The best snippets of nuclear news this month...

More opinions about nuclear and Ireland

Irish Times Cantillon opinion

Microsoft, Google and Amazon are all eyeing nuclear power to supply their data centres with low-carbon energy

Irish Times Una Mullally opinion

The public should know strategy regarding nuclear and data centres. An expert was sceptical about “anyone who talks solar and wind and data centres in the same sentence”, describing it as “smoke and mirrors. It’s not going to happen.

IAEA suggests that Ireland considers nuclear energy

The main points raised by 18for0's Denis Duff in a Newstalk Breakfast Show interview that was cut short due to a sound problem.

ESB sees SMRs as zero carbon dispatchable energy

ESB's Emerging Technology Insights 2024 considers that "SMRs hold the promise of zero carbon dispatchable energy and could play a crucial role in providing reliable, firm and low carbon energy."

Michael McDowell questions why nuclear is not legal here

Senator Mc Dowell says our energy policies won't decarbonise today's electricity, let alone the fully decarbonised system needed for broader climate goals or increased energy. "We have made developing small-scale nuclear power technology actually illegal by statute for some reason, instead of leaving it open as a policy choice."

Ireland's renewable energy significantly off track (SEAI)

The SEAI National Energy Projections 2024 report highlights renewable energy as one key area where Ireland is significantly off track.

International news - lots happening

Natural Gas is Enabling the Renewable Energy Boom

Zero Hedge writes that renewable energy's inherent intermittency depends on natural gas as a back-up. Natural gas supplied 49% of Ireland's electricity generation in 2023, with a further 6% from other fossil fuels.

USA to triple nuclear capacity by 2050

USA's roadmap to triple their nuclear capacity foresees a 200GW increase by mid-century. Nuclear is expected to see continued strong support under the Trump administration.

31 nations to triple nuclear capacity by 2050

El Salvador, Kazakhstan, Kenya, Kosovo, Nigeria and Turkey at COP29 joined the declaration to triple nuclear energy capacity by 2050, increasing the total number of declared countries to 31.

UK and US to collaborate on new nuclear

USA and UK announced a framework agreement to collaborate on developing "Generation IV" nuclear technology at COP29. Other countries are expected to join the agreement in the coming months.

Public support for nuclear increases in USA

There is increased level of public support and bipartisan backing of nuclear energy in the USA, driven primarily by people under the age of 40 and by those concerned about climate change and energy security.

Permission granted to construct SMR in USA

The US Nuclear Regulatory Commission gave a construction permit for the Kairos Hermes 2 SMR. Their demonstration reactor started began construction in December 2023 - the first US Gen IV reactor to do so.

US tool helps integrate nuclear and renewables

The Argonne National Laboratory created a tool to help integrate nuclear power and renewables effectively. This could help the next Irish government if they put decarbonised electricity ahead of building renewables infrastructure exclusively.

Wales to get 4 micro reactors of 20MW

Four 20MW reactors from Last Energy are planned for a former power station in Wales. The £300m project is to be entirely privately funded.

Sweden permits long term waste storage facility

Sweden has permitted a long-term nuclear waste storage facility where waste can be stored underground for up to 100,000 years.

Italy to develop advanced reactors

Italy's plan to build advanced nuclear reactors will be presented by a new state-backed company by year-end. Reuters report EDF and Westinghouse as potential partners for the state-backed company.

Norway looking at SMRs

The feasibility of using SMRs in Norway will be assessed by Norsk Kjernekraft in partnership with X-energy and South Korea's DL Group.

USA to finance Poland's first reactor

The US International Development Finance Corporation may supply c.$976 to finance the first nuclear reactor in Poland. The US Export-Import Bank had already expressed interest in contributing c.$17bn towards Poland's nuclear buildout, according to the developer, PEJ.

USA to lend for Romania's new SMR

The US Export-Import Bank authorises a $98m loan for pre-project services for Romania's first SMR.

USA provides grant for Slovakia SMR preparation

The US NEXT project grants $5m to help Slovakia select an SMR site. The US Project Phoenix already funded $2m for feasibility studies.

Rolls Royce SMR progresses in UK and Czechia

Czech electricity producer CEZ agrees to acquire a 20% stake in Rolls-Royce SMRs, pending regulatory approvals, to participate in the deployment of SMRs in the UK, Czech Republic and other countries.

US nuclear's design-once, build-many approach

A US start-up plans a series of large nuclear plants using a "design-once and build-many approach". The Nuclear Company aims to achieve the learning curve benefits of building multiple large scale plants with the same design, to avoid cost and timeline overruns.

Nuclear attracting interest from large energy users

NextEra Energy may open a nuclear plant in Iowa after keen interest from data centre customers.

Utah considering nuclear and geothermal

Utah launches a new initiative focused on nuclear and geothermal energy to enhance its energy supply.

South Korea embrace the "nuclear renaissance"

President Yoon Suk-yeol aims to restore South Korea's nuclear sector and expand its global role. South Korea has delivered new nuclear plants in a more timely and cost-effective manner than their Western peers in recent years.

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.