

All we want for Christmas is...

...the Programme for Government to permit all forms of clean energy

Opinions on nuclear & energy in Ireland

"... the second biggest fiscal disaster in Ireland's history"

[Fintan O'Toole](#) laments the Irish Fiscal Advisory Council (IFAC) estimated **potential fines of €20bn** for not meeting legally binding 2030 emissions limits. These are second only to the financial crisis bank bailouts. IFAC said "it is **increasingly unlikely that the necessary levels of reductions are being achieved** to put Ireland on a pathway to climate neutrality"

We see that Ireland's current approach isn't working; **all energy options need to be considered ASAP**

The data centre debate continues

Mark Foley (Ex-Eirgrid CEO) says [data centres are part of the solution to the climate problems](#), and are of key importance to our economy

Accenture finds that [AI could add €140bn to Ireland's GDP](#), but is also expected to increase our CO2 emissions. The report finds that "big technology firms are aware of the challenge and are now turning their attention to **investments in nuclear energy**, particularly small modular reactors, to provide uninterrupted emissions-free power generation"

Meta requests [proposals for up to 4GW of nuclear](#) capacity. It is clear what way the wind is blowing if countries want to harness the full benefits of AI...

Ireland has third highest electricity prices in Europe

[Ireland's electricity prices are the third highest in Europe](#), 52% higher than the European average (Eurostat). **Reducing nuclear capacity was a key contributor** to price increases in countries such as Germany

Green Hydrogen goes from Hyped to Humbled on Eye-Popping Costs

The **International shift away from green hydrogen is [primarily due to its very high costs](#)** (Bloomberg report). It is particularly concerning for Ireland, where electricity prices are already well higher than the European average and Green hydrogen is touted as a key solution for decarbonising, that such questions still exist over its economic viability

The Finland, Denmark & Sweden - renewables and nuclear

Comparing Finland and Denmark, [renewables with nuclear can lead to much faster rollout of clean electricity](#). Finland's use of **nuclear and wind has far outpaced Denmark's renewables-only** approach, even though Denmark is the global leader in wind energy

Sweden decarbonised electricity using nuclear and wind. Their Energy Minister said "There is [no opposition between nuclear and renewable energy](#). Instead, they complement each other", adding "**full technology neutrality is imperative for Europe's competitiveness**. We must take politics out of energy policy and put physics back in"

GE Hitachi 300MW SMR hits milestone

The GE Hitachi BWRX-300 small modular reactor [completes Step 1 of the Generic Design Assessment](#) in Britain. Step 2 entails a thorough assessment of the design's suitability for general deployment in Britain

A 300MW SMR is ideal for many power station sites in Ireland. It could use existing staff and electricity infrastructure to bring power to the demand centres, with lowest impact on people and our natural habitat

GE [anticipates strong demand for these BWRX-300 reactors](#), projecting a need for up to **57 units across North America and Europe**

International news - lots happening

UK thinktank criticises "unfounded" nuclear fears

The [Tony Blair Institute found that global energy emissions would be 6% lower than today](#) (equivalent to taking 460 million cars off the road) only for the “unfounded public concern” raised by an “inaccurate narrative” against nuclear power since the Chernobyl disaster

Europe electricity prices spike due to December weather

Due to a period of "dunkelflaute", i.e. low wind and sunlight, [Europe saw significant price spikes](#) in December, with prices in Norway increasing 20x. Such periods highlight the importance of having baseload power such as nuclear, which is not dependent on weather

Denmark moves further toward removing its nuclear ban

The Conservative Party in Denmark [supports lifting Denmark's ban on nuclear energy](#)

Serbia removes nuclear ban

Serbia's National Assembly [amends its energy law](#), ending the 35-year prohibition on constructing nuclear power plants. Serbia aims to source 1200 MW of nuclear capacity from SMRs

France's Flamanville 3 reactors comes online

[Flamanville 3 will provide 1,675 MW of clean electricity](#). The total cost of €13bn is higher than would be hoped for future plants that can benefit from the learnings of this experience. Flamanville 3 is often quoted as an example of the cost and timeline overruns associated with new nuclear in the West, but its energy costs compare well to wind when nuclear's higher capacity factor and longer operational life are accounted for, even before considering the benefits of nuclear not being intermittent and incurring lower grid costs

Japan sees nuclear as cheapest baseload power in 2040

Japan forecasts [nuclear power as the cheapest baseload electricity source in Japan in 2040](#) as they plan to restart their idled reactors. The Japanese trade ministry compared the levelised cost of electricity (LCOE) and total system costs of each technology in the new report

Strong UK public support for nuclear

[66% of UK voters believe that nuclear should play a role in UK energy](#), with only 9% saying that it should not. 74% of **Green voters said that nuclear should play a role**, according to a November YouGov poll

Norway & Sweden consider reducing interconnection with Germany

After Germany shut its nuclear plants, it imports significantly more electricity from Norway and Sweden. This **drives up electricity prices** significantly in regions of Norway and Sweden, who are now [considering reduced interconnection with Germany](#) as a result

Indonesia progresses plans for first nuclear plant

Indonesia complete site studies and [aims to have an SMR operational by 2032](#)

New SMR proposed for Virginia

Appalachian Power [proposes a new 300MW SMR for Virginia](#), the State with **the largest data centre market** globally

Saskatchewan continues its nuclear exploration

The Canadian province [aims to replace coal power with SMRs](#). As well as the GE BWRX 300, they are also considering microreactors for use in remote areas, in order to replace diesel generators.

Course: intro to nuclear energy and engineering

This **free, self-paced, online** [course](#):

- Explains the working principles of nuclear reactors for each of the various reactor generations/technologies, with a special emphasis on existing reactor technology (Light Water Reactors)
- Discusses and weighs the advantages and disadvantages of such systems
- Analyses the impact of using nuclear reactors
- Reflects upon the use of different reactor technologies depending on various factors, such as resource maximization, waste minimization, risks, etc.

What About the Waste?

A common but easily answered question concerns 'The Waste'. These 3 items outline the small amounts of nuclear waste created given the amount of energy produced, and how it is safely managed.

Picture: See [what 45 years of used nuclear fuel](#) from a North American nuclear power plant looks like.

Video: [How I learned to Stop Worrying and Love Nuclear Waste](#)

Article: Did you know that nuclear waste can be an asset, not a burden. The International Atomic Energy Agency discusses the key benefits of [using fast neutron reactors in a closed fuel cycle](#), where:

1. Power generation can be 60-70 times more fuel efficient
2. Much less waste is generated
3. The waste is only radioactive for ~250 years, not thousands of years

Outreach

Cabinet's ill-conceived, unhelpful and unnecessary **bans on Irish nuclear reactors** in the 2023 Planning and Development Bill and the 1999 Electricity Regulation Act have serious negative impacts on the effectiveness and cost of Ireland's clean energy plans, and should be reversed.

Sensible energy policy and a credible decarbonisation plan must feature in Ireland's next general election. Excluding nuclear from our energy policy puts us at a significant disadvantage internationally and

seriously jeopardises our chances of achieving Net Zero by 2050. Meanwhile, support for nuclear energy is growing steadily here.

Please email [TDs and Senators](#) - start with this [sample letter](#) - if you **disagree with the bans on Irish nuclear energy and want a more inclusive and credible Irish energy policy.**

We can address your local club, village or extended group of friends. Please [get in touch](#) to arrange an event, either online or in person.

Have you ideas about how to engage more people in **our message of hope** for an affordable clean energy future? [Contact us here](#)

Helpful 18for0 Links

- [18for0 Objectives](#)
- [18for0 Publications](#)
- [Got questions? See our FAQ!](#)
- [Would you like to get involved? Reach out to us!](#)
- Got this newsletter via a forward? Subscribe [HERE](#)

18for0 - an Irish voluntary group of professionals - firmly believe that Ireland must assess every technology for its ability to assure our clean energy future. After all, if we haven't got all the information, how can we know that we're making the right decisions?

This newsletter is important to us. It keeps you updated on relevant developments about nuclear energy suitable for Ireland, confirms your vital part in our community and lets you know what we've been up to.

We welcome any [ideas, help or feedback](#) that you might like to offer.