

ENERGY

Opinion: Ireland's energy system is fundamentally broken and needs a radical overhaul

An urgent overhaul of how the state incentivises new power plants is needed, writes the chief executive of the Electricity Association of Ireland

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As far back as 2019, Eirgrid has estimated that there wouldn't be adequate generation capacity to meet demand from 2026 or earlier, if older power plants closed ahead of 2025. Picture: iStock

The Irish state has a problem. At the heart of our target to halve our overall carbon emissions by 2030 is a plan to massively decarbonise the country's energy system.

Clean energy powering homes, small businesses, heavy industry and transport is absolutely vital to reducing Ireland's carbon emissions by more than 50 per cent by the end of this decade.

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However, continuously expanding electricity demand and the prospect of further system alerts on the power grid also drives up our need for firm or constant sources of power such as natural gas, which obviously puts all our climate targets at risk.

So how does Ireland square this circle and is it even possible to phase out fossil fuels by 2050?

The challenge lies with how we incentivise energy companies to build new power plants in Ireland.

As a matter of urgency, we need to overhaul the state's electricity market so that it attracts the investment needed to provide security of supply while also decarbonising the existing power generation fleet in this country.

Flimsy systems and missed targets

For the electricity sector, where demand is expected to grow rapidly as we swap fossil fuel usage for electrical plugs, carbon emissions must be reduced by 75 per cent – the steepest decline of all sectors.

However, the EPA is projecting that the energy sector won't achieve these targets, which means Ireland's chances of hitting its overall 2030 climate targets are in serious jeopardy.

The recently published "[Energy Security in Ireland to 2030](#)" report by the Department of the Environment, Climate and Communications (Decc) included a review of the state's response to the energy crisis that hit Europe following Russia's invasion of Ukraine.

Dermot McCarthy, the senior civil servant that compiled the review, charted the key events that ultimately led to a severe squeezing of Ireland's energy supply capabilities forcing regulatory bodies to procure emergency electricity generation capacity.

As far back as 2019, Eirgrid has estimated that there wouldn't be adequate generation capacity to meet demand from 2026 or earlier, if older power plants closed ahead of 2025.

Subsequently in January 2021, two major generation plants broke down, which accounted for 15 per cent of electricity capacity and forced Eirgrid to issue a stark warning that the state's electricity supply was threatened for the coming winter.

Read the **review**

[Risks to Ireland's electricity supply 'underestimated', review of power system finds](#)

The warning ultimately meant Eamon Ryan, the minister for energy, had to sign off on a plan to procure the emergency generation capacity at a cost of hundreds of millions of euro, which will be levied on all electricity customers.

In his review, [McCarthy concluded](#) that “the unpredictable elements of Covid and the impact on energy markets of the invasion of Ukraine have little relevance to the underlying risks [of the energy market] revealed by the crisis which has emerged.”

Shortfalls in auction system

The McCarthy report went on to focus on the “underlying risk” to Ireland’s energy system, which he identified as shortcomings with the auction system used by the state to incentivise energy companies to build new power plants in this country.

Despite early success in these power plant capacity auctions, subsequent low levels of participation in recent years have raised doubts about the effectiveness of the mechanism.

Eirgrid has repeatedly criticised the capacity auction process, arguing that it is too focused on securing the lowest cost power plants instead of offering contracts to projects that will provide the generation mix actually required to enable Ireland’s transition to a power system with a very high level of renewables.

Eirgrid’s own review of the capacity auction process concluded that it had inherent flaws and accused the Commission for Regulation of Utilities (CRU) of consistently approving a lower volume of power plant capacity than recommended.

Overhaul

In his report, McCarthy concluded that the market is not receiving sufficiently clear signals about the scale of new capacity required in this country. This failure, combined with the upcoming review of state aid rules in 2027, meant investors were turning away from Ireland’s electricity market, McCarthy found.

The solution to the problem lies with the Single Electricity Market Committee (SEMC) – an all-island body that has ultimate responsibility for the electricity market. This committee, as a matter of urgency, needs to overhaul the design of

the existing capacity auction system so that it can actually help deliver against the state's decarbonisation targets and ensure a secure energy system.

As soon as possible, the SEMC needs to transition away from its current approach of procuring unabated gas power plants and, instead, design auctions based on decarbonised generation.

We are in a time of substantial uncertainty for existing power generation companies as they support increased renewables on the energy system. Companies are recovering smaller fees from the market (known as infra-marginal rents) and are required less often to produce power (reduced load factor). This is at a time when severe inflationary pressures are driving up construction and maintenance costs.

Therefore, the current auction design process needs a vigorous overhaul to ensure it meets the following parameters:

- 1.** Incentives are set to a level that will attract investors with all forms of new technology that are needed to help decarbonise the energy system. This means ensuring higher-cost emerging technologies are not excluded by price caps.
- 2.** The auction must account for the risks, limitations and challenges faced by existing power plants as they attempt to forecast future costs and revenues.
- 3.** It must incentivise existing power plants to stay in the market by creating targets that are dynamic, fit for purpose and encourage existing sites to repower as an important pathway to decarbonise.

By taking on-board industry feedback the SEMC can improve the reliability of Ireland's existing power system, while also sending positive signals to potential new investors.

The electricity sector is up for this challenge, but it will need sustained, regular and meaningful engagement with regulators and the government to develop a shared vision for how the electricity system can completely phase out fossil fuel usage by 2050.

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