ESG Viewpoint

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US Utilities – Will the energy transition be Trumped?

Goal: Managing the risks and opportunities stemming from climate change trends and regulation

Engagement since: 2016

Sectors involved: Utilities

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Key summary

- President Trump's calls to reverse climate policy raises uncertainty about the speed of decarbonisation amongst US electric utilities.
- Economic factors, like low gas prices and falling costs of renewables, are already driving the shift toward lower carbon energy, yet further policy support will be needed to ensure meeting global climate commitments.
- Our engagement focused on improving disclosure gaps amongst utilities that would enable better assessment of companies' strategic alignment with potential lower carbon energy pathways.

Background

President Trump has just announced his plans to roll back the Clean Power Plan (CPP), the centrepiece of President Barack Obama's climate policy legacy, whilst also reversing other policies aimed at reducing carbon emissions. The CPP would have set a target to reduce US power sector carbon emissions by 32% from 2005 levels by 2030. The plan was designed to be a key component for the US to deliver on its commitment to meeting the 2015 Paris COP21 Agreement on climate change.

The current administration has been intent on rolling back climate regulations. In some areas, Trump has the authority to translate this into policy, which includes lifting a moratorium on new coal mining leases or cutting the budget for the Environmental Protection Agency (EPA) by 31%. However, undoing other key pieces of existing or proposed legislation, like the CPP, will require a lengthy legal process that could take many years and is likely to end up before the Supreme Court.

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While the expectation is that the EPA will be less active during the Trump administration, existing environmental regulation that has withstood past legal challenges is likely to remain in place. Hampered by the proposed budget cuts, the agency's ability to enforce regulation will most certainly shrink. Yet history has also shown that, in such cases, federal enforcement has often been supplanted by legal challenges, mostly brought about by NGOs.

In terms of climate policy and regulation, we are therefore heading into a period of prolonged uncertainty. Questions have been raised as to what extent these political dynamics will affect the underlying economic factors that are already driving the transition to lower carbon power in the energy sector.

US power sector trends

The carbon intensity of US power production has declined in recent years as a result of a number of factors, including coal power plant retirements, economics-driven fuel switching from coal to gas and buildup of renewables. These trends in decarbonisation are likely to exceed the 32% reduction targets originally set by the CPP. This shift is further supported by various state-level initiatives promoting low carbon generation, such as the emission trading schemes in California and some states in the northeast.

- **Carbon pricing**: The impact of carbon pricing on earnings per share for US utilities is, somewhat surprisingly, relatively limited. Research suggests that a $10/ton carbon price would drive mostly positive single digit earnings sensitivity.[1] The main reason for this situation is that many companies have already made use of opportunities to switch plants from coal to gas fuel, with many of the remaining coal assets having low utilisation rates. Many coal heavy providers already derive most of their cash flow not from energy revenues (that could be penalised by a carbon price) but from capacity payments for maintaining low utilization peaking units. In addition, the diversified generation mix of these companies means that the positive impact derived from lower carbon assets, particularly nuclear, often offsets the negative impact a carbon price would have on earnings from coal plants.
- **Coal**: Since 2010, coal generation in the US has declined 10% and a further 8% is expected to retire by 2020 as existing plants come to the end of their useful life and are not replaced. Much of the country's coal fleet is old and inefficient and, even without further environmental regulation, has already unfavourable economics against low gas prices and declining costs of renewables. As many commentators have highlighted, a 'pro-coal' Trump policy is unlikely to reverse this trend. That said, federal legislation like the CPP would drive positive investment opportunities for some carbon intensive regulated utilities, particularly in the south-eastern states, where significant shifts in generation mix are needed if states were to meet more aggressive decarbonisation targets.

Case Study – Duke Energy

Despite moves to diversify, **Duke Energy** still holds a substantial power generation portfolio which is focused on carbon-intensive coal. It has faced pressure to transform its power generation mix significantly away from coal and towards lower carbon alternatives such as gas, nuclear and renewables. In 2016, we initiated dialogue with the company on the back of having sent an investor expectations guide we developed in collaboration with other asset managers participating in the Institutional Investor Group on Climate Change.

Having spoken with the company a number of times in 2016, we followed up this year to get its reaction to the US policy environment. The company confirmed its long-term target to reduce carbon emission in its portfolio by 35% from 2005 levels by 2026. This target is set independently of the implementation of the CPP. Duke claims that, with these changes, it is well positioned to meet potential regulatory reduction requirements.

We encouraged the company to provide more clarity on the gap between its current greenhouse gas emissions targets and market-wide lower carbon pathways, including a 2 degree centigrade (2°C) scenario. A shareholder proposal requesting such a report has also been filed in this year's proxy with the company. While Duke is open to constructive dialogue on these issues, its long-term planning on carbon reduction and generation mix changes appear to be largely reactive to wider market and regulatory trends. Given Duke's continued significant exposure to coal-based power generation and its less prominent exposure to transmission and generation businesses, the company is likely to face more challenges navigating a lower carbon energy transition than some of its similar-sized peers.

[1] See "Introducing our ESG Analysis for Diversified Utilities/IPPs", Morgan Stanley (January 2017).

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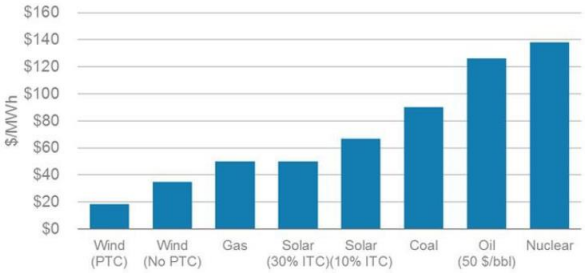
- **Gas and renewables (REN)**: Despite the significant shifts from coal to gas power in many regions in the US, renewables are already competitive against gas plants based on the Levelised Cost of Energy (LCOE), the all-in cost model across the life-cycle of a plant. [See Exhibit 1] While gas prices are expected to stay lower in the longer term, LCOE advantages exist already for onshore wind in many central states and for solar in sunny states in the south-east and south-west. Even on an unsubsidised basis, this cost advantage is likely to carry forward, driving investment growth in utility scale solar and wind assets. Depending on the region, and independent of policy support, these are indications of attractive growth prospects in the medium term for renewables from the current relatively low base of ~1% wind and ~5% solar in US power generation.

Exhibit 1: Levelised Cost of Energy (LCOE) by Generation Type (US market)



Source: Morgan Stanley Research. Gas LCOE assumes $3.50/mmBTU gas price. PTC = Prodcution Tax Credits; ITC = Investment Tax Credits.

However, it is important to note that in regions where renewables have started to outmuscle conventional power, this typically has led to depressed wholesale energy prices. Higher renewables penetration undermines wholesale prices as the spot price for electricity is determined by the most expensive producer in the market. To the extent to which lower cost renewables are displacing higher cost conventional plants (coal, gas, and nuclear), as is already happening in e.g. California (and other markets like Germany and some areas of China), the wholesale electricity price decreases. This effect has not set in across most markets in the US given the mostly low renewables penetration. Yet, further down the line, it may pose some unintended headwinds that could undermine the potential attractiveness of private investments in the unregulated power market and complicate the transition toward a low carbon energy system.

As renewable penetration picks up, a key factor for conventional generation plants (coal, gas, nuclear) to maintain their competitiveness will be their level of flexibility of adjusting energy production in response to wind and solar output. Plants with high flexibility, like modern gas plants, are typically better able to capitalise on spot market peak prices as renewables come on or off stream.

- **Grid infrastructure**: Finally, aside from building up new generation assets, enormous investments are needed over the next decades on grid modernisation. Balancing the intermittency of renewables and integrating distributed energy resources (rooftop solar, electric vehicles, onsite energy storage systems, etc.) will require grid infrastructure that can manage complex two-way flows of electricity. Such a 'smarting-up' of the grid includes building out fibre optic networks and sensors for real-time data collection and establishing an enhanced management system to control the new distributed grid.

  Beneficiaries of such new technology deployment are particularly regulated utilities, for whom this spend is additive to rate base, as well as companies that sell energy and services on a retail basis. Recent trends have shown this to be a popular capital expenditure. However, depending on the region, it is unclear if the incentives for grid investments are sufficient to drive further build-up of low carbon generation assets or whether too slow a pace of grid modernisation will act as a bottleneck for shifting the energy mix to more lower carbon generation.

Engagement action

Building on the research and engagement we have conducted on the stranded assets theme in the energy sector over the past years, we started an engagement project in 2016 to better understand and encourage climate compatible strategies among utility companies. We reached out to 52 utilities companies globally, which were widely held across our client base and where our analysis flagged potential carbon risks. The biggest subset of companies (22) were based in the US and – in conjunction with the policy uncertainties introduced by the 2016 election – we concentrated our engagement on this market. We received responses from 15 US utilities and had further meetings with 11 of those. The key questions we posed include:

- **Emissions targets**: To what extent are companies' targets for energy efficiency and greenhouse gas (GHG) emission reductions aligned with national and international political commitments? What are the implications of policy uncertainty on planned changes in the companies' power generation mix?
- **Low carbon scenarios**: How do companies assess the impacts of various energy transition scenarios (including a 2°C global climate policy scenario) on their full

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portfolio of power generation assets and planned capital expenditures? How does such scenario assessment inform strategic decision-making?

- **New energy opportunities**: How are companies preparing for potential demand side changes such as an increase in distributed energy generation, energy storage solutions and power grid transformations? What kind of opportunities have been identified and to what extent do these form part of future strategy?

While the initial round of our engagements occurred before the inauguration of the new US administration, we followed up with a number of companies after President Trump's more recent policy announcement. We were particularly interested in understanding the effect the administration's commitment to repel the CPP would have on companies' plans to accelerate the decarbonisation of their generation mix.

"We're not spending money on that anymore. We consider that to be a waste of your money."

Mick Mulvaney, White House Office of Management and Budget Director (in reference to proposed budget cuts for climate-change related programmes)

Engagement Findings

We had originally identified the 22 US utilities for our target list based on screening the following indicators: carbon intensity of the power generation portfolio; the past three years combined annual growth rate of their carbon intensity; and a carbon emissions management score based on the level of disclosure and emissions target setting. Following our analysis and dialogue with the companies, we then assessed their risk exposure and opportunities management based on the following factors (see client confidential appendix for more details on the companies):

- Assessment of companies' emission reduction targets, including to what extent targets would be in line with / or outperform CPP requirements
- Level of exposure to coal based power generation[2]
- Level of exposure to renewables generation[3]

An assessment of companies' exposure to new energy opportunities (such as energy services, distributed energy resources, and grid transformations) involves many factors and does not lend itself to the simple segmentation we ran in this analysis.

High-level findings of this assessment include:

- Out of the 12 companies with high coal exposure, eight exhibited weak emission reduction targets.
- Three companies with high coal exposure also have medium to high renewables exposure, showing the diversified nature of some portfolios and build-up of renewables as coal exposure declines.
- Most companies (20) have a significant exposure to gas in their generation mix, reflecting potential opportunities companies are seeking for gas plants to provide peak base load electricity, even in a decarbonised power system.
- Four companies have a low to medium exposure to coal, with strong targets and high exposure to renewables.

In terms of emission targets, we found that companies generally confirmed that their strategy is aligned with the 32% emission reduction requirement by 2030 as set by the CPP. Companies typically also did not expect their long-term targets to change significantly because of revisions to federal legislations on carbon. This is a reflection of the fact that fundamental economic factors (such as low gas prices and falling renewables costs) are driving trends in the power sectors, independent of high-level carbon legislation.

However, the degree to which the CPP target would have affected individual companies depends hugely on the states they operate in and the specific carbon intensity of companies' generation portfolios. We often heard that the 32% reduction target would be within reach without getting clarity on the extent to which some coal-heavy utilities in carbon intensive states could become subject to much more aggressive state-level imposed decarbonisation requirements.

In terms of disclosure on forward looking scenario analysis, there is still little evidence on how utility companies model the gap between their current long-term strategy and various low emission pathways. Compared to other sectors where we have seen more willingness to report such scenario analysis (like among the oil & gas and mining majors), utility companies by and large refer to emerging regulatory requirements, such as the CPP, as guidelines for their long-term planning.

[2] Definition coal exposure (in % of generation capacity): Low = <5%; Med = 5-15%; High = >15%.

[3] Definition renewables exposure (in % of generation capacity): high=>25%; med=10-25%; low = <5%.

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Regulated utilities in the US are required to publish an Integrated Power Plan, which provides detailed information on business planning assumptions, including options for complying with greenhouse gas reduction targets. However, these are detailed technical documents that do not produce clear disclosure on what climate change pathway their power generation mix is optimised for.

Transparency around scenario analysis is an area where more progress is needed in order to inform policy-making and to help accelerate the transitioning of the power sector to climate compatible levels. The forthcoming publication of the Financial Stability Board's Task Force for Climate Related Financial Disclosure (TCFD)[4] may provide an important stepping-stone to raise the bar for climate disclosure in the utilities sector.

Conclusion and next steps

Our engagement with US utilities revealed a complex picture of a sector whose transition to lower carbon energy is already well underway and strongly driven by economic fundamentals that federal policy is unlikely to alter significantly in the short term. That said, policy still matters. On a state-level, many initiatives to decarbonise the power sector are already being implemented, which will continue to provide opportunities for low carbon investment independent of the eventual fate of the CPP.

In light of the Trump administration's stated aim to reverse climate policy, it still raises the question whether the economic fundamentals in the power sector are sufficiently strong and lasting to support the country's ability to decarbonise in line with the Paris Agreement. Whether Trump will opt to keep the US as a participant in the Paris climate agreement is another question altogether. If he chooses to, and there are indications that he may, the country would not be able to meet its commitment without decarbonising the power sector. If he decides to opt out, then the onus will be even more on the private sector, investors included, to see past political barriers and seek out opportunities that are aligned with global climate goals.

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Investment Week Sustainable Investment Awards

Best Ethical Investment Fund Management Group 2016

Best Sustainable Investment Fund Management Group 2016

Outstanding Contribution 2014

Fair Pensions 2014

[4] For more, please refer to article on TCFD in BMO Global Asset Management 2016 Responsible Investment Annual Report.