Winter-Outlook-2025\\_0.pdf](https://www.gasnetworks.ie/sites/default/files/2025-11/Winter-Outlook-2025_0.pdf)
- 119 Joint Committee on Climate and Environment and Energy, 'Report on Pre-legislative Scrutiny of the General Scheme of the Strategic Gas Emergency Reserve Bill 2025', 2026. Accessed: Apr. 14, 2026. [Online]. Available: [https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint\\_committee\\_on\\_climate\\_environment\\_and\\_energy/reports/2026/2026-02-26\\_report-on-pre-legislative-scrutiny-of-the-general-scheme-of-the-strategic-gas-emergency-reserve-bill-2025\\_en.pdf](https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint_committee_on_climate_environment_and_energy/reports/2026/2026-02-26_report-on-pre-legislative-scrutiny-of-the-general-scheme-of-the-strategic-gas-emergency-reserve-bill-2025_en.pdf)
- 120 Climate Change Advisory Council, 'Carbon Budget Proposal Report', 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.climatecouncil.ie/media/CCAC%20Carbon-Budget%20Proposal%202024-final.pdf>
- 121 ESB Networks, 'For a Clean, Secure Energy Future: Ireland's Pathway to a Net Zero Energy System by 2050'. Accessed: Apr. 14, 2026. [Online]. Available: [https://cdn.esb.ie/media/docs/default-source/corporate-governance/ireland-s-pathway-to-a-net-zero-energy-system-by-2050.pdf?sfvrsn=d9d7e1bd\\_4](https://cdn.esb.ie/media/docs/default-source/corporate-governance/ireland-s-pathway-to-a-net-zero-energy-system-by-2050.pdf?sfvrsn=d9d7e1bd_4)
- 122 National Economic & Social Council, 'Ireland's Future Power System and Economic Resilience', Apr. 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.nesc.ie/publications/council\\_report\\_167\\_econ\\_resil/](https://www.nesc.ie/publications/council_report_167_econ_resil/)
- 123 National Economic & Social Council, 'Accelerating the Transition to a Sustainable Energy System', Feb. 2026. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.nesc.ie/app/uploads/2026/02/172\\_energy\\_systems.pdf](https://www.nesc.ie/app/uploads/2026/02/172_energy_systems.pdf)
- 124 Government of Ireland, 'National Hydrogen Strategy'. Accessed: Apr. 14, 2026. [Online]. Available: <https://assets.gov.ie/static/documents/national-hydrogen-strategy.pdf>
- 125 Islandmagee Energy, 'Islandmagee Energy'. Accessed: Apr. 15, 2026. [Online]. Available: <https://www.islandmageeenergy.com/>
- 126 Government of Ireland, 'National Biomethane Strategy', May 2024. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/national-biomethane-strategy/>
- 127 Irish Farmers Journal, 'Department confident of AD projects'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.farmersjournal.ie/more/renewables/department-confident-of-ad-projects-855803>
- 128 M. Barrett, N. Farrell and B. Roantree, 'Energy Poverty and Deprivation in Ireland', Jun. 2022. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.esri.ie/system/files/publications/RS144.pdf>



- 129 Commission for Regulation of Utilities, 'Arrears and NPA disconnections: December 2025 update'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.rte.ie/documents/news/2026/02/cru-report.pdf>
- 130 National Economic & Social Council, 'Energy Transition as an Opportunity to Eliminate Energy Poverty', May 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.nesc.ie/publications/energy-transition-as-an-opportunity-to-eliminate-energy-poverty/>
- 131 D. Kelly, A. Gonzalez Del Campo, A. Ryan, P. Collins and M. Quigley, 'The Energy Divide: Linking Local Deprivation to Household Renewable Adoption', 2026. Accessed: Apr. 14, 2026. [Online]. Available: <https://publicpolicy.ie/wp-content/uploads/2025/12/Renewable-Energy-and-Deprivation.pdf>
- 132 S. Malik, C. Mac Domhnaill, J. Doody and A. Keane, 'Towards Peer-to-Peer (P2P) Energy Trading: A Policy Pathway for Ireland's Decentralised Energy Future', Jul. 2025. Accessed: Apr. 14, 2026. [Online]. Available: [https://www.nexsys-energy.ie/t4media/NexSys\\_Policy\\_Brief\\_\\_Peer\\_to\\_Peer\\_Energy\\_Trading\\_.pdf](https://www.nexsys-energy.ie/t4media/NexSys_Policy_Brief__Peer_to_Peer_Energy_Trading_.pdf)
- 133 Y. Zhou, J. Wu and W. Gan, 'P2P energy trading via public power networks: Practical challenges, emerging solutions, and the way forward', *Frontiers in Energy*, vol. 17, no. 2, pp. 189–197, Apr. 2023, <https://doi.org/10.1007/s11708-023-0873-9>
- 134 Department for Energy Security and Net Zero, 'Government to make "plug-in solar" available within months'. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.uk/government/news/government-to-make-plug-in-solar-available-within-months>
- 135 A. Wyley, 'EnergyCloud Ireland presentation to Joint Committee on Social Protection, Rural and Community Development'. Accessed: Apr. 14, 2026. [Online]. Available: [https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint\\_committee\\_on\\_social\\_protection\\_rural\\_and\\_community\\_development/submissions/2026/2026-02-04\\_opening-statement-alan-wyley-chief-executive-officer-energycloud\\_en.pdf](https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint_committee_on_social_protection_rural_and_community_development/submissions/2026/2026-02-04_opening-statement-alan-wyley-chief-executive-officer-energycloud_en.pdf)
- 136 A. Wyley, 'EnergyCloud Ireland presentation to Joint Committee on Housing, Local Government and Heritage regarding supplying excess renewable energy to homes experiencing energy poverty'. Accessed: Apr. 14, 2026. [Online]. Available: [https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint\\_committee\\_on\\_housing\\_local\\_government\\_and\\_heritage/submissions/2025/2025-11-18\\_opening-statement-alan-wyley-chief-executive-officer-ceo-energycloud\\_en.pdf](https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint_committee_on_housing_local_government_and_heritage/submissions/2025/2025-11-18_opening-statement-alan-wyley-chief-executive-officer-ceo-energycloud_en.pdf)
- 137 A. Wyley, 'EnergyCloud Ireland presentation to Joint Committee on Climate, Environment, and Energy'. Accessed: Apr. 14, 2026. [Online]. Available: [https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint\\_committee\\_on\\_climate\\_environment\\_and\\_energy/submissions/2025/2025-12-10\\_opening-statement-adam-wyley-chief-executive-officer-energycloud\\_en.pdf](https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/joint_committee_on_climate_environment_and_energy/submissions/2025/2025-12-10_opening-statement-adam-wyley-chief-executive-officer-energycloud_en.pdf)