The Energy of our Future: Community Solar, Wind, and Hydro

Community Energy is happening now. In states like Colorado, Minnesota, Massachusetts, and New York, it is deregulation of the utility industry, version 2.0. It is a fundamental shift away from the traditional centralized power system, namely wholesale markets, that allows electricity customers to buy clean energy from smaller, distributed generation sources, mostly solar farms, located in their service territory. Community Energy is still a small fragment of the electric industry, but it is growing explosively, and billions of dollars of capital, domestic and foreign, are building gigawatts of solar farms, wind farms, and hydro sites across North America. Community Energy is almost always less expensive, safer, cleaner, more easily built, and more reliable than traditional generation, and it is these characteristics that portend a future largely powered by community distributed generation.

Like ISO power, Community Energy can be sold by anyone that follows the regulations of the market. Developers, retail electric and natural gas companies, oil companies, municipalities, private asset owners, and property managers are examples of organizations that are currently selling contracts to customers under the guidelines of the local public utility commission. Critically, these assets are not interconnected to any ISOs, which have largely ignored generators of less than 5 MW nameplate capacity. This means that there are no ISO membership requirements to sell Community Energy contracts. It is a “DSO” product.

There are many benefits to the Community Energy revolution, but a few in particular are driving larger and more established energy companies to get involved, namely competitive electricity, natural gas, and oil companies. Why?

First, customers are demanding it, and they’re signing long-term contracts for community solar, wind, and hydro. By some accounts, competitive energy suppliers lose 25% of their electric, natural gas, and oil customers annually to churn whereas Community Energy customers are signing six to fifteen-year PPAs routinely. Over the past ten years, over one million customers have purchased on-site solar systems, often tied to twenty-year PPAs, a term unheard of for most energy companies. In the Community Energy world, these systems no longer need to be installed on residential rooftops and instead can be installed in fields or on warehouses at greater scale, providing competitively priced, local, safe, and clean energy that can be sold to customers. And with no fuel costs, price volatility is a non-issue.

Utility regulators also see the writing on the wall. Especially in New York, regulators want electric companies to offer a better-valued product to their customers. The Community Distributed Generation (CDG) program promulgated by the NYPSC was three years in the making and a key component to REV. The NYPSC wants energy suppliers to provide clean, local, and reliable energy products. CDG capacity is now available, customers are now signing up for it, and dozens of companies are building portfolios throughout the state. There are also several large national energy companies that are selling or launching Community Energy products in New York and Massachusetts.

As with the progression of deregulation across the United States, programs have also developed in California, Massachusetts, Minnesota, Maryland, Hawaii, Oregon, and Illinois, and some have developed to the point where initial markets rules are being revised. New York is in Phase 2, and Minnesota is contemplating adjustments to market pricing to promote residential adoption of the Xcel program. Other states, including some that are not deregulated, will open over the next five years, presenting opportunities to serve greater populations of utility customers.

Finally, Community Solar, Wind and Hydro are dramatically different than ISO power. Energy produced by these generating assets is compensated at retail, not wholesale, rates. Each kWhr is simply more valuable, and in some cases, twice as much as those produced by ISO resources. As previously mentioned, these distributed generation assets are not in the competitive wholesale markets. Instead, they are interconnected within the distribution network and financially settled with the distribution companies operating those grids. The energy produced by these assets is valued at or near the utility's all-in retail rate for power, reflecting the value of non-transmission alternatives, rather than simply the supply rate. This means that an energy company, or town, or any business, can sell power from their assets for the all-in cost of supply, transmission, and distribution, a significant increase in the value provided to, and the revenue potential of, every customer.

Community Renewable Energy is nascent but permanent. It can serve all types of customers in every market with open-minded and unencumbered regulators. The economics alone are now driving community renewable energy adoption to greater heights, and companies across the energy landscape, from oil majors to small energy retailers, are starting to build their presence in the Community Renewable Energy industry. All roads are converging on Community Energy.

--Nate Owen
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