



The Five P's of the Energy Transition

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April 2024

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Does politics matter for the energy transition?

Key Headlines

- [Green government programmes could be at risk with elections due to be held over the course of 2024.](#)
- ['Zombie' projects are clogging up the queue, preventing more viable projects from coming to fruition.](#)
- [Businesses and the general public want green infrastructure, but not in their backyard, causing more concern moving towards net zero.](#)
- ["Where are the returns that allow us to truly lean into the transition?" Solar growth has boomed in Europe, but returns haven't.](#)
- [Cripps Leadership Advisors viewpoint: How small steps and partnerships are going to lead the transition.](#)

The year of elections

At least 64 countries (plus the European Union) representing about 49% of the global population, will hold national elections this year, and the results will shape our world for years to come. More than 90% of global GDP is now covered by a net zero target but progress, already patchy, could be at risk if politicians seek to win favour at the ballot box by ditching expensive emissions-curbing policies.

But do these high-level changes matter, or has the energy transition built its own momentum? This was the question posed at the Cripps Leadership Advisors energy transition dinner in March 2024, which opened up a far-ranging and enlightening debate. Our attendees agreed that when it comes to realising the energy transition, five 'Ps' will make all the difference: policy, permission, procurement, profits and people.





Politics

Have politicians who seek to gain favour been a hindrance? Grand statements that create too big a gap between target and reality provide no comfort to investors who need to build convincing business cases, with realistic and consistent pathways to delivery and, yes, profit.

For example, poorly thought-out commentary of a sudden giant leap into an unproven and unbuilt hydrogen economy, or an unfunded pledge to roll out heat pumps across the land, is a distraction from the hard work needed to create the foundation for a net zero world.

At the time of writing, the polls suggest Donald Trump could, despite facing a barrage of lawsuits, again be elected President of the United States. A second Trump administration could potentially unravel parts of President Biden's Inflation Reduction Act, which has turbo-charged the nation's green industry. Forecasts suggest projects delivered under IRA will reduce US economy-wide emissions by up to 40% by 2030¹.

The IRA's 'carrot' approach of tax credits and other incentives for clean energy deployment and the reshoring of domestic manufacturing, has not only put firepower behind renewables, nuclear and clean hydrogen but has also created thousands of jobs, which should play well in the coming elections. But the IRA has its vocal critics among the Republicans, who have been trying to chip away at its provisions, citing inflated costs for the consumer or a distortion of energy markets that leads to an increased reliance on China. However, as with another hated Democrat-era law, President Obama's Affordable Care Act (ACA), politicians often find laws are harder to repeal than they are to pass. Biden's IRA may well survive a Trump presidency², but the uncertainty that election-year grandstanding creates is likely to ratchet up the risk profile for would-be clean energy investors.

Across the Atlantic, there's a similar mood of uncertainty. An expected shift in the balance of power in the European Parliament following this summer's elections could put the Green Deal strategy to make Europe climate neutral by 2050 at risk if, as polls suggest, a populist right coalition emerges with a majority for the first time. Over in the UK, the opposition Labour party - widely expected to dislodge the incumbent Conservatives - recently rolled back its pledge to commit £28 billion a year of additional capex to reach net zero. With many countries facing an ongoing cost-of-living squeeze, renewable energy pledges are no longer vote-winners.



We have lost five years trying to develop the undevelopable...we jumped straight to the expensive end of decarbonisation without appreciating the scale of the challenge."



¹ <https://www.nationalgrid.com/document/149701/download>

² <https://www.financierworldwide.com/will-election-year-politics-imperil-the-us-inflation-reduction-act>



Planning, permission and backyard resistance

Planning and permitting issues in key economies have undoubtedly slowed the pace of the energy transition. One estimate at our recent transition dinner suggested the timeframe from start to operational for new green power projects in the UK was circa 10 years - seven for permit and three for construction.

Power grids now require substantial investment on an accelerated timeline in order to have the capacity and flexibility to deliver net zero goals. In the UK, the National Grid needs to deliver five times more infrastructure in the next seven to eight years than it has in the last thirty years³ to meet the national target of 50 GW of offshore wind by 2030, and 70 GW of solar by 2035. Yet its ability to deliver has been hamstrung by a bureaucratic 'first come, first served' queue of potential projects in the planning system which currently stands at 400GW, many of which are unviable so-called 'zombie' projects.

“There are a lot of 'junk' projects clogging the queue ahead of more viable projects.”

As a result, Ofgem has announced new rules to fast-track electricity grid connections for viable ready-to-go generation and storage projects, and for these so-called 'zombie projects' to be forced out of the queue⁴.

A total of 26 projects have been identified by Ofgem for fast-track progression, and in March 2024 two electricity superhighways, Eastern Green Link 1 and Eastern Green Link 2, were awarded provisional funding packages totalling of £5.4 billion. This is good, and we need much more of it.

Planning and permitting bottlenecks are common elsewhere. In major EU countries, permitting times range from three to ten years for onshore wind installations, and from two to six years for solar. In Italy, more than 30 bodies can be involved in permitting. According to BloombergNEF, there are almost 1,000 GW of solar projects and over 500 GW of wind projects stuck in the interconnection queue. Compared to the IRA where funding grants are awarded up front, for companies in the EU to be considered for funding, projects need to go through three years of development before applying. This creates significant project development risk.

³<https://www.nationalgrid.com/document/149701/download>

⁴<https://www.ofgem.gov.uk/publications/ofgem-announces-tough-new-policy-clear-zombie-projects-and-cut-waiting-time-energy-grid-connection>



Planning, permission and backyard resistance



Developers must also overcome ‘not in my backyard’ (NIMBY) opposition to new infrastructure projects. Onshore wind has been virtually shut down in the UK since 2015 due to planning rules, while in Germany, lawsuits opposing renewable projects add about 40% to permitting timelines. The US has similar issues: in Q4 of 2023, the 2000 km Navigator pipeline project, designed to shift huge volumes of CO₂ from Midwest ethanol plants and store it permanently underground, was cancelled due to the complexities of multi-state permitting and public opposition. Widespread public opposition is also acting as a brake on large lithium-ion based power banks, which are considered critical to delivering reliable energy from solar or wind. Some planned battery energy storage systems (BESS) in the US and Canada have already been cancelled, and a number of projects in the UK are mired in planning disputes, with local communities citing concerns about fire risk, water pollution and the impact on wildlife.

Procurement and supply chain

Delivering net zero goals is going to require a lot of consumption. Wind turbines and electric vehicles, for example, require the rare-earth metals. Shortages of these, as well as nickel and cobalt, are expected to be in short supply by 2025. China also supplies around 70% of solar modules and around 60% of lithium battery components. Cabling – and the vast amounts of copper it requires – will also be in demand, with a net zero 2050 requiring a 152 million km supersize grid – more than double the length of the grid today, according to BloombergNEF⁵.

With so many projects likely to reach final investment decisions in a similar time horizon, supply chain costs are already escalating to push projects into uneconomic territory.

⁵<https://about.bnef.com/blog/a-power-grid-long-enough-to-reach-the-sun-is-key-to-the-climate-fight/>



Profits

When it comes to clean energy, profit is not a dirty word. The investment required to deliver the energy transition won't be unlocked unless those financing these complex projects can see viable returns. Consistent and supportive policies are important to create certainty and encourage the flow of capital into technologies and markets where, as yet, there's no proven route to profit.

“Where are the returns that allow us to truly lean into the transition?”

Take, for example, the solar market which has boomed in Europe, with several countries exceeding their targets for installation. But this growth of capacity has not been reflected in the valuations or finances of solar companies, which have seen their valuations hit amid rising material costs, delays in permitting, high interest rates and political uncertainty. Longer term, these transitional issues may yield the efficiencies that deliver sustainable profit growth⁶ but it's not exactly an encouraging case study for investment in other clean energy tech.

New financing models are required to unlock investment. UK insurers are calling for new public-private partnerships to help funnel a promised £100 billion of investment into green infrastructure projects. Public-private partnerships that use taxpayer funds to reduce risks for investors, help projects achieve an investment-grade credit rating, and make them a better match for insurers' long-term liabilities⁷.

Another solution may be to build integrated value chains, where the investor controls both production and consumption – be your own offtake agreement. This type of closed-loop economic project derisks the deployment of capital into new energy technologies, such as hydrogen or carbon capture, where there's no established market or distribution network to justify the high costs of investment.

In Denmark, a hydrogen eco-system is under development at the Port of Hirtshals, using renewable energy from local wind turbines to produce 500 tonnes of green hydrogen annually. The project includes the construction of a 5 MW electrolyzer, a large-scale refuelling station for heavy-duty transport, and distribution networks for hydrogen, oxygen and heat, to make Hirtshals a model for green ports.

In the UK, the East Coast CCUS Cluster, which aims to capture and store an average of around 23 million tonnes of CO₂ per year by 2035, will build synergies between net zero Teesside Power, H2Teesside and Teesside Hydrogen CO₂ Capture. A 'Heads of Terms' agreement has been signed ahead of a final investment decision in September 2024.

⁶<https://www.morningstar.co.uk/uk/news/243103/the-solar-paradox-production-up-stocks-down.aspx>

⁷<https://www.ft.com/content/87fc7913-82ce-48f3-b713-db25847adb77>



People

In a time of crisis, with complex and changing problems of unprecedented scale and urgency, there's a need for disruptive thinkers to bring about meaningful change. Airbnb would never have been created by the hotel industry, nor Uber by the automotive industry. Disruption needs to come from outside, in order to rethink how we price energy – both the polluting kind and the renewable kind – and how we distribute it to ensure a transition that's clean, green and equitable. And given the realities of the world we operate in, there needs to be space for profit. Perhaps in the new partnerships we are seeing developing around CCUS clusters or closed-loop hydrogen, we will see the kind of innovation and creativity that will deliver the transformation our world needs.

The Cripps Leadership Advisors Viewpoint

Over the last six months, the energy transition is undoubtedly going through an ebb phase in its evolution. However, that is not to say it is a negative. A sense of realism has been created and an understanding that making smaller and more achievable steps forward is still progress in a transition. We needed to prove the theory that a giant leap to a green future in an idealistic single movement was not possible before we could move forward.

There is optimism and investable opportunities to be found in systems where existing infrastructure can be leveraged, by decarbonising off grid industrial customers, or converting a vehicle fleet business from diesel to electric. These may not make the headlines, but they are gradually creating the demand for technology development, green molecules contracts and critical mass to drive cost down and enable large scale projects.

As one attendee at our November event put it, if you have any experience of large-scale project development, there are frequently moments where decisions and beliefs are questioned and where you need to be patient and persevere. We see this as a key trait in the leaders that we are appointing into the new energy markets, alongside an ability to create alliances and forge partnerships.

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