Decarbonization: The defining utility trend of the next decade?

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Over the past three years, states, provinces, cities, and utilities across the US and Canada have made bold commitments to address carbon emissions. As of March 2020, more than 20 utilities in the US have announced they'll supply their customers with carbon-free or net-zero-carbon energy by 2050.

To help you stay on top of this accelerating trend, we highlight some of the biggest reasons why utilities have made decarbonization commitments. If you're planning to announce one, you'll also find our suggestions on the best approaches for doing so.

Why are utility CEOs signing on to carbon-reduction goals?

Economics. In many regions of the US, carbon-free power generation costs less than coal or natural gas. In fact, the latest 2020 projections from the US Energy Information Administration—which has historically underestimated the growth of renewable energy—indicate that overall electricity generation from renewable sources, including hydropower, will surpass that from nuclear and coal by 2021 and natural gas by 2045.

Customer demand. In 2019, 65% of Americans believed their utility should source more electricity from renewables, according to the Claritas Energy Behavior Track Survey, conducted in partnership with E Source. The sustained growth of RE100 shows that large businesses demand carbon-free energy too. (RE100 is a group of organizations, including many of the world's Fortune 500 companies, that have publicly committed to purchasing 100% renewable energy.) Meeting customers' needs reduces the likelihood that they'll seek alternatives to replace their relationship with utilities.

Policy risk reduction. A carbon-free or net-zero-carbon goal can help you get ahead of policies and

regulations mandating carbon reductions. The push to divest from fossil fuels on the part of universities, pension funds, and nonprofit groups foreshadows growing support for policy changes. As the CEO of BlackRock, the world's largest investment manager, said in his 2020 annual letter to CEOs A Fundamental Reshaping of Finance, "Climate change has become a defining factor in companies' long-term prospects. In the near future—and sooner than most anticipate—there will be a significant reallocation of capital." Utilities should plan for these kinds of changes soon to maintain profitability and viability.

Brand equity. Utilities want to grow amidst a lot of uncertainty. Growth is easier when you have a strong brand that customers love and when you demonstrate that you're responsive to issues important to your customers. A carbon-free or net-zero-carbon goal builds brand equity by showing your customers you want to be their energy provider throughout the 21st century.

New products and services. Realigning your mission around carbon reduction means you can package value-added carbon-reducing offerings within a new, compelling story. With a carbon goal, the value propositions for your products such as community solar, home energy management and automation, and weatherization become clearer and more compelling.

What do the various goals indicate?

Carbon-reduction goals vary, so we describe our view of the approaches below:

- A carbon-free energy provider supplies its customers with energy generation and delivery that emits no carbon dioxide.
- A net-zero-carbon energy provider removes as much carbon dioxide from the atmosphere as it emits through its energy generation and delivery.
- A carbon-neutral energy provider accounts for its energy generation and delivery emissions by investing in carbon offsets equal to its emissions.
- A 100% renewable energy provider supplies its customers with energy from renewable resources. There's debate about what constitutes a renewable resource, so it's important to be clear about what resources you include.

The details matter when we talk about offsetting or removing emissions, as referenced in net-zero and carbon-neutral goals. There's some discussion around whether offsets that protect existing forests provide the same value as offsets or projects that create new forests. The discussion boils down to the degree to which one type of offset helps to solve the problem. Microsoft reviews this nuance well in the "Grounding in science and math" section of its blog Microsoft will be carbon negative by 2030.

What's the best approach?

The best approach to a decarbonization strategy is one that:

- Considers the benefits and challenges of different strategies objectively
- Keeps energy equity top of mind

- Avoids limiting options to a few strategies

It’s critical to prioritize an equitable shift to a low-carbon future. A utility’s main purpose is to serve all customers fairly. And if utilities don’t work to avoid increased bills or other negative financial consequences stemming from decarbonization, low- and moderate-income customers could be disproportionately affected. The utilities that will see the most success with decarbonization will be those that keep customers at the forefront of their planning, while making the best use of available and emerging technologies.

While it’s tempting to focus on individual strategies, such as 100% renewable power or an exclusive focus on electrification, it’s premature to pick winning strategies without fully understanding each one’s pros and cons. For example, electrification may be a key decarbonization strategy for many utilities, but it isn’t a silver bullet. Our recent white paper The electrification framework that benefits customers, the grid, and the planet details where this strategy can be most effective. Offering renewable natural gas may be important for utilities serving commercial and industrial facilities that can’t effectively electrify all their processes. And technologies other than wind and solar will serve an important role in maintaining grid reliability and improving the overall cost-effectiveness of carbon-reducing investments.

How E Source can help

We can help you design and execute your carbon-reduction strategy by supporting your technology assessment, program design, customer experience, marketing, and branding efforts, and by providing custom consulting as needed.

Please contact us if you’d like to learn more about our research subscriptions or consulting offerings.
