AMERICAN CHAMBER of COMMERCE IRELAND

Unlocking Ireland's Renewable Energy Potential

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The Voice of US-Ireland Business

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Foreword:

Ireland's geography, climate and business ecosystem offer significant potential in the context of renewable energy. By reducing the barriers to growth in this sector and creating a consistent policy framework that fosters greater innovation, Ireland can achieve significant advancements towards meeting renewable energy targets, reducing the cost of energy across the State, and facilitate a vibrant and dynamic energy system that drives sustainable economic growth.

Investments in Ireland's electricity grid are critical to delivering the infrastructure required to meet the needs of the population and the ambition of the business community. Further, the development of wind and solar energy offers enormous potential for Ireland's economy into the future, supporting Ireland's renewable energy transition and ultimately Ireland's ambition to become a net energy exporter in the years ahead.

Innovative policy developments in the areas of private wires and district heating respectively, can further unlock the promise of renewable energy, reduce emissions, and overcome challenges faced within today's energy landscape.

Delivering the next generation of energy infrastructure and driving research, development and innovation through coordinated policy approaches is key to realising the potential of Ireland's energy sector. These investments will have a direct and positive impact on Ireland's international competitiveness at a time when energy competition is increasing.

Ireland's energy system is a key facilitator of investment in Ireland, as well as allowing for further growth and the expansion of existing operations in Ireland. This white paper sets out the key methods in which Ireland can unlock the potential of the renewable energy sector, encourage growth, reduce barriers to investment, and provide for long-term sustainable energy supply. The implementation of these measures will ensure Ireland is to the forefront of energy innovation in the decades to come.

Key Recommendations

Electricity Grid Infrastructure:

- Continuously review energy infrastructure capital expenditure with a view to enhancing investment through the National Development Plan review process.
- Provide for a clearly defined funding stream for electricity grid improvements.
- Enhance existing electricity grid capacity to avoid energy opportunity costs.
- Develop a clear long-term strategy to position Ireland as a net energy exporter, with clearly defined, progressive targets.

Wind and Solar Energy:

- Develop a long-term offshore wind strategy through which Ireland can realise its renewable energy potential.
- Implement reviews of the planning system with regard to renewable energy projects to create efficiencies that align with national targets.
- Address the delays in the planning system through prioritising renewable energy projects.
- Publish and implement a new National Ports Policy to support infrastructural development.
- Provide for clear planning guidelines for the development of the solar energy sector in Ireland.
- Develop and implement renewable energy storage infrastructure and investments, including battery storage and green hydrogen strategies.

Private Wires:

- That clear guidance be given to the business community with regard to the use of private wires in Ireland.
- That Government delivers a private wires policy framework as a matter of urgency.
- That the Electricity Regulation Act be amended to facilitate the use of private wires.
- That multi-site businesses are enabled to develop private wire networks to distribute renewable energy to operations across Ireland.
- That future private wire networks utilise existing grid infrastructure to redistribute excess renewable energy to the national grid.

District Heating:

- The development and implementation of a National District Heating Strategy.
- Enacting legislation and regulatory measures to support to roll out of district heating in Ireland.
- The rapid deployment of district heating in Ireland as a priority.

Security of Supply:

- Continuously review, with a view to increasing resourcing and staffing of the National Cyber Security Centre (NCSC).
- Developing a dedicated unit within the NCSC to mitigate cyber-security risks to Ireland's energy supply.

Government-Industry Cooperation:

- Coordinate policy frameworks across all levels of Government to support the delivery of renewable energy projects.
- Develop a defined unit within Government to support the renewable energy sector.

Electricity Grid Infrastructure

Modernisation of Ireland's electricity grid is a crucial step to developing a robust and sustainable approach to the security of energy supply in Ireland. This has a significant impact on the business community's ability to forecast growth and investment in their Irish operations. Estimates of the required investment in Ireland's electricity grid range from €1.1bn - €2bn per annum to 2030, in order to meet the needs of both the general population and the business community. The recent review of the National Development Plan, and increased funding for the ESB and Eirgrid provided for under Budget 2026, presents an opportunity for Government to build momentum through continued investment in Ireland's electricity grid and strengthen Ireland's energy infrastructure offering.

Ireland's electricity demand has been growing year on year over the previous decade, driven by a rising population and greater economic activity. In 2023, Ireland's electricity demand grew by 1.24 TWh as compared to 2022 figures. Ensuring that there is grid capability to deliver electricity to businesses is key to maintaining Ireland's position as an attractive place for Foreign Direct Investment, and the continuation of Ireland's role as a competitive location for operational expansion.

Grid capacity is also having direct impacts on the level of renewable energy generation in Ireland. In 2024, wind energy accounted for 32% of electricity produced in Ireland, however, the overall share of wind generated electricity was down 3% compared to 2023 figures. This was primarily a result of a halt in wind energy production due to grid capacity constraints. The loss of potential energy generation represents a challenge for both existing wind farms, on and offshore, as well as putting at risk future investments in this sector. The lack of grid capacity therefore has a compounding effect as it results in higher energy costs, due to reliance on fossil fuels.

Furthermore, Ireland's electricity costs and related expenditures including grid connection fees rank significantly higher than other European jurisdictions, this makes Ireland a less attractive place in which to invest and expand operations. Addressing the high cost of electricity for industry would prove beneficial to long-term economic growth.

The role of interconnectors will play an increasingly important role in the electricity sector in Ireland, with the existing connections to the UK and the Celtic Interconnector with France due to be operational by 2027. It is important that Ireland pursues further interconnector projects to enhance Ireland's electricity network. Under the National Policy Statement on Electricity Interconnection, Ireland has the potential to develop a second interconnector with France, an interconnector with Spain, and further interconnections with Belgium, the Netherlands, and the UK.

These interconnection projects will have significant benefits to the Single Electricity Market (SEM) in Ireland, new interconnection projects with the UK could yield a 12% reduction in SEM system costs beyond 2030, while projects with Spain and France have the potential for reductions of up to 30% of SEM system costs in 2040 and 2050 respectively.

The development and operation of interconnector projects will also put Ireland on a path to realising ambitions to become a net energy exporter. The role of interconnectors play a critical role in developing the necessary infrastructure to allow for energy exports and developing the energy sector in Ireland, while also reducing electricity costs, reducing risks in renewable energy production, and increasing Ireland's security of supply.

AmCham recommends:

- Continuously, review energy infrastructure capital expenditure with a view to enhancing investment through the National Development Plan review process.
- Provide for a clearly defined funding stream for electricity grid improvements.
- Enhance existing electricity grid capacity to avoid energy opportunity costs.
- Develop and review strategies to develop new interconnectors to the UK, France, Spain, Belgium, and the Netherlands.
- Conduct the necessary geographical feasibility studies, particularly in relation to an interconnector with Spain, as a priority.
- Develop a clear long-term strategy to position Ireland as a net energy exporter, with clearly defined, progressive targets.

Wind & Solar Energy

Ireland has ambitious wind and solar electricity generation targets and, while there has been steady progress with regard to increasing the amount of electricity produced through these sources, it is important that policy and regulation continue to match the level of ambition from industry within these sectors in order to maintain future progress.

With a target of 5GW of offshore wind energy by 2030, rising to 37GW by 2050, ensuring that the planning, regulatory and policy ecosystem supports industry in strengthening this sector will be of significant importance to helping Ireland achieve these targets.

Onshore wind generation targets encompass the development of 9,000MW by 2030, with over 5,000MW connected by the end of 2024, Ireland is over halfway to this target, however, challenges remain in terms of Ireland's ability to meet these targets.

Delays in the planning process represent a major hurdle for the development of wind generation projects. In 2024, 10 wind farms were granted approval by An Bord Pleanála, the combined output of these projects accounts for 42% of what was needed to remain on track to the 2030 targets. A further 30 projects were awaiting a decision at the end of 2024, notably the rejection rate for wind farm applications increased in 2024*. However, figures show that seven wind energy projects, with a combined 402MW, were approved in Q1 2025, a significant improvement in approval rates, but still behind quarterly targets. As of the end of Q1 2025, 27 projects, totaling 1,399MW, remain pending decision.

The enhancement of port infrastructure that will facilitate the development of offshore wind energy in Ireland will be another key measure through which policy can work to support the sector. The implementation of new National Ports Policy, and accompanying capital investments in Ireland's port infrastructure, will be essential in ensuring renewable energy projects can be scaled up without undue delays and that future capacity growth is inbuilt to policy.

In 2023, solar energy accounted for 1.9% of all electricity production, this is equivalent to meeting the demand for the entire country for 1 week. By enhancing policy frameworks to support the growth of the solar energy sector in Ireland, solar energy generation be increased and play a greater role in electricity production in Ireland, while reducing fossil fuel dependency.

Addressing planning and regulatory challenges to solar energy development is a key step to encouraging further growth in the sector, with a need for clear planning guidelines for solar projects. Further, a review of policy and regulation with regard to co-location energy generation sites, solar energy generation on public buildings, and impacts on the use and definition of agricultural land, can provide greater clarity to investors and foster an increasingly dynamic solar energy sector in Ireland, whilst also assisting in meeting Government targets of delivering 8GW of solar energy by 2030.

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*https://windenergyireland.com/latest-news/7831-10-new-wind-farms-approved-by-an-bord-pleanala-in-2024

Since 2000, Irish electricity customers have saved approximately €840 million through the increase of renewable energy, while reaching the 2030 targets of delivering 80% of all electricity generated in Ireland through renewable energy sources could yield a further €610 million in savings beyond 2030. This underscores both the potential of the renewable energy sector and the need for increased policy support and investment to develop research and development in energy storage infrastructure, including battery storage and green hydrogen.

AmCham recommends:

- Develop a long-term offshore wind strategy through which Ireland can realise its renewable energy potential.
- Implement reviews of the planning system with regard to renewable energy projects to create efficiencies that align with national targets.
- Address the delays in the planning system through prioritising renewable energy projects.
- Ensure adequate resourcing to An Bord Pleanála through staffing and funding to address delays.
- Publish and implement a new National Ports Policy to support infrastructural development.
- Ensure that ports have the capacity to facilitate future demand within the offshore wind sector.
- Provide for clear planning guidelines for the development of the solar energy sector in Ireland.
- Facilitate the development of co-location energy generation sites through proactive policy actions.
- Increase solar energy production through the installation of solar PV units on all public buildings.
- Review policy relation the use of agricultural land and renewable energy production to reduce conflicting policy goals.
- Develop and implement renewable energy storage infrastructure and investments, including battery storage and green hydrogen strategies.

Private Wires

Delivering a policy, regulatory, and legislative framework to enhance the role private wires can play in Ireland would provide significant advantages for Ireland and the business community. Through delivery of a supportive framework with regard to private wires, Ireland can advance its efforts to reduce emissions, foster greater innovation, increase renewable energy production and facilitate a greater security of supply.

Building on the Cabinet's recent approval of reforms to private wire regulations, and by facilitating the introduction of private wires as a means of energy generation and usage, Ireland can increase the level of public-private cooperation in the energy sector. Private wires also have the ability to reduce delays in grid connection times, reduce electricity grid congestion by bypassing the need to connect to the grid and allowing a direct means of energy generation and energy usage.

Furthermore, through the implementation of private wires regulations and legislation, Ireland can develop a culture of research and innovation with regard to electricity production, energy consumption, and renewable energy storage. This has the potential to contribute to the wider development of energy efficiency in Ireland and overcome challenges facing Irish electricity infrastructure.

Existing complexity and costs to the connection processes are having a significant impact on FDI and the ability of businesses to grow their Irish operations, this is counter to Ireland's efforts to increase its attractiveness and competitiveness for FDI. This underscores the importance of ensuring that under new regulations, approved by the Government, that the Commission for Regulation of Utilities is adequately resourced to meet demand in this policy area.

Further consideration should be given to the connection of generation sites to demand consumers across third party roads or lands, which can be done with limited policy interventions; following the full roll-out of private wires, which will require amendments to the Electricity Regulation Act, Ireland can begin to harness the potential of private wires.

While there has been positive steps taken by the Government to develop policy frameworks surrounding the use of private wires in Ireland, notably through recent consultations and publications conducted by the Department of Environment, Climate, and Communications, and Government approval of private wire reforms, it remains of paramount importance that a clearly defined and supportive policy framework is delivered in respect of private wires without undue delay.

Building on this progress, it is important to recognise and develop the opportunities for multi-site businesses in Ireland to generate renewable energy in one location and be facilitated in distributing this energy to operations across Ireland. Future policy frameworks should therefore enable the development of private wire networks that connect multi-site operations, and through linkages with the existing grid facilitate the sharing of excess energy, resulting in greater investment incentives and lower energy costs for businesses and consumers.

AmCham recommends:

- That clear guidance be given to the business community with regard to the use of private wires in Ireland.
- That Government delivers a private wires policy framework as a matter of urgency.
- That the Electricity Regulation Act be amended to facilitate the use of private wires.
- That the Commission for the Regulation of Utilities is adequately resourced to engage with industry to develop the role of private wires.
- That multi-site businesses are enabled to develop private wire networks to distribute renewable energy to operations across Ireland.
- That future private wire networks utilise existing grid infrastructure to redistribute excess renewable energy to the national grid.

District Heating

The development and rollout of district heating in Ireland has the potential to significantly boost Ireland's decarbonisation of heating targets, diversifying Ireland's energy supply sources and increasing the reliability of supply.

District heating has been widely used internationally and has a proven track record of reducing emissions generated by heating buildings. Ireland has the potential to rapidly roll out district heating and in doing so ensure reduced costs and reduced emissions in heating systems.

Analysis shows that the potential for district heating in Ireland, through a networked heat system could meet the demand of 50% of all buildings in Ireland today. This offers significant advantages to the Irish energy sector if implemented in a timely manner with supporting policy frameworks. Underscoring the need for decarbonisation in heating is demonstrated when considering the 90.2% of Ireland's heat demand was met through fossil fuels in 2023.

In particular, Ireland is home to a large number of data centres which play a pivotal role in positioning Ireland as a digital gateway to Europe, enhancing the Itish economy's attractiveness for FDI. This potions Ireland in an advantageous space whereby residual heat created by data centres can be harnessed through district heating and thus supply other buildings, resulting in lower heating costs, lower heat waste and greater decarbonisation of Ireland's heating systems.

Furthermore, through the wide-scale introduction of district heating through underground pipelines, Ireland can increase the security of supply for heat as these forms of infrastructure are less susceptible to weather events and other forms of physical damage to infrastructure.

By addressing the regulatory, planning and policy barriers to district heating in Ireland, there exists the potential for a significant growth in district heating in Ireland, with the technology already in use in other nations. This would lead to substantial benefits to the public and industry alike. This would also lead to greater advancements towards the Government's emissions reduction targets for both 2030 and 2050.

AmCham recommends:

- The development and implementation of a National District Heating Strategy.
- Enacting legislation and regulatory measures to support to roll out of district heating in Ireland.
- The rapid deployment of district heating in Ireland as a priority.
- Develop a roadmap to reducing heating costs in Ireland through the use of district heating.

Security of Supply

Security of supply for Ireland's energy network is vital to ensuring that businesses remain confident that Ireland can meet the energy needs of the population and commercial operations. In a recent AmCham survey of member organisations, 100% of respondents agreed that the security of Ireland's energy supply was an important issue, with 77% stating that it was extremely or very important.

Developing robust cyber security mechanisms surrounding Ireland's energy supply, capable of withstanding external threats, is key to meeting the needs of FDI in Ireland. The threat of cyber-attacks on energy infrastructure poses a significant challenge to protecting investment in Ireland and continuing reliability in Ireland's energy systems. Cyber-attacks on Ireland's energy network have the potential to cause major disruption to business operations and the workforce's ability to carry out their duties. Furthermore, such attacks could take a prolonged time to resolve and restore the ability to meet demand. This poses a risk for productivity and opportunity loses to the Irish economy and weaken business confidence in Ireland's ability to maintain energy security.

Building on Budget 2026 commitments to recruit 70 additional civil servants to work in cybersecurity, Ireland will benefit from continued investment and reviews of resourcing and staffing of the National Cyber Security Centre, with a dedicated unit to mitigating cyber risks to Ireland's energy supply.

Further, physical attacks on Ireland's critical energy infrastructure poses a threat to energy supply, prevention and defence measures should remain Departmental priorities. Enhanced cooperation with European and international partners will also provide for a more robust defence ecosystem.

AmCham recommends:

- Continuously review, with a view to increasing resourcing and staffing of the National Cyber Security Centre (NCSC).
- Developing a dedicated unit within the NCSC to mitigate cyber-security risks to Ireland's energy supply.

Government-Industry Cooperation

The development of stronger communication forums between Government and industry could play an important role in identifying emerging challenges and delivering solutions. This can be achieved through the establishment of a unit within Government with a responsibility for the development of energy infrastructure.

The advantages of this unit would include the cross-Departmental and agency coordination of energy infrastructure policy and development. This unit would be best placed to create cohesion between Government, local authorities and relevant agencies on a strategy basis and ensure that at every level policy is enabled to enhance Ireland's renewable energy sector grow.

Furthermore, this unit could provide a singular point of contact for industry with regard to the development of energy infrastructure in Ireland and foster a streamlined approach to project development. This mechanism through which industry can engage would also provide for the early identification of bottlenecks in the system and posit solutions to enable sustainable growth.

AmCham recommends:

- Coordinate policy frameworks across all levels of Government to support the delivery of renewable energy projects.
- Develop a defined unit within Government to support the renewable energy sector.


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