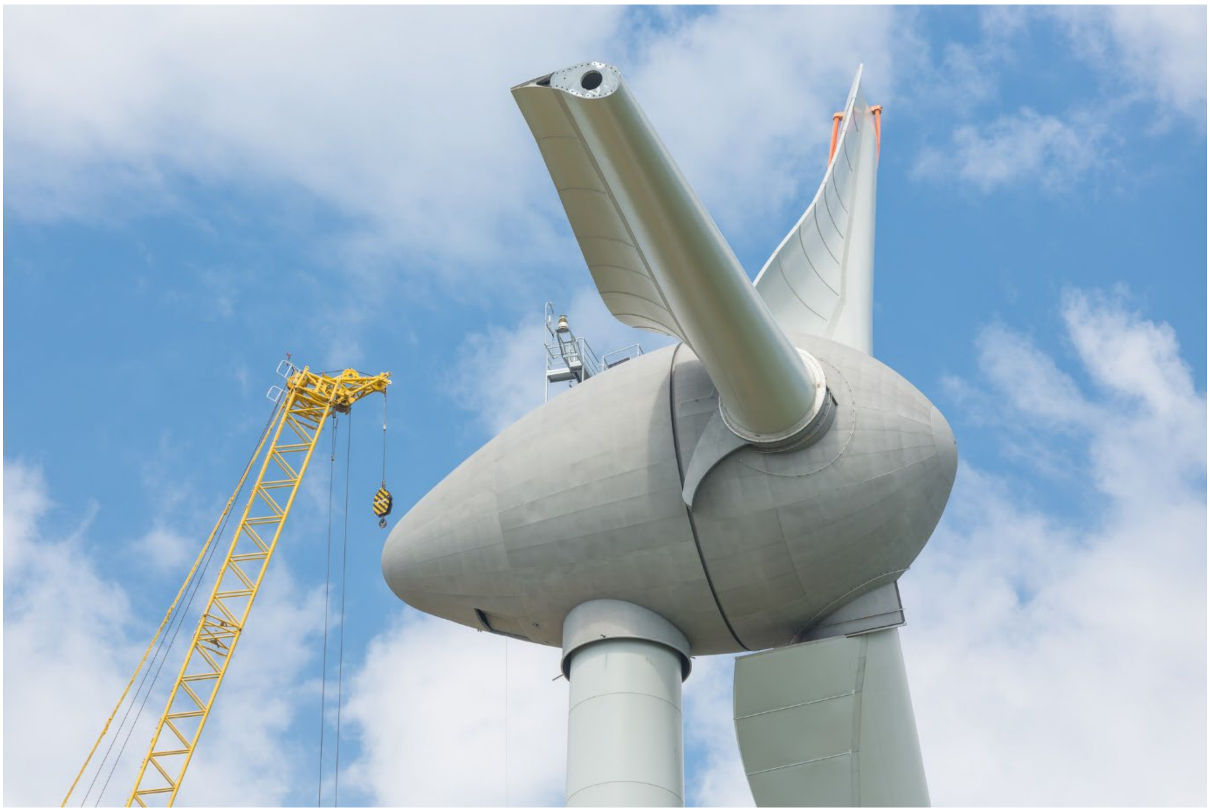
Note: Below are extracts from two separate news articles on cleantech and renewable energy, with both a global and domestic focus. Published by The Financial Times (30th November 2023) and The Irish Times (22nd November 2023) respectively, the articles and their authors are referenced below.

Biden's climate law triggers global shifts in cleantech supply chain.



Trading partners struggle to compete with potential $1tn of spending.

In this recent Financial Times report, Chu (2023) reveals how the historic climate legislation introduced by the Biden administration last year, through its Inflation Reduction Act (IRA), is the most significant step ever taken by the country to reduce its carbon emissions. However, its impact on global supply chains is reverberating around the world as a result of the many grants, loans and tax credits on offer for cleantech investment in the USA :

> When US President Joe Biden passed his flagship climate law last year, he ushered the world into a new era of industrial policy. The Inflation Reduction Act (IRA) marked the most significant legislative action the US has ever taken to reduce emissions, with $370bn in tax credits, grants and loans to rapidly decarbonise the world's largest economy — while also building out a domestic supply chain for clean technologies. Overnight, the US became one of the most attractive destinations for cleantech investment, much to the ire of the country's trading partners, including the EU, which said the law had created "unfair competition". "Europe was probably in the lead if you had asked me 18 months ago, but now I think they're playing catch-up," says Fredrik Mowill, chief executive of Hystar, a Norwegian hydrogen company. Hystar is scouting sites for its first gigafactory in North America, a decision Mowill says was catalysed by the IRA. The move by Hystar underscores the profound shifts under way

in the global supply chain as a result of Biden's climate law, with investors rushing to make historic commitments to manufacture in the US, and countries racing to protect their stake in the clean energy future. More than $200bn has been invested in US clean energy this year, a 37 per cent increase on the previous year, according to an analysis by think-tank Rhodium Group.

Chu (2023)

According to Chu (2023), other significant economies, including the EU, are attempting to meet the challenge head-on to retain some competitive advantage. However, what is being termed a cleantech 'arms race' is developing and the scale of the IRA, is a major threat to other countries striving for the clean energy future:

> Many countries have since introduced competing incentives to counter the IRA and protect domestic industries. In March, the EU proposed the Net-Zero Industry Act, promising to speed up administrative timelines and allow member states to match incentives for projects at risk of going abroad. Similarly, in its 2023 budget, Canada proposed C$20.9bn ($15.5bn) worth of incentives, including tax credits for clean electricity and hydrogen, as part of its Made in Canada plan, which cites the IRA as a "major challenge" to the country's competitiveness.
>
> "There's a little bit of an arms race . . . between industrial nations. Nobody wants to lose their competitive edge," says Chris Taylor, chief executive of GridStor, a US battery storage company. "Industrial policy is back at the forefront all over the globe." But sceptics question whether any country can compete with the size and might of the IRA, which analysts at banks such as Credit Suisse and Goldman Sachs predict could result in more than $1tn of federal spending because of the uncapped nature of its tax credits. Its movement away from globalisation in a crucial decade for climate action has also sparked concern among analysts that a slower trajectory of emission reductions may result.
>
> "There is a lot more that could be done in terms of developing low-carbon energy in the US if restrictions compelling or incentivising companies to use American-made products were abandoned," says Ed Crooks, Americas vice-chair of consultancy Wood Mackenzie.
>
> Chu (2023)

Chu points out that US competitiveness could be under threat once these legislative incentives expire in 10 years time, with cheaper imports from coming China and other Asia markets, plus a growing concern that the US government climate action will suck up the majority of equipment and finance available for cleantech investments:

> So far, the Biden administration has walked a tightrope as it tries to balance climate policy with domestic manufacturing within the IRA. Developers say its domestic content restrictions are too difficult to meet, while local manufacturers demand a stricter interpretation of a US-made product. Andrés Gluski, chief executive of AES, one of the largest renewables developers in the world, says that, even with IRA tax credits, US restrictions on Chinese imports make the country a more expensive market for projects than Chile, for example, where solar panels are 50-80 per cent cheaper. But he adds:

“The US is such a big economy that there is a worry that it will suck up a lot of the equipment, a lot of the financing available — I’m not seeing that.” Gluski suggests the “most important part of the IRA” may be in its ability to deploy capital at nascent technologies and help commercialise new solutions.

Others question whether US-made products can be competitive with imports especially once the 10-year sweeteners in the IRA expire. China is the leading producer of clean technologies, making three-quarters of the world’s batteries and solar modules, and processing more than half of critical materials, such as cobalt and graphite. And a BloombergNEF report has warned that new US solar cell factories could become “functionally obsolete” in the next five years because of long timelines for construction and lack of competitiveness, compared with Asia.

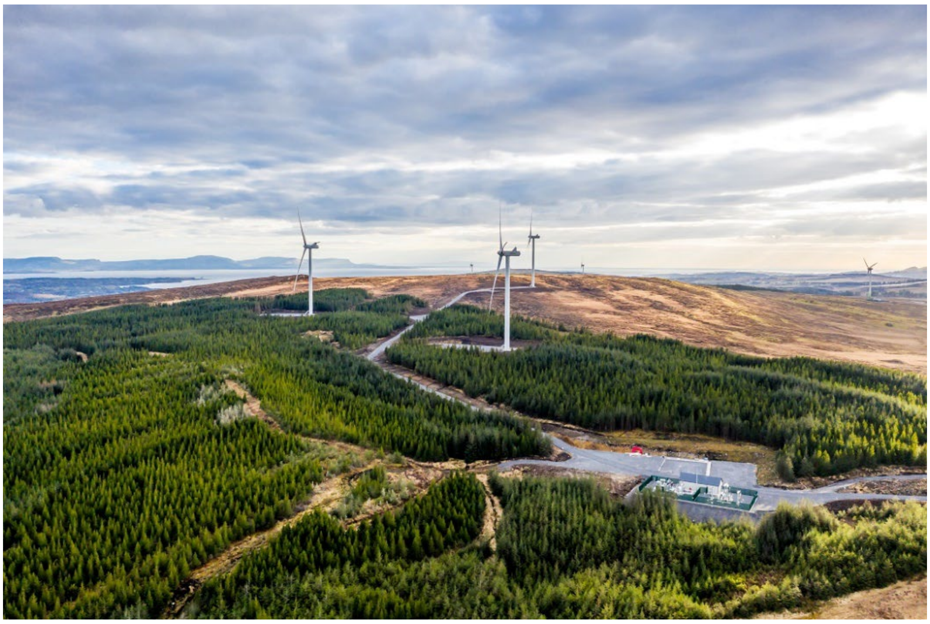
The US clean energy buildout is also running into a tight labour market, a tough macroeconomic backdrop, and an outdated grid and permitting system. Nearly 90 per cent of construction companies are struggling to hire workers, according to Associated Builders and Contractors, a US industry lobbying group. Delays in tax credit rules and threats from the Republican party to roll back the IRA have further raised uncertainty for investors.

“How [the IRA] plays out is the thing that keeps us as investors awake at night, because the IRA is a fantastic front-end incentive to get factories built, but it does nothing to keep them solvent for the 30 years,” warned David Scaysbrook, co-founder of Quinbrook Infrastructure Partners, at the FT’s Investing in America summit on November 7. “There’ll be a great upfront sugar hit of new manufacturing capacity, and then you’re going to see a bunch of broken dreams,” he predicted.

Chu (2023).

Changing focus closer to home, Burke-Kennedy (2023) highlights Ireland’s success in attracting green investment according to EY’s latest renewable energy country attractiveness index.

Ireland ranked 12th most attractive market for green investors.



Ireland continues to climb the global ranks in terms of attractiveness for renewable energy.

Burke-Kennedy (2023) describes how recent positive measures by the Irish government to promote renewable energy and related infrastructure developments, has contributed to our improved ranking on the EY index:

> Ireland ranks as the 12th most attractive destination for green investment, according to EY's latest renewable energy country attractiveness index. This was up from 13th place in the previous index and comes on the back of what the report described as a "series of positive renewable energy and related infrastructure developments".
>
> The State's improved ranking comes on the back of the State's first offshore wind auction, under the auspices of Offshore Renewable Electricity Support Scheme (ORESS 1), earlier this year, which saw four offshore wind projects with a combined capacity of 3 gigawatts awarded.
>
> The higher ranking was also linked to a new memorandum of understanding with the UK to support offshore renewable energy. British government agency UK Export Finance is said to be eyeing several Irish offshore wind projects. In its report, EY noted the positive news for offshore wind in Ireland comes at a time when globally the sector has experienced a difficult 12 months.
>
> "Globally, project costs have risen by 40 per cent since 2019 and the next decade could see cost inflation adding around $280 billion in capital expenditure for the sector," it said. "Against this backdrop around 80 per cent of the 15 markets with offshore wind targets for 2030 are predicted to miss their stated goals," the consultancy said.
>
> Burke-Kennedy (2023)

Burke-Kennedy (2023) informs how The Inflation Reduction Act, referenced above, in the US is helping to maintain its No. 1 ranking closely followed by Germany and China, in 2nd and 3rd place. According to Burke-Kennedy (2023) a culture of support, incentives , corporate policy and innovation are contributing to Ireland's strong positioning as an attractive location for green investment.:

> EY's index, which is published on a biannual basis, ranks the world's top 40 markets based "on the attractiveness of their investment in renewable energy and deployment opportunities".
>
> The top three markets remain unchanged with the US retaining first position on the back of significant solar growth linked to incentives from President Joe Biden's Inflation Reduction Act. Germany retained second position having experienced substantial growth in its onshore wind sector. New capacities installed by the end of September surpass the total installed in 2022, the report noted. "And despite halting national-level subsidies, China continues its upward trajectory in offshore wind, maintaining its overall third position," it said.
>
> Ireland has also continued to expand its corporate power purchase agreements (CPPA) market, climbing two places to rank 17th, reflecting an increased use of these agreements by major corporates here. "It is really positive to see Ireland continuing to climb the global ranks in terms of attractiveness for renewable energy. This improvement is a direct result of the policy frameworks that have been put in place to support and incentivise renewable energy, which is being matched by innovation and ambition from energy producers and rapidly escalating demand from corporate users, in particular," Derarca Dennis, EY Ireland Sustainability Services Lead, said.
>
> Burke-Kennedy (2023)

Burke-Kennedy (2023) concludes, quoting Derarca Dennis once again, that Ireland is fast becoming a key player in the green energy sector, claiming “the cumulative and compounding effect of these actions is helping Ireland become a green energy powerhouse, is playing a key role in meeting our climate commitments and will underpin our drive for 80 per cent renewable electricity generation by 2030. ” (Burke-Kennedy 2023).

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