

Hourly Carbon-Free Energy Matching

More than 60 percent of America's Fortune 500 companies and countless other organizations have set laudable goals to reach net zero by 2050. To get there, many of these companies purchase Renewable Energy Certificates, or RECs, to reduce emissions associated with their energy use on an annual basis. That's a great start, but annualized RECs don't ensure that the energy being used by a customer is actually carbon-free at the point in time it is being used. As a result, many companies are still reliant on electricity from carbon-emitting power plants, which makes it difficult for them to achieve their carbon reduction goals.

A recent study* found that customers in the nation's largest electric grid, PJM, who purchase annualized RECs as a way to achieve their clean energy goals still end up getting a significant portion of their electricity from carbon-emitting sources. The same is true in other regions.

Despite their limitations, RECs have been very effective at funding a significant wave of renewable energy construction, and they will remain a useful tool. But one shortcoming is that they incentivize developers to build renewable resources in places where the power isn't actually needed.

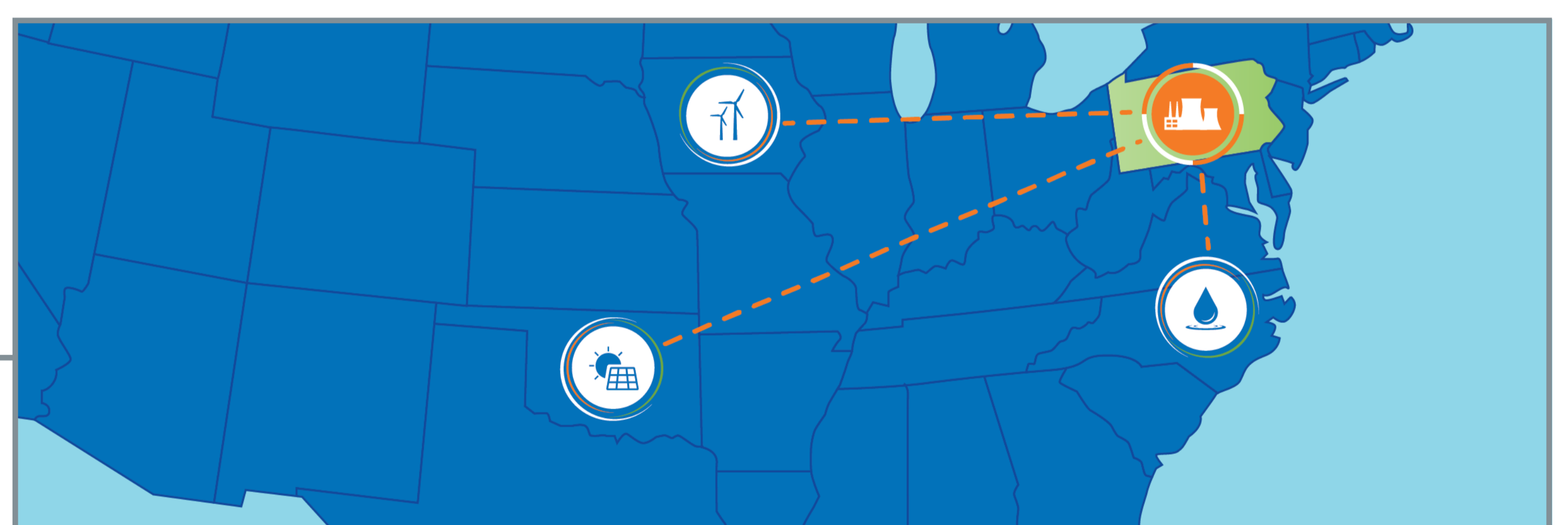
To solve this problem, we need better technology and less guesswork. Constellation is leading the way by working with Microsoft to launch an hourly carbon-free matching platform that matches a customer's electricity needs with regional, clean, carbon-free energy 24 hours a day, seven days a week, 365 days a year. The result isn't Net Zero, **it's Actual Zero.**

Net Zero vs. Actual Zero

Net Zero

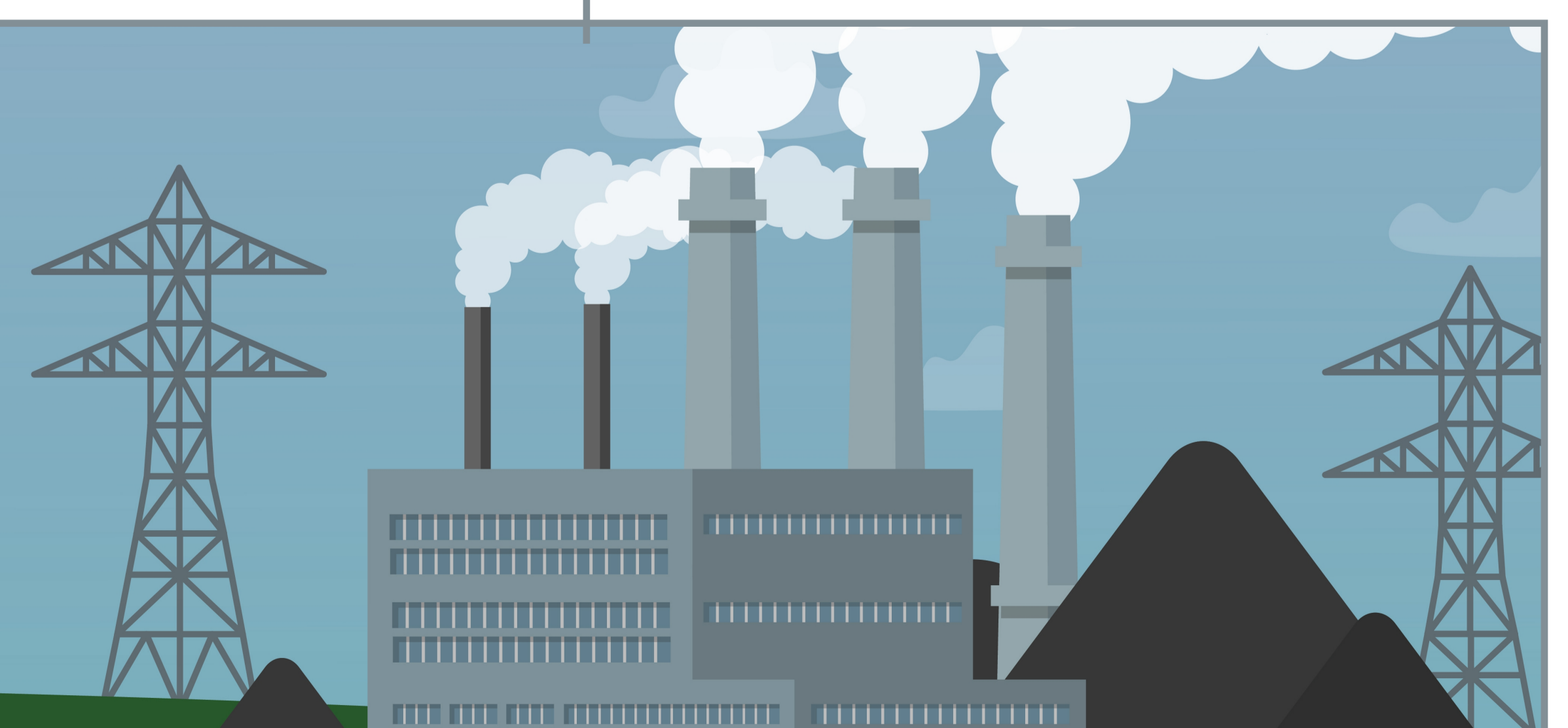


The ACME Shoe Company in Pennsylvania is serious about climate change....



So they purchase RECs produced from clean, carbon-free resources outside of their region to reduce emissions associated with their anticipated annual usage.

But RECs don't take into account when and where ACME will need its power, so when the plant manager fires up the assembly line on a hot summer night (when the sun isn't shining and the wind isn't blowing) ACME is actually drawing 100% of its power from a nearby coal plant. ACME is considered to be at Net Zero because of its REC purchases, even though it still has to rely on carbon-emitting sources. ACME really wants to be at Actual Zero, but RECs alone can't get them there.

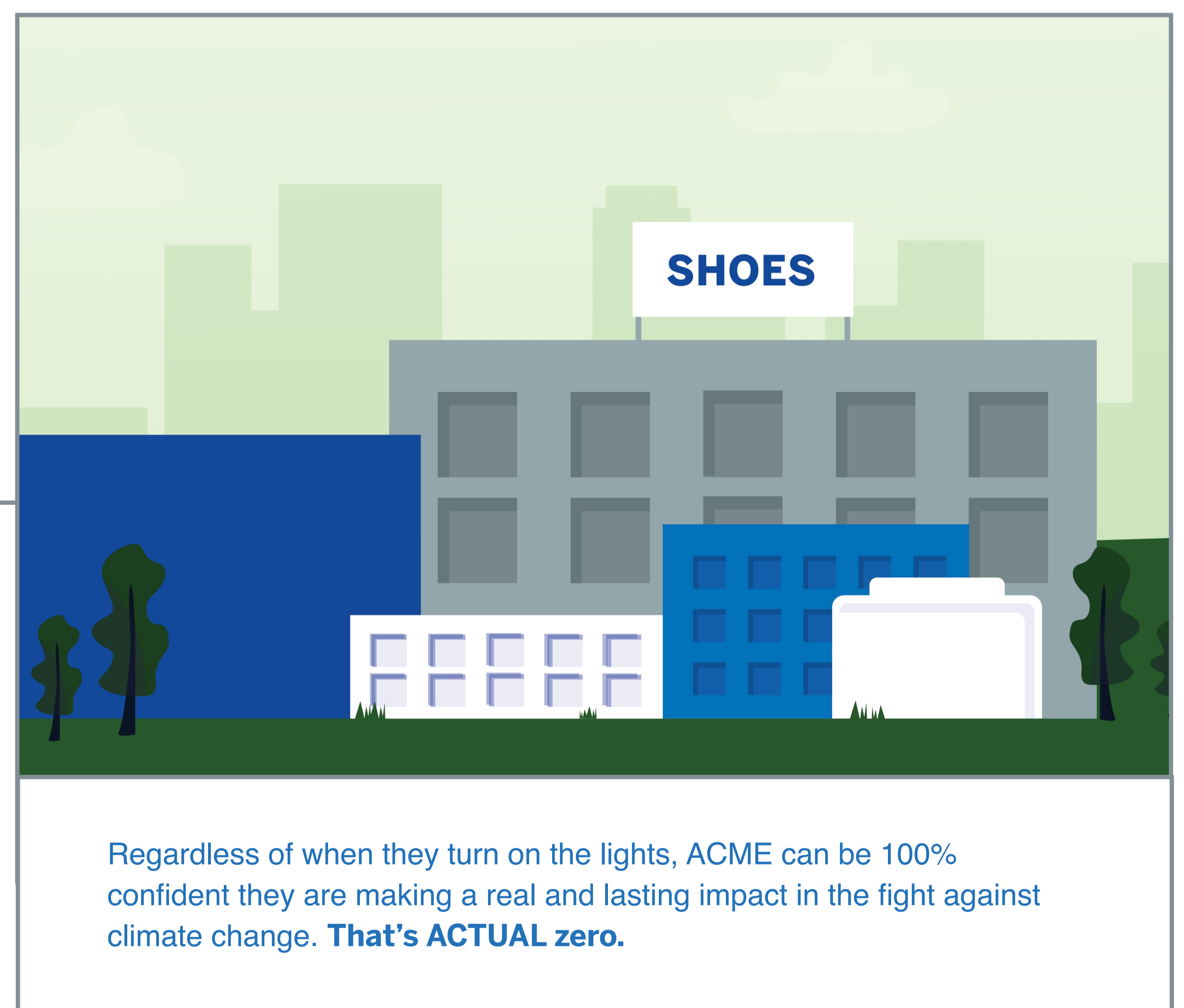
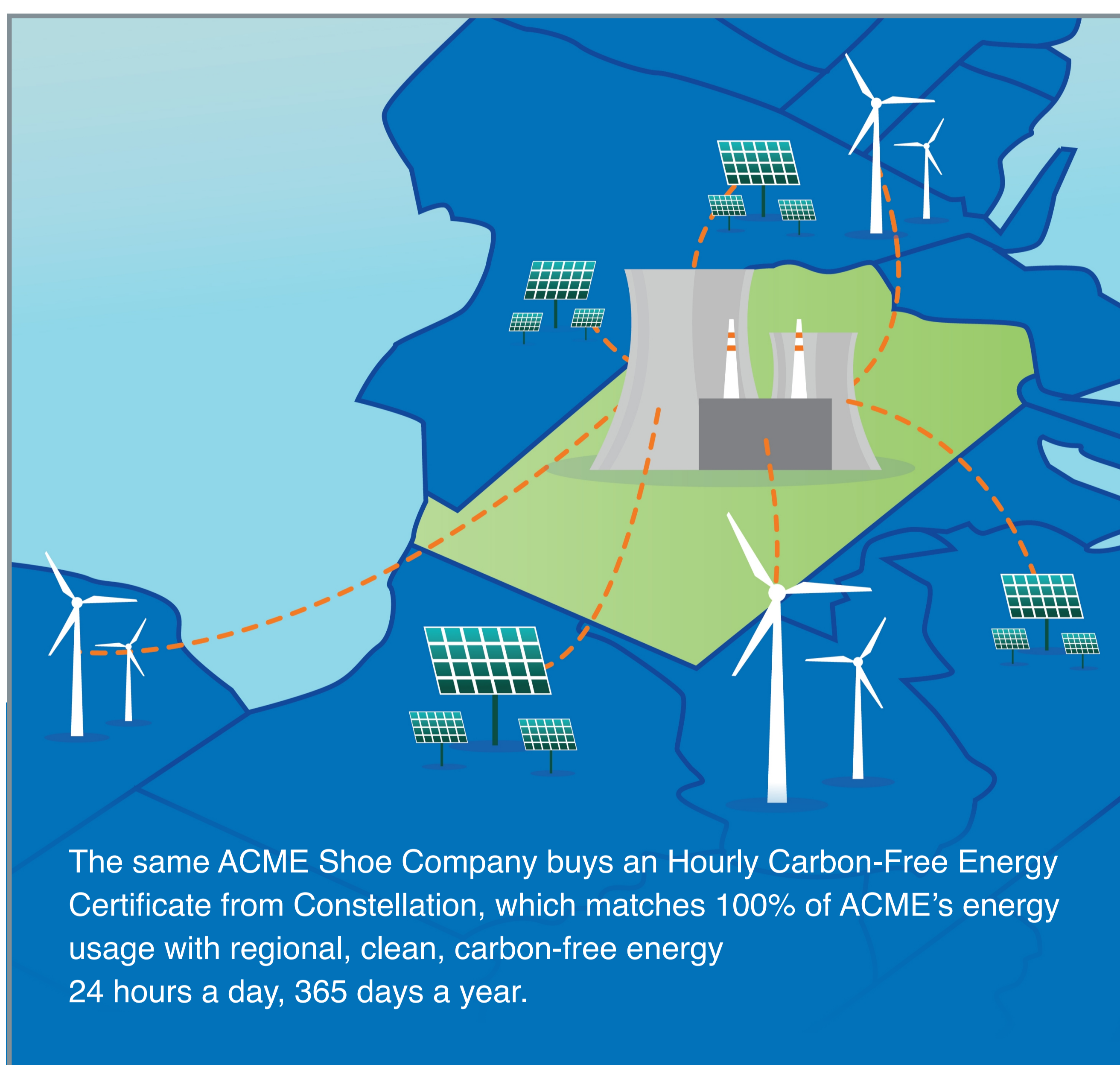


Actual Zero isn't just a slogan. It's a movement that will fundamentally change how we power the American economy and bring the right mixture of carbon-free nuclear, solar, wind and hydro power to every corner of the nation, eliminating our reliance on fossil fuels to balance the grid.

To truly solve the climate crisis, we need to match every customer's energy use with clean, carbon-free energy produced at the time and place it is needed. Every hour. Every day.

Constellation is well-positioned to lead this transition. We built our business around providing carbon-free nuclear, solar, wind and hydro resources to customers, reliably and affordably. Together with an hourly carbon-free energy matching platform, every environmentally conscious company in the U.S. could know where every megawatt of their electricity comes from.

Actual Zero



Through industry standardization, market mechanisms, new technology and progressive policies, Constellation will help make Actual Zero a reality for businesses and enterprises across the country.

*Xu, Q., Manocha, A., Patankar, N., & Jenkins, J. (2021). System-level Impacts of 24/7 Carbon-free Electricity Procurement. Princeton University ZERO Lab.

About Constellation

Headquartered in Baltimore, Constellation Energy Corporation (Nasdaq: CEG) is the nation's largest producer of clean, carbon-free energy and a leading supplier of energy products and services to businesses, homes, community aggregations and public sector customers across the continental United States, including three fourths of the Fortune 100 companies. With annual output that is nearly 90 percent carbon-free, our hydro, wind and solar facilities paired with the nation's largest nuclear fleet have the generating capacity to power the equivalent of 15 million homes, providing 10 percent of the nation's clean energy. We are further accelerating the nation's transition to a carbon-free future by helping our customers reach their sustainability goals, setting our own ambitious goal of achieving 100 percent carbon-free generation by 2040 and by investing in promising emerging technologies to eliminate carbon emissions across all sectors of the economy. For more information: www.constellationenergy.com

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