Institutional Investor Statement Regarding Decarbonization of Electric Utilities

We are long-term institutional investors representing assets under management of $1.8 trillion as of February 28, 2019. The recently released report of the Intergovernmental Panel on Climate Change (IPCC)[1] could not be clearer: we are on track to climate disaster, and we have just a decade to avert the worst of it. As investors, we are responsible for broad portfolios that are already seeing the early stages of the expected negative impacts and ongoing economic costs of climate change, including the impact of extreme weather events on property and agricultural/fisheries yields, rising pollution-related health care costs, and lost worker productivity. The U.S. Fourth National Climate Assessment, an official report published by a consortium of 13 U.S. federal agencies, projects hundreds of billions of dollars in annual losses in some economic sectors of the United States by the end of the century resulting from rising temperatures, sea level rise, and extreme weather events.[2] Stanford University researchers predict that limiting global warming to 1.5 degrees Celsius instead of 2 degrees Celsius could prevent over $20 trillion in economic damage by the end of the century.[3]

The IPCC's report makes clear that limiting warming to 1.5 degrees Celsius requires achieving "net-zero" carbon emissions across all sectors of the global economy by 2050, which in turn depends on "rapid and profound near-term decarbonization of energy supply."[4] According to the IPCC, complete decarbonization of electricity by 2050 is a central feature of pathways consistent with limiting warming to both 1.5 degrees and 2 degrees Celsius.[5] The power sector is the second largest carbon emitting sector in the U.S., contributing 28.4% of the country's annual carbon emissions. Moreover, decarbonizing electricity generation is the lynchpin to broader decarbonization of the economy, empowering other sectors such as transportation to convert to emissions-free models. Therefore, establishing a net-zero carbon emissions target for electricity by 2050 at the latest must be the centerpiece of any plan to meet the goals of the 2015 Paris Agreement in terms of constraining global warming to well below 2 degrees.

Mitigating the worst effects of climate change will require companies that supply electricity to make the transition to using a combination of sources that generate "net-zero" carbon emissions by 2050 at the latest. As investors in publicly traded electric utilities, we are keen to see the companies in our portfolios set net-zero targets and to focus their efforts on devising economically attractive ways to achieve the targets before potentially being forced to do so by regulators or losing market opportunities to competitors who more aggressively transition to the low carbon economy. Material risks we believe such a net zero commitment can help mitigate include:

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[1] Intergovernmental Panel on Climate Change, Global Warming of 1.5°C (2018), https://report.ipcc.ch/sr15/

[2] Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States. https://nca2018.globalchange.gov/

[3] Burke et al, "Large Potential Reduction in Economic Damages under UN mitigation targets," *Nature*, 2018. https://www.nature.com/articles/s41586-018-0071-9

[4] IPCC, "Summary for Policymakers," section C.1; IPCC, 2018: "Global warming of 1.5°C.", p. 129. Available at https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/ and https://www.ipcc.ch/site/assets/uploads/sites/2/2018/11/SR15_Chapter2_Low_Res.pdf

[5] IPCC, 2018: "Global warming of 1.5°C.", pp. 112, 130, Figure 2.14(b).

- Regulatory: In response to mounting pressure at the state level to respond to climate change, governors representing nearly a third of the population of the U.S. have established or called for achieving ambitious electricity emissions reductions targets, often even sooner than 2050. Failure to proactively embrace net-zero targets leaves utilities vulnerable to consequences of dramatic policy shifts.
- Wasted Capital Expenditures: Utilities risk overbuilding generation capacity that will be impossible to keep operating if a company decides or is later forced by regulation to achieve net-zero by 2050. Flawed capital expenditure plans in the coming years could lead to costly retrofits and asset write-downs, particularly if regulators and elected officials prevent such unnecessary costs from being pushed onto consumers.
- Physical risks: Climate change is exacerbating the risks of natural disasters that can cause many billions of dollars in damage to electricity infrastructure, with utilities in the southeast of the U.S. facing billions in recovery costs after historic hurricanes have ravaged the region, and Pacific Gas and Electric declaring bankruptcy following wildfires in California. Decarbonizing the power sector will help protect the utilities from further increasing their physical risk exposure.
- Competition & Demand shifts: Local governments may act to decarbonize by separating their local electric system from a utility's network and creating a municipal utility, as is now happening in cities like Boulder, Colorado, while retail customers may increasingly choose local, carbon-free, distributed generation.

As long-term investors, we view these risks as significant and material. However, we also see opportunities for utility companies during the transition to the low carbon economy; as the IPCC notes, increased electrification in other sectors, notably transportation, is a key feature of 1.5˚C pathways, potentially creating substantial new demand growth for the electricity industry. Indeed, a 2014 report by the Edison Electric Institute, an industry trade group, cited electrification of the transportation sector through greater use of electric vehicles as a "proactive, positive strategy" that would enable "significant economic and environmental benefits." The study added: "Leading the charge on electrification will help the electric utility industry control its own destiny and meet future regulations on its terms.[6]"

Never before have the economics of a transition to net-zero emissions been so favorable, particularly as levelized costs of many renewable energy sources (without subsidies) and storage have dropped to be at or below the cost of coal and natural gas.[7] In an industry in which capital investments can have useful lives of 40 or more years, it is imperative that utilities ensure that near-term capital investments are consistent with the goals of achieving deep decarbonization.

We are heartened by Xcel Energy's recent announcement that it is committed to achieving net-zero carbon emissions by 2050. **We believe that every utility can and should commit to achieving the goals of the Paris Agreement of limiting warming to well below 2 degrees by setting a clear target of net-zero carbon emissions for electricity by 2050 at the latest, and communicating this to shareholders no later than 6 months from the publication of this statement.** We recognize that certain jurisdictions

[6] http://www.eei.org/issuesandpolicy/electrictransportation/FleetVehicles/Documents/EEI_UtilityFleetsLeadingTheCharge.pdf

[7] https://www.lazard.com/media/450784/lazards-levelized-cost-of-energy-version-120-vfinal.pdf

have imposed more ambitious deadlines for decarbonization, and we expect electric utilities to incorporate those deadlines into the targets they set.

The pathway to achieving net-zero emissions may look different for each utility, both operationally and from a regulatory standpoint, but as investors, we believe that there are specific governance reforms that utilities should adopt to help maintain a company's focus on the overall goal and to achieve interim steps that will make attaining that goal easier. These include:

1. Identifying who on the board is responsible for overseeing an economically attractive execution of the transition, which could occur by forming a decarbonization transition committee of the board;
2. Developing and publishing a detailed transition plan toward achieving net-zero emissions by 2050 (or earlier target), with clear near-term benchmarks and plans for 2025 and 2030. Plans should account for impacts on communities and workers and the mitigation of those impacts as part of the transition;
3. Meaningfully incorporating transition milestones into executive compensation metrics;
4. Disclosing how a utility's political, lobbying and trade association activities will support its decarbonization commitment.

We call on U.S. utility companies to implement these recommendations in advance of their 2020 proxy statements. Through initiatives such as Climate Action 100+, we seek productive dialogue with U.S utility companies on this and other climate-related issues in order to protect the investments we make on behalf of our beneficiaries and clients. We see a commitment to sustainable business models as an important way to reduce material risks and as a critical test of board leadership at U.S. utility companies, and we will consider company responses when evaluating our proxy voting decisions.

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