

A Brighter Future *A Congress Perspective on Energy Policy*

November 2024



Congress would like to pay tribute to Macdara Doyle, Campaigns Officer. Macdara passed away following a short illness and this was the last piece of work he did in his 20 years working for Congress. He will be sadly missed by all of his colleagues in Congress and the wider trade union movement.



A Brighter Future

A Congress Perspective on Energy Policy

1. Introduction

The energy market in Ireland (and across Europe) no longer serves the needs of working families or wider society. Almost a quarter of a century ago, policymakers across Europe embarked on a radical experiment in relation to energy generation and distribution. The very successful publicly-owned and controlled model was deemed not fit for purpose and was forced to cede a far greater role to private and for-profit interests.

Advocates of the shift had promised a new era of abundant, affordable and secure energy supply.

Twenty five years later, none of this has materialised. If anything, the situation has worsened with key metrics on security of supply and energy affordability well below what they were prior to privatisation and deregulation.

In the first half of 2024, average household electricity prices were the second highest in the EU and almost 30% above the EU average.¹ Electricity is €355 a year more expensive on average than the rest of the EU, calculations based on Eurostat figures show. Gas prices are the fifth highest in the EU.²

The latest figures from the Commission for Regulation of Utilities show the number of households in arrears on their energy bills has surged this year, with almost one in eight now behind on their electricity and almost one in

four behind on their gas bills.³

Thus, the most significant impact of more than two decades of 'deregulation' and 'market reform' is that we now pay a far higher price for energy, while supply is often stretched to the very limits of capacity, in order to meet demand.

In 2007, Congress published a briefing on the changes then afoot in the energy sector. Even at that early stage, the paper sounded the alarm on rising prices and the forces that were driving change in the sector: "It is of great concern that price inflation has at least partially been driven by ideology - by the need to make the market more attractive to private sector interests."

3 Commission for Regulation of Utilities (October 2024) Arrears and NPA Disconnections May 2024 Update



1 Eurostat, 28 October 2024, <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20241028-1>

2 Irish Independent, 29 October 2024, <https://www.independent.ie/business/personal-finance/households-here-paying-355-more-a-year-for-electricity-than-eu-average/a626016069.html>



2. The Role of Europe

The main impetus for deregulation came from within the European Union, as part of a wider global shift that promoted private enterprise over public ownership in all areas of the economy.

In 1996 the EU Commission adopted the First Electricity Directive, which began the ‘unbundling’ (breaking up) of national electricity systems - generation, transmission, distribution, retail. The primary aim - as the Congress paper had noted - was to make the sector attractive for private investors. This in turn would create more efficient energy markets, lower prices and ensure security of supply, so the argument went.

The privatisation drive was enthusiastically embraced here by the Irish government, policymakers and commentators. Yet in many member states - including Ireland - this entailed the transfer of key strategic assets into private control, assets that had been developed over many decades by way of public investment. Here in Ireland, it resulted in the absurd spectacle of the ESB being forced to increase prices in order to ‘incentivise’ private sector involvement in the sector.

Ultimately, the EU is seeking to create a single market for electricity across all member states, where energy is traded daily like any other commodity. While this goal has yet to be fully realised, it has ushered in one fundamental change that has had a profound economic and social impact. Under the publicly-owned and operated model, energy prices were primarily driven by costs of production. But under the new market-based model, this critical

link has been broken and energy prices are now detached from the costs of production, determined primarily by ‘market forces’ and speculative profiteering. This means energy prices are far more vulnerable to spikes and rapid fluctuations, while the State has lost a key strategic capacity to control prices and deliver more affordable energy, as required. Instead, the ‘risk’ has been transferred to households, who are left to chase the best possible price on the open market and whose only defence is to ‘switch’ frequently between suppliers.

Prior to the adoption of the 1996 Electricity Directive, the sector was essentially governed as a ‘state monopoly’ (as were areas like transport, telecoms etc). As such, it was the State that took on that risk and applied social tariffs to keep prices low, in the interests of wider social equality: “...if the State wanted to grant access to the core utilities and networks to every citizen, it could charge less than full costs to periphery and rural customers, to the poor over the rich, to the retired over the young.”⁴

Over recent years, additional flaws in the deregulation agenda have become ever more apparent, particularly since the onset of the energy price crisis, post 2021.

4 Why Social Tariffs are Needed, Dieter Helm, Jan 2023



Photo © Chris Allen (cc-by-nc/2.0)

In the first instance, energy systems require significant levels of investment. The development of the Shannon Scheme (Ardnacrusha) in the 1920s, is a case in point. This pioneering scheme required investment of £5.2 million - close to 20% of the young State's annual budget at that time.

Indeed, State investment in the project was required primarily because private investors could not be persuaded to take on a risk of that magnitude, or baulked at the fact that the new service would be based on universal access, not on capacity to pay. And unlike State investment, private funds require quicker returns on their outlay and so have less capacity to spread costs over a longer timeframe. This essentially rules out affordability measures such as social tariffs and price controls. As a result, higher costs and prices are passed on to consumers and households across the board.

Secondly, when energy pricing is contracted out to the private market it runs into a major obstacle. Energy systems (and societies)

require a constant, uninterrupted flow of power, but private energy providers can only generate energy when the price is right.

The EU's single market energy system has attempted to square this circle by way of an algorithm, based on what is termed 'marginal cost pricing.' This sees energy auctions take place daily, with energy generators offering to sell varying amounts of megawatt hours (MWh, equal to 1000 units (kWhrs) of electricity). The algorithm sifts through the bids to determine the price that will be paid. However, in order to guarantee an unimpeded flow of energy into the system, the algorithm essentially defaults to the highest price offered by the private generators - effectively incentivising them to keep their power plants operational. In other words, the single market model of energy generation deliberately drives prices higher for consumers and households, in order to benefit private providers. The all-island single electricity market (SEMO Ireland), which was established in 2007, operates in a similar way.

In addition, in the midst of a global drive to decarbonise and transition to renewable sources, this higher price is based on the operators use of fossil fuels - primarily gas - in power plants, as these are far more expensive than energy derived from renewable or nuclear sources. This '*fossilflation*' of the energy system represents a serious flaw in the single market model and it was this which effectively ensured skyrocketing prices across the European Union when the energy crisis emerged in 2021.

In Ireland, electricity prices for domestic customers rose by 76% between 2021 and 2022, with gas prices up by 100% in the same timeframe. In France, on a single day in October



2022 wholesale electricity prices rose from €160 to €600 per MWh.⁵ As one commentator observed of the overall deregulation process, it has succeeded in “degrading the service, increasing prices (and) shifting most of the risk onto the most vulnerable” while amassing record profits for energy providers.⁶ It is interesting to note that despite being the ideological home of the privatisation agenda, only a minority of US states have opted for full deregulation of the sector.⁷

There are now question marks over the capacity of the market-based model to realise the full promise of the renewable energy revolution, especially with regard to the delivery of more affordable energy and security of supply.

Across the EU, a serious investment deficit threatens to undermine the region’s ability to meet its climate and renewable energy targets. Indeed, the Institute for Climate Economics estimates an EU ‘investment gap’ of some €406 billion (some 2% of total EU GDP), in respect of what is required.⁸

Again in contrast to the United States, whose government has embarked on an ambitious programme of public investment over recent years, restrictive fiscal rules within the EU are now impeding necessary social and green investment on the part of member states. And despite expectations, private investment has failed to close the deficit. Thus analysis by the European Trade Union Confederation

confirms that private finance has “proven to be largely insufficient over the last decades to fill social and green spending gaps....”. This is particularly pertinent for Ireland, given the enormous potential we possess in terms of renewable energy and, more pointedly, the enormous investment that will be required to ensure this potential can be realised.

3. The Union Response

In March 2023, the ETUC demanded major structural reform of an energy system that penalises households by way of increased prices and has failed to deliver genuine energy security. The resulting resolution noted the trade union movement’s criticism of “the historical decision to liberalise the EU energy market” driven by free market ‘dogma’. It urged “a deep reform of the electricity market” and an end to the marginal pricing mechanism that pushes prices higher and is based on fossil fuels as a ‘price setter.’

“Fixing the electricity prices basis on fossil fuel generation is not adapted to a world aiming at carbon neutrality where renewable energy sources, producing energy at a much lower price, will become increasingly important. This creates enormous windfall profits for energy producers throughout the energy value chain (production, transport, marketing, distribution) and disincentivises the phasing out of fossil fuels.”

It also called for tougher regulation of financial speculation on energy markets, which contributed to “volatility and price hikes” without contributing to supply.

⁵ The High Price of Deregulating the EU’s Electricity, LMD, Oct 2023

⁶ Ibid

⁷ <https://www.electricchoice.com/map-deregulated-energy-markets/>

⁸ <https://etuc.org/en/pressrelease/study-social-cost-austerity-rules>



Overall, the required structural reform would be based on a number of key principles:

i. Energy as Public Good

Access to affordable energy must be considered a human right and key energy infrastructure should be viewed as a 'common good', rather than a market commodity. Where public investment in energy systems occurs, this should result in public ownership and control, a far more stable and sustainable model than one based on the short term interests of shareholders and private investors.

ii. Affordable Energy

Member states should have the capacity to regulate and control energy prices, where required, while all citizens should also be guaranteed a minimum amount of energy. There should also be a ban on disconnections.

iii. Price Predictability

It should be mandatory for suppliers to offer fixed price, long-term energy contracts to households and consumers. Supports should also be provided to SMEs and enterprises in difficulty, in order to protect jobs and speed up the introduction of energy saving measures.

iv. Just Transition

The principles and practice of Just Transition must be at the heart of the energy transition across the European Union, which requires the involvement of trade unions and key stakeholders, to both anticipate and manage the process of change. Central to a fair and just transition is the creation of good, unionised and sustainable alternative jobs for workers who are impacted by a move to reduce carbon emissions. This must be accompanied by significant investment in affected communities.

v. Energy Conservation

Energy conservation is closely linked to energy poverty, with poorer households disproportionately likely to be living in energy-inefficient housing and/or relying on old, inefficient (and more polluting) heat sources. A publicly-delivered retrofitting programme could not only ameliorate energy poverty but also provide good unionised and sustainable jobs.

4. It Wasn't Always Like This...

There are interesting parallels between the energy challenge that confronts Ireland today and that which we faced a century ago, in the early 1920s. The new State was severely lacking in financial resources and its policy outlook was significantly limited by the dominant *laissez faire* (free market) ideology of the day, that said governments should not interfere in markets. Yet, despite these restrictive conditions the then government succeeded in creating the world's first publicly-owned energy provider - the ESB - and ensured universal access to affordable energy for the population at large.

This was underpinned by Shannon Scheme at Ardnacrusha, which cost the equivalent of 20% on annual expenditure. The ESB was established in 1927 to ensure delivery of the power generated by the scheme. It was a remarkable achievement, by any standards. In many ways, the government of the day was forced to abandon conventional thinking because of the chaotic nature of the existing electricity generation and supply system, allied with a reluctance on the part of private investors to become involved.

The existing electricity system was described as "a piecemeal mess of three hundred expensive,



badly run, inefficient private and local authority systems” which only catered for a minority of the population. It was nationalised by the government.⁹ Efforts to persuade private investors - primarily from the United States - proved unsuccessful, with many unimpressed by a scheme based on universal access to energy. Their views were shared by one national newspaper, which condemned the initiative as “the first fruits of bolshevism in this country.”

The Shannon Scheme was delivered on budget, on time and met the country’s entire power needs. Crucially, it provided universal access to power at a price five times lower than the earlier private system. In the years that followed, the Rural Electrification Scheme (RES) would ensure this new, cheaper energy was delivered to all homes and businesses across the country.

Despite this success, by the 1990s publicly owned power systems like the ESB were seen as relics of a past age and impediments to growth. The assault on public provision

and State involvement in the economy was based on ideology, rather than evidence and it found enthusiastic support among policymakers and the main political parties.

In 1999, then Minister Mary O’Rourke published the Electricity Regulation Bill, which opened some 28% of the Irish energy market to competition, signalling the end of the core principles of universal access and affordability that had underpinned the energy sector for decades. O’Rourke said this promised “a new dawn for Ireland..”.

In 1999, the government also sold off Telecom Eireann to private investors. It proved an unmitigated disaster and was to seriously hamper the development of online and broadband services here, over many years. In 2001, the government went further and repealed the ESB’s legal requirement to operate as a ‘not for profit’ entity. Electricity prices spiked. That same year, the spectacular collapse of Enron in the United States laid bare many of the baseless claims made by advocates of energy privatisation.

⁹ <https://journals.sagepub.com/doi/abs/10.1177/10957960211008165> Ireland’s Energy System: The Historical Case for Hope in Climate Action - Sinead Mercier



5. Rising Prices, Amber Warnings & Data Centres

A 1999 survey revealed that energy prices for households here were the third lowest across all member states, with prices for industry close to the EU average.¹⁰

Fast forward to today, electricity prices are the second highest in the EU and almost 20% above the EU average.

The dramatic divergence is shown starkly in prices charged for kilowatt hours (kWh):

- €0.37 per kWh here, as against an EU average price of €0.28 kWh in the first half of 2024..¹¹

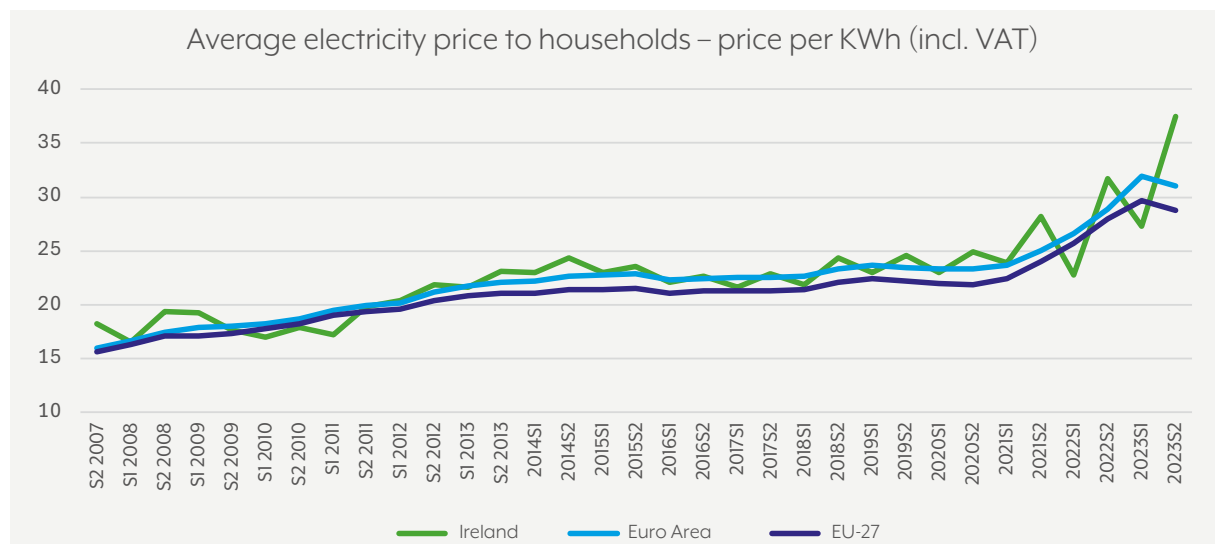
There are some mitigating factors that help explain *some* of this divergence: the relatively small size of our electricity market, limited interconnection and the higher length of network required per customer. Crucially, our heavy reliance on electricity generation from gas leaves us more exposed than most to volatile gas prices on the wholesale electricity market. According to the European Electricity Review 2024, Ireland had the highest share of gas in their electricity mix and was the country “with the largest gas generation per capita (3,008 kWh)...”¹²

In addition, it appears that the changes introduced in the late 1990s have failed to provide a suitable framework to develop and expand network capacity to ensure security of supply and meet the needs of a growing population and economy.

¹⁰ <https://www.irishtimes.com/business/republic-s/domestic-electricity-prices-third-lowest-in-europe-1.153436>

¹¹ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics#Electricity_prices_for_household_consumers

¹² <https://ember-climate.org/insights/research/european-electricity-review-2024/#supporting-material>





Thus, as the Commission for Regulation of Utilities (CRU) noted in 2023, Ireland was in the deeply troubling position of having to simultaneously address “both rapidly increasing energy demand and decarbonisation of the energy system” making us an outlier among EU member states.¹³ Indeed the CRU went on to warn that consumers should not be expected to fund the entirety of the process, but only in proportion to the direct benefits they received in return.¹⁴

The pressures on the energy system referenced by the CRU have become all too apparent in recent years. Between 2020 and early 2022, 11 amber alerts were issued by the Single Electricity Market Operator (SEMO): amber alerts warn of a shortfall between supply and demand and the possibility of power

outages.¹⁵ This compares with just 13 amber alerts issued over the previous decade.

While the installation of emergency temporary capacity helped to address the deficit, Eirgrid’s 2023 Winter Outlook advised that the system still fell well short of its own ‘adequacy standard’.¹⁶

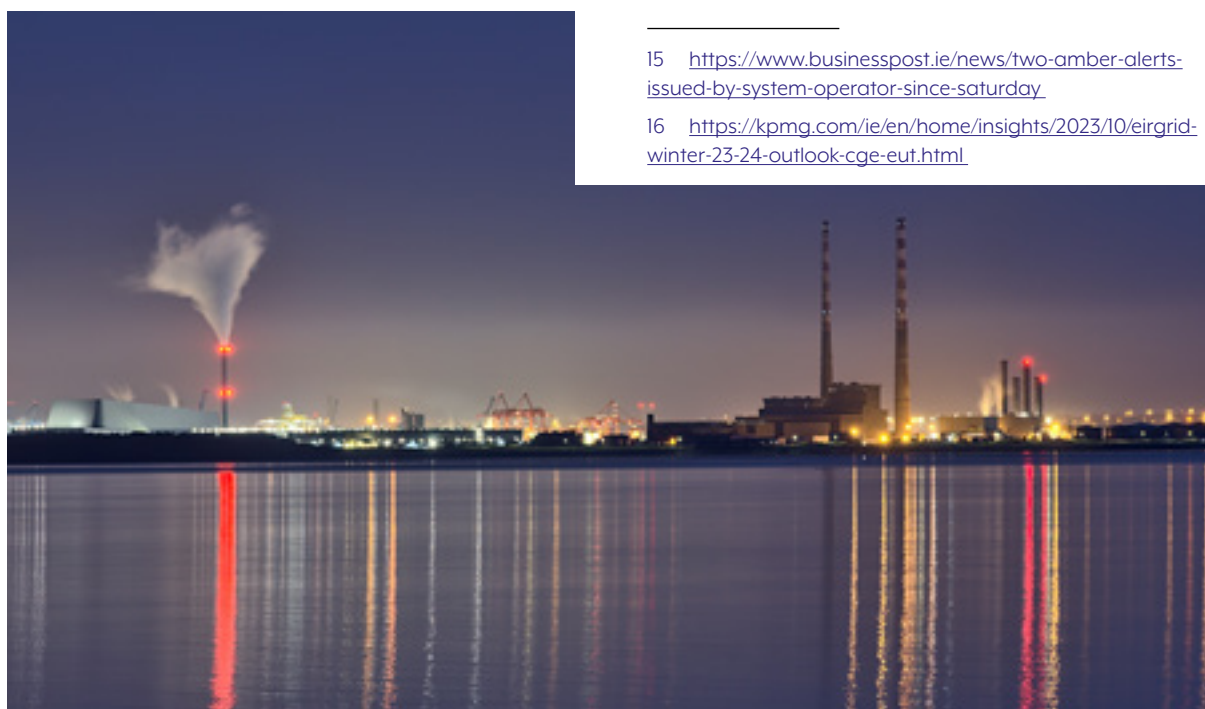
The failure to procure sufficient new generation capacity through the current market mechanisms allied with the requirement to meet projected demand from 2023-2032, resulted in EirGrid and the CRU being forced to obtain government approval for a Security of Supply Action Plan. This involved the installation of 650MW of temporary emergency generation (costing close to €1 billion), securing of commercial agreements to extend the operation of existing generation (Moneypoint, running on oil instead of coal) and agreements with larger electricity users to drop demand.

¹³ [National Energy Demand Strategy | CRU.ie](https://www.cru.ie/national-energy-demand-strategy/)

¹⁴ <https://www.cru.ie/about-us/news/cru-publishes-energy-retail-report/>

¹⁵ <https://www.businesspost.ie/news/two-amber-alerts-issued-by-system-operator-since-saturday>

¹⁶ <https://kpmg.com/ie/en/home/insights/2023/10/eirgrid-winter-23-24-outlook-cge-eut.html>





The necessity for these additional costly measures will only end if over 2,000 MW of new enduring flexible gas-fired generation capacity can be somehow achieved by 2030 - which seems highly unlikely, given the record to date.¹⁷

In late 2022, the government asked the former Government Secretary General Dermot McCarthy to carry out a major review of the electricity supply systems and wider security of supply.

Published in late 2023, the review concluded that the lack of capacity within the system and risks to Ireland's security of supply had been wholly underestimated. McCarthy found systemic problems with "the architecture and framework" of the electricity sector, which led to the problem.¹⁸

Among these were the dramatic rise in projected energy demand from sources such as data centres and the failure of key regulatory bodies to ensure sufficient energy resources were in place, in the context of a transition to renewables.

The report called for a full review of plans to deliver new electricity grid infrastructure and into the functioning of the electricity market.

¹⁷ <https://www.eirgrid.ie/publications> & EirGrid warns of 'liquidity challenges' due to rocketing costs | Business Post

¹⁸ <https://www.businesspost.ie/article/risks-to-irelands-electricity-supply-underestimated-review-of-power-system-finds/>



A study from the Irish Academy of Engineering (IAE) graphically highlights this 'underestimation' of risk. They cite the example of March 25, 2022. At 10.15am on that day electricity demand across the island of Ireland reached 5124 MW. The installed capacity of wind generation stood at 5000 MW.

Yet, over that 24 hour period renewables contributed less than 3% of total requirement, for the simple reason that the wind was not blowing. Some 83% of demand in that period was supplied via coal and gas.¹⁹

Not only do we have the highest per capita gas usage in the EU (Corrib gas will be exhausted by 2030), but we also import the vast bulk of our primary energy requirements: in 2022, we imported 81.6% of total need, with 85.8% of that energy requirement derived from fossil fuels, according to the SEAI.

¹⁹ http://iae.ie/wp-content/uploads/2022/04/IAE_Energy_Crisis_2022.pdf



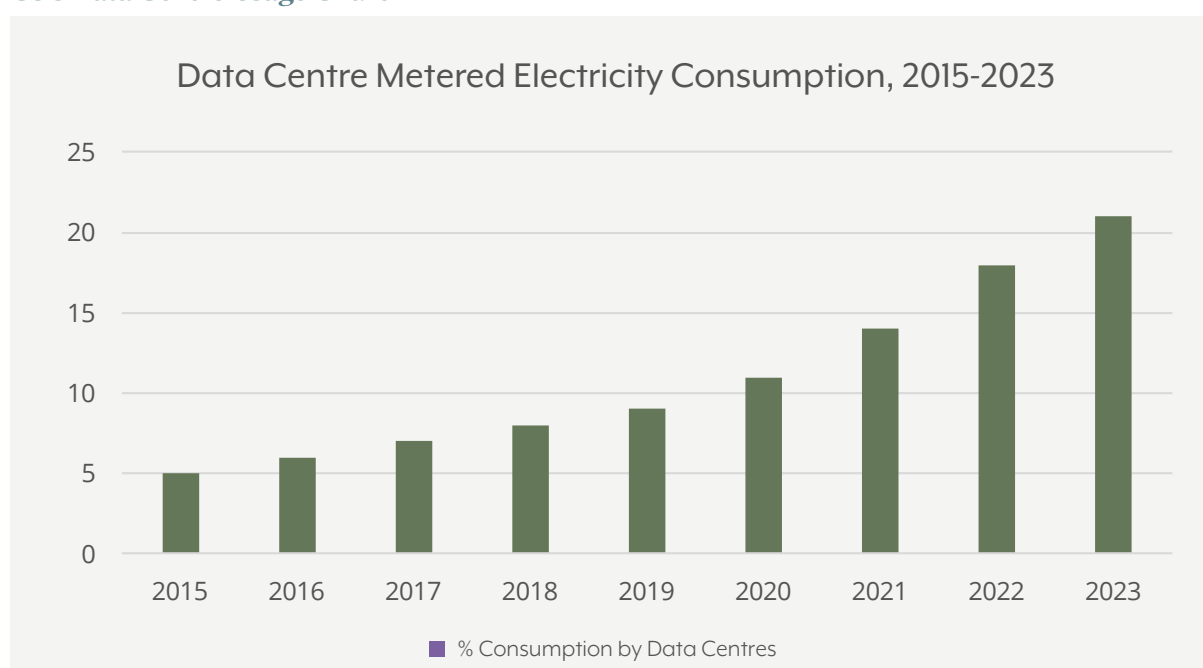
The IAE has characterised our energy supply reliability as “below standard” and says it will “deteriorate further unless rapid practical action is taken to remedy the shortcomings over the next few years.”²⁰

This takes place in the context of surging demand for electricity. In 2022 it was up 24% on 2012, with virtually all of the increase coming from the ‘commercial services’ sector.

Demand in this sector alone is up 61.5% since 2012, while the total increase in demand from all other sectors combined - industry, domestic, transport, public services, agriculture & fisheries - was just 8.0%.

20 <https://www.irishtimes.com/business/2023/06/17/up-to-82-data-centres-operating-in-republic/#> (<https://www.cso.ie/en/releasesandpublications/ep/p-dcmec/datacentresmeteredelectricityconsumption2022/keyfindings/#:>)

CSO Data Centre Usage Chart



Digging deeper into those figures, virtually all of the new demand in commercial services comes from the Information & Communication - more commonly known as the Tech sector - which has surged by a staggering 562% since 2012.

And this in turn has been driven primarily by Data Centres, which accounted for 82% of *all* demand within the tech sector in 2022.

Ireland is home to over a quarter of all data centres in Europe - the number stood at 82 in 2023. On average across the EU, data centres accounted for just 2.7% of electricity consumption in 2018.

Yet data centres in Ireland accounted for 21% of total electricity consumption by 2023 - a fourfold increase on 2015. This represents an increase of more than 5,000 Gigawatt hours in just seven years, with data centres



now consuming as much power as all urban households combined, across the country²¹

It is this alarming growth - albeit one in evidence over almost a decade - that forced Eirgrid to introduce a moratorium on new centres. Singapore has introduced a similar initiative, in response to pressure on their grid.

But even as the energy system has been forced to resort to emergency measures, the demand from centres is only likely to grow, driven by their expanding role and also by new technology such as AI (Artificial Intelligence).²²

21 <https://www.cso.ie/en/releasesandpublications/ep/p-dcmec/datacentresmeteredelectricityconsumption2023/keyfindings/>

22 <https://www.businesspost.ie/article/power-hungry-how-the-ai-frenzy-is-impacting-on-data-centres/>



According to one recent report, newer data centres are larger and more powerful than earlier models, placing additional pressure on power capacity. The International Energy Agency (IEA) estimates that global data centre power consumption will more than double from 460 terawatt-hours (TWh) in 2022 to 1,000 TWh in 2026 - close to the entire annual electricity consumption of Japan.²³

While some of the larger operators - 'hyperscalers' - such as Amazon, Google, Meta and Microsoft are now going off grid for their power, this may well threaten established climate and emission targets as they will use diesel and gas generation, or divert renewable energy away from assisting in decarbonisation of wider society.

As of June 2023, there were a further 14 data centres under construction, planning approval for 40 more with additional applications already lodged.²⁴

The Eirgrid moratorium is due to end in 2028.

23 <https://www.businesspost.ie/article/power-hungry-how-the-ai-frenzy-is-impacting-on-data-centres/>

24 <https://www.irishtimes.com/business/2024/07/23/electricity-consumption-by-data-centres-rises-to-21-eclipsing-urban-households/>

6. The Renewable Revolution?

In many respects, the successful development of the nascent energy sector in the 1920s provided an ideal template for the renewable revolution now upon us. Instead, lessons from history have been overlooked and a curious amalgam of bad planning, questionable subsidies for private providers and market ideology have thus far failed to deliver on that promise.

Arguably our ability to maximise renewable capacity was severely hampered by the deliberate erosion of the ESB's role in energy generation over recent decades, with the country's most successful semi-state forced to downsize, restrict operations and jettison its key public service mandate. Today, the ESB only provides between 30%-40% of generation capacity.

The forced retreat of the ESB was based on the evidence-free theory that public control of energy generation was detrimental to the public good. This is precisely the reverse of the innovative thinking that drove the energy revolution of the 1920s and delivered energy independence for the new state.

To embark on such a process while on the cusp of the global, renewable energy revolution represents a strategic error of major proportions. And the results have been predictable. As one analyst points out: "After 30 years of renewable energy and climate directives, Ireland's energy system is one of the most heavily reliant on fossil fuels in Europe."²⁵

Expert bodies such as the Irish Academy of Engineering (IAE) take a similar view: "Faced with the most challenging energy transition in history, the Academy is concerned at the slow pace at which policy change is being implemented, at the lack of a coherent financial and economic analysis and at the failure to efficiently manage reliability risk."²⁶

Other than setting some of "the most ambitious national decarbonisation targets" across the globe, "Ireland has done little by way of serious

²⁵ <https://journals.sagepub.com/doi/abs/10.1177/10957960211008165>

²⁶ http://iae.ie/wp-content/uploads/2021/09/IAE_Sustainable_Electricity_in_2030-1.pdf





planning to achieve those targets.” Crucially, it also expressed reservations about the belief that simply expanding wind generation would provide a silver bullet for all our energy needs, into the future.

“Whether Ireland expands its wind generation by 5000MW or 25,000MW over the next decade, doesn’t matter from the point of view of system adequacy. Under either scenario there will be times..when wind generation will meet less than 1% of instantaneous electricity demand and there will be days when it meets less than 5% of demand over 24 hours.”

In May 2024, the government finally announced a new, long delayed framework for development of the offshore wind sector, with projected delivery of up to 20 gigawatts (GW) by 2040 - over three times the current volume generated annually.

The Future Framework for Offshore Renewable Energy was primarily aimed at “derisking the market for developers” who are expected to invest more than €100 billion over the next 20 years, albeit with the State serving in a support role in terms of port development and the strengthening of the power grid. Although key details of the framework remain to be clarified, official statements tried to draw a direct line between this initiative and the 1920s energy revolution, with the new plan described as “Ardnacrusha to the power of a hundred.” But given the de facto supporting role for the State outlined in the new offshore framework, that appears to be a very significant revision of the historical record.

7. Taking the Lead

There are compelling arguments as to why the State should take a more commanding and leading role in the development of energy generation over the coming decades.

Perhaps the strongest argument arises from the rather poor performance of the market-led model that has dominated for recent decades - a model that has proven incapable of replicating or surpassing the system it replaced. And this failure has raised serious doubts around our energy security and generation capacity, into the future.

Equally, the necessity to ensure universal access to secure, affordable energy will be central to the prospect of achieving a Just Transition across the economy and delivering a genuine public dividend from the move to a zero carbon economy. Indeed, there is a growing consensus across the political spectrum that the market-led approach to the economy as a whole has failed to deliver.

Even such bastions of the free market as the *Financial Times* have acknowledged the need for change: “Radical reforms – reversing the prevailing policy direction of the last four decades – will need to be put on the table. Governments will have to accept a more active role in the economy. They must see public services as investments rather than liabilities...”²⁷

But there is also a compelling business case as to why government must be to the fore in energy generation, over the coming years. As the leading economist Mariana Mazzucato has pointed out: “...as with all technological

²⁷ <https://thecorrespondent.com/466/the-neoliberal-era-is-ending-what-comes-next>



revolutions, green technology requires a bold government to take the lead – as was the case with the Internet, biotech and nanotech.”

Recent analysis of social and green investment across the EU has revealed serious deficits in key areas, not least in the renewable energy sector. To date, the sector has failed to attract expected levels of private investment, with investors seemingly dissuaded by the lower profit margins in renewables, by comparison to fossil fuels.

The ETUC estimates that, as a result, the additional investment required to meet climate targets will be in the region of €384 billion. It argues for a substantial programme of EU wide investment, pointing out that the cost of not doing so will be far higher in the longer-term, both for member states and EU citizens.

“A reactive approach that continues to underinvest means infrastructure decaying further, foregoing the upskilling crucial to ensuing Europe continues on a path of high productivity and high added value... This...also risks rendering Europe more vulnerable to climate, social, economic and geopolitical threats.”

It warns of the social divisions that will inevitably arise as wealthier citizens invest in electric vehicles, heat pumps and greater energy efficiency, while the majority are punished by carbon taxes and higher energy costs. Indeed, Germany’s Environment Agency has warned of ‘social unrest’ unless there is sufficient supports for households during the transition.

“A transition without sufficient green public investments and focused primarily on pricing carbon...will mean higher costs and impacts for the vast majority of households.”²⁸

8. A Single Power Buyer Model

Perhaps the single most effective means to deliver a genuine dividend for households and businesses would be by way of cheaper and more affordable power.

Unfortunately, the current market and fossil fuel based system mitigates against this and acts to inflate energy prices for users. As seen earlier, this flawed system has been heavily-criticised by the European trade union movement, which has led calls for radical reform. This would include the designation of energy as a public good, far greater levels of public ownership and the capacity of member states to control prices, in the interests of the wider social good.

In this context it would also be opportune to examine in greater detail a very innovative proposal that emerged from New Zealand, in recent years.

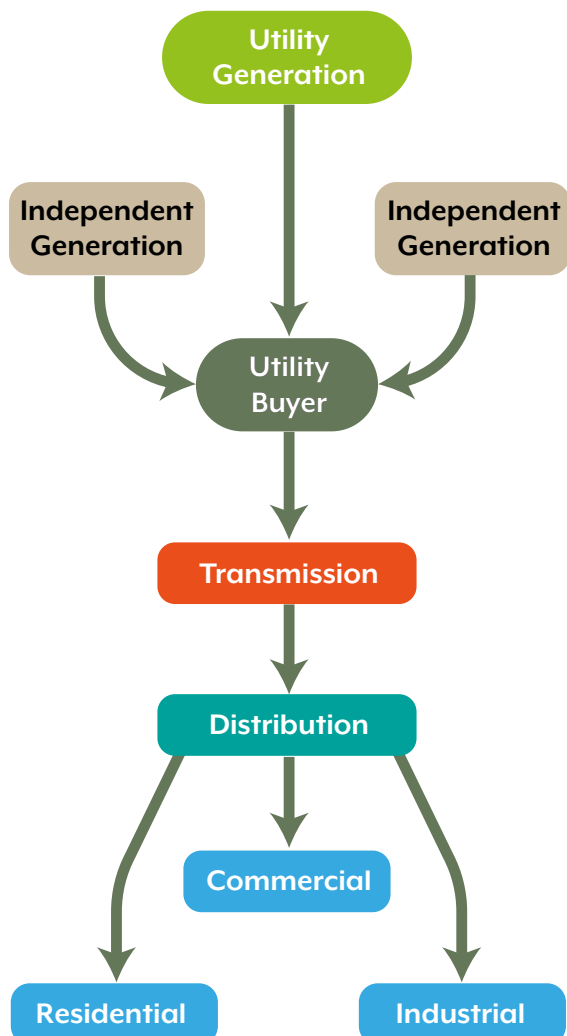
At that time, New Zealanders were also confronting the unpleasant reality of constantly rising prices charged by a privatised power sector that had previously been in public ownership.

²⁸ <https://etuc.org/en/pressrelease/study-social-cost-austerity-rules>



That led to a joint NZ Labour and Green Party proposal to effectively re-regulate the electricity market through the creation of a new, single-buyer agency that would purchase electricity from producers at cost and would supply it to households at lower, more affordable prices.

The plan estimated savings of several hundred NZ dollars per annum for users. Although it never came to fruition, for electoral reasons it seems, the concept does merit much deeper study as a possible solution to the currently dysfunctional market.



9. Are There Viable Alternatives?

The 2007 Congress Energy Policy paper advocated for consideration of nuclear power, in the debate on our energy future.

Proponents of nuclear point to the untested nature of an energy system based fully on renewables - not least the crucial issue of storage, with the punitive cost of battery systems a major obstacle. One report cited an investment cost of some \$16 billion to store just one day's electricity consumption on the Irish system, in 2030.²⁹

Equally, as noted above, some expert groups have highlighted the vulnerability of wind based systems to changeable weather and have seriously questioned their capacity to meet demand at all times. In that context, it is argued that nuclear offers a secure, reliable additional power source to the grid and points to a new generation Small Modular Reactors (SMRs) as being ideal for this country's needs.

Those arguing in favour of nuclear power claim it can help completely decarbonise the electricity grid within a matter of decades, increase the supply of energy and enhance energy security. The sector's positive safety record over recent decades is also cited.

One study suggests that over the coming three decades a programme to construct up to six nuclear reactors could replace all existing fossil fuel use and double energy supply. It says the first reactor could be online as early as 2030.

²⁹ http://iae.ie/wp-content/uploads/2022/04/IAE_Energy_Crisis_2022.pdf

Such a programme would be comparable to those that currently operate in Finland and Slovakia. Ownership of the system would be vested in ESB and the all-island network operator EirGrid-SONI, in partnership with the manufacturer. The estimated cost of the programme would be between €40-60 billion.³⁰

Those who oppose the use of nuclear power argue that the length of time it would take to have a nuclear power station up and running could be as long as 15 years. The development of nuclear power and its operation is expensive and will require the State to provide funding on an ongoing basis. More fundamentally however, when you consider the greenhouse gas emissions relating to all stages of a nuclear plant from the cement needed to build it, to the storage of the waste at the end, opting to decarbonise energy production by a move to nuclear power will not be enough to address our climate crisis.

The use of **green hydrogen** as an alternative power source has also been proposed. Some countries have already commenced large scale projects, amounting to a global pipeline of some 250 GW. These include Oman, China, Germany and a very ambitious project in the Netherlands, centred on developing the world's largest renewable hydrogen plant in Rotterdam.³¹

However, to date, there appears to have been insufficient technical progress to allow for large scale development and deployment of the technology. Some analysis suggests that it is unlikely green hydrogen will be feasible at scale in Ireland, by 2030.

Nonetheless, given the rapid pace at which technology in the sector is improving and evolving, it would be wrong to exclude hydrogen as a viable option, over the longer-term.

Solar power will also have a role to play in our energy future. And while it is the cheapest option in terms of generating electricity, it too is impacted by the weather related factors which similarly hinder the reliability of renewables like wind, meaning it cannot provide 'power on tap'. Solar also remains relatively underdeveloped here, as a power source. In 2020, solar provided just 1% of all renewable energy generated here, with wind accounting for some 59% of the total.³²

³² <https://greennews.ie/solar-energy-in-ireland-is-it-the-way-to-go/>



³⁰ <https://workersparty.ie/nuclear-power-policy/>

³¹ <http://iae.ie/publications/irelands-hydrogen-economy/>



10. Conclusions & Recommendations

The current electricity model is not working. The dysfunction is evident in terms of the delivery of adequate generation capacity to meet electricity demand; supporting greater use of renewable energy sources and delivering (affordable) electricity at a price related to the cost of production, from all sources.

Plans to dramatically increase the use of electricity in order to decarbonise transport and heating reinforces the argument that electricity infrastructure in particular must be viewed as a 'common good', rather than a market commodity.

Public ownership and control is the only effective vehicle by which the basic energy needs of citizens can be provided at affordable and predictable prices, in a reliable and sustainable manner. As our own energy history clearly demonstrates, public ownership has a strong and proven track record of delivering secure, affordable and sustainable supply across society, as opposed to a system captured by the short term needs of investors and speculators.

Twenty five years of market-led energy have resulted in a scenario where electricity users seeking to decarbonise now find themselves competing with data centres for access to both the current and future electricity available. The market has also fared poorly on the ambition to maximise the potential of our significant offshore wind resources.

The government has been forced to compensate for market failures through



provision of State supports (electricity credits), subsidies to support renewable energy projects and approval for the installation of emergency generation capacity to prevent the system grinding to halt.

It is clear that the vast majority of electricity usage in the future must come from renewable sources, which have long run marginal costs. Equally, additional generation from fossil fuels will still be required and this will also have long run marginal costs, because of limited running. In addition large investments in upgrading and expanding transmission and distribution networks will be required, to facilitate expanded usage and generation.

Therefore the vast majority of costs to be recovered will be fixed, irrespective of energy usage. This implies tariffs for domestic customers based on flat fees and tied to the level of import or export required. This in turn means some form of State subsidies will be required to prevent energy poverty.

Clearly, the burden of financing the electricity infrastructure that is required by large energy users and to support the production of power from renewable sources must be fully reflective of who the main beneficiaries of such a programme are. It would be deeply unwise for any government to assume that such costs could simply be added to the existing price burden of households and families.

Ultimately, the only way to reduce the cost of such investments is through provision of long term contracts with guaranteed low risk level of investment returns, with incentives and penalties based on performance and reliability, to enable financing to be obtained at lower rates.

The government and the EU are in a position to provide such financing, based on State or future EU bonds. If private investors are unwilling to develop projects based on such long term, low risk investment returns, then we must significantly expand the role of existing state companies - ESB, GNI, BnM and Coillte - to address the deficit.

Recall the unwillingness of private investors to finance the 1920s programme and the enormous benefits that flowed when the state stepped into the breach.

In order to facilitate greater public, political and policy debate around these key issues, Congress is making a number of very specific recommendations:

i. In concert with European partners, push for a major reform and radical overhaul of the current EU market-based system, as outlined by the ETUC. This must include a central role for the state in the ownership and control of energy generation and transmission assets.

ii. The government should establish a new, time-limited independent Expert Group that will be tasked with impartially assessing the evidence and evaluating the potential role of nuclear in our energy sector in the years to come. The Expert Group should also examine the potential that other alternative energy sources, such as hydrogen, might have in addressing our future energy needs.

iii. The government should also establish a Citizen's Assembly on Energy, that would be tasked with developing a new vision for the energy sector here, one based on ensuring greater democratic control of this key strategic asset and on maximising the potential of the ongoing renewable energy transition, for the benefit of wider society.





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