



CANADA AND THE UK: RACE TO NET-ZERO

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It wasn't long ago that world leaders met in Glasgow for the highly anticipated UN Climate Change Conference (COP26) to accelerate action to tackle climate change and support the transition to a lower-carbon economy. Yet, despite the ambitious policies and targets set out by various governments, countries continue to grapple with the challenge of balancing the economy and the environment. Among the G7 nations, Canada and the UK are arguably leading the way, with both nations legally committed to decarbonizing their economies by 2050 through their respective climate plans. Moreover, both countries follow a roadmap to achieve their climate targets, including sales mandates and incentives for zero-emission vehicles, support for charging infrastructure, critical minerals and battery supply chains, sustainable finance, investment in industry-led R&D, and investments in clean technologies.

Since Canada and the UK are on a similar path, it is worth exploring how they differ in their approach- particularly in the power and utilities sector - as both have committed to fully decarbonizing their electricity grid by 2035.

Overview of Canada and the UK's Climate Plans

Canada's strategy to fight climate change builds on a set of climate plans fundamental to how the federal government will chart the path towards net-zero emissions by 2050. In 2016, the [Pan Canadian Framework on Clean Growth and Climate Change](#) marked Canada's first-ever national climate plan, followed by the 2020 [Strengthened Climate Plan](#) (SCP), which included a host of new policies and investments in high-emitting and emerging sectors. Last month, Canada released its [2030 Emissions Reduction Plan](#) (ERP), its most granular plan yet, with clear targets for each sector of the economy and over \$9 billion in new funding to build on existing measures and programs.

In the UK, the first piece of climate change legislation passed in 2006 in the form of the Climate Change and Sustainable Energy Act 2006, followed closely by the Climate Change Act of 2008, which committed the UK to a series of carbon reduction targets by 2050. However, fast forward to 2019, it became clear that the UK is not on track to meet its target despite the Acts, and that stronger, [more challenging measures would be required if the UK is to meet future emission reduction targets](#). As a result, the UK government launched its 'landmark' [Net Zero Strategy](#) setting out for the first time the intention to halve UK emissions in just over a decade and eliminate them by 2050.

Comparable to Canada's plans, the UK's Net Zero Strategy provides the overarching framework for delivering a greener and more sustainable environment and economy. The strategy is supplemented by various other government agendas and plans including the [10 Point Plan for a Green Industrial Revolution](#), and the [Heat and Buildings Strategy](#). The 10 Point Plan sets out the key milestones that must be achieved to deliver Net Zero, including advancing offshore wind, the growth of low carbon hydrogen, creating new and advanced nuclear power, and accelerating the shift to zero-emissions vehicles, amongst more. Meanwhile, the Heat and Buildings Strategy sets out the vision to transition to high-efficiency, low-carbon buildings.

Achieving Net-Zero Electricity Sectors by 2035

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Canada is a world leader in clean electricity and is eyeing to lead in the electrification of its economy among G7 nations by phasing-out coal-fired power and increasing the supply of clean energy. Although the sector falls under provincial jurisdiction, the federal government plays an important role in reducing the risk for provinces to move toward renewable technologies. To that end, Canada has announced over \$15 billion since 2016 to fund renewable power projects such as wind and solar and the deployment of power storage, support regional interties, and the development of small modular reactor (SMR) technology. In addition, the ERP announced new measures such as a Clean Electricity Standard and a Pan-Canadian Grid Council that will require the federal government to work with all levels of government, utilities, and the private sector to ensure electricity is generated through clean sources.

The UK has made strong progress on its efforts to decarbonize, and since the launch of the 10 Point Plan in November 2020, a substantial 3,600 new green jobs have been created across the country and £22 billion of private investment in various green projects has been secured. Investment has been particularly notable in advancing offshore wind, with £1.6 billion worth of investment transforming into 11GW of energy generated to date, and a further 12GW in the pipeline. The government has also committed up to £320 million in financial support for fixed bottom and floating wind ports and infrastructure as it strengthens its shift away from onshore wind energy and focuses on its offshore capabilities.

Whilst the UK has made some commendable progress with its 10 Point Plan, efforts to strengthen the power and utilities sectors must be accelerated to keep pace with today's challenges, in order to become energy independent given the soaring energy prices due to the war in Ukraine. Indeed, the launch of the government's [Energy Security Strategy](#) in April 2022, seeks to respond quickly and efficiently to these new and ever-changing circumstances. The boldest commitment within the new strategy will ensure the UK produces 95% of its electricity through low carbon sources of generation by 2030 by ramping up its efforts across key energy outputs. In particular, the UK government is setting its sights on rapidly scaling nuclear power generation, with an ambition to increase its current target of 6.9GW per annum to 24GW per annum by 2050. In addition, the UK has committed to increasing its current 14GW capacity for offshore wind and solar energy by approximately five times by 2035.

Lessons Learned?

It is clear that both Canada and the UK are committed to delivering on their respective Net Zero ambitions, with a joint focus on tackling the power and utilities sectors, but what (if anything) can these leading G7 nations learn from one another?

The most notable difference between the UK's and Canada's approaches is the focus on nuclear vs. renewables. Canada's phase-out of fossil fuels and replacing their use with renewables such as wind and solar energy is somewhat in contrast to the UK's prioritization of nuclear energy – given that the material used to produce nuclear energy is not renewable. However, whilst some consider nuclear as less credible in terms of renewability, it is estimated to be [2.5-3.5 times more reliable](#) than wind and solar plants, which are variable and intermittent by nature.

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Ultimately, the UK recognizes that investing in nuclear will not only fast-track decarbonization but will lead to more job creation and make a difference in energy bills in the long term. Whether the UK's reliance on nuclear is misplaced, it has certainly not pushed Canada away from investing in nuclear energy. In fact, Canada is investing in nuclear and leading the development of Small Modular Reactors (SMR) to help provinces and remote communities that are still reliant on coal. Canada's [SMR Action Plan](#) involves collaborating with all levels of government, industry, Indigenous and academic partners to make nuclear more reliable and deploy it across Canada's electricity grid—the [Darlington SMR project](#) being the first of its kind in the world. But Canada is not accelerating in deploying nuclear as fast as the UK for a variety of reasons, mainly because of high capital costs and schedule delays which are major key drivers that will disrupt Canada's ambitious timeline to decarbonize its electricity grid.

Regarding lessons to be learned from Canada, the UK should look at a more collaborative and joined-up approach to delivering its Net Zero ambitions. Owing to Canada's vast geography, managing energy is a complex and challenging task. Under Canada's constitution, each province is responsible for electricity generation, intra-provincial electricity transmission, electricity distribution, and market structure meaning that the federal government must work closely with the provinces to ensure Net Zero targets are being met. Meanwhile, in the UK, Whitehall has the power to implement strong policies across regions without necessarily consulting local government bodies. Whilst this systemic approach can enable more [aggressive and ambitious](#) policies to be announced, the whole-government approach has been criticized for being unclear and at times, too bureaucratic.

For Net Zero to be successful, all players must be engaged and critically, willing and able to deliver on ambitions. By developing and implementing policies via a top-down approach, the UK government risks alienating key business stakeholders and failing to fully understand regional nuances in delivery capability. By way of example, the UK's ambition to begin phasing out fossil fuel boilers in households by 2026 is currently creating an issue for rural populations across the country, as they face higher costs for installing green alternatives. The UK government has so far failed to recognize or address this inequality, and therefore rural households may create resistance to switching out their fossil fuel boilers. A recent [House of Lords report](#) critically concludes that the current Net Zero target is at risk of being missed unless the UK government can encourage and secure the essential investment needed from consumers and businesses – indicating the urgent need for the government to ramp up its engagement and consultation with key stakeholders.

Ensuring all stakeholders – particularly those in local government and across businesses – are involved in policy development and delivery will be key to delivering Net Zero, and therefore the UK should take inspiration from Canada's collaborative approach.

Concluding Remarks

Canada and the UK have, in the past, lagged in the transition to a net-zero electricity grid, and given the recent energy crisis sparked by the war in Ukraine, decarbonization offers a pathway to energy interdependence. Creating a sense of common purpose around modernizing the electricity grid will be a challenge for both countries and while there is no one-size-fits-all formula for decarbonization, the pace of the transition will be more important than the transition itself. As much as the debates around renewables and nuclear will

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continue to dominate discourse in the electricity sector, the structures and processes that encourage investment and help realize projects will equally matter.