

The Free Market Energy Act of 2015

U.S. Senator Angus King (I-Maine)

BACKGROUND SHEET

Distributed Energy Resources: Distributed Energy Resources (DER) are energy resources at the edge of the grid – at a person’s home or a small business, for example. This can include generation, storage, demand reduction, among other technologies. DER might be a large battery in your home that is connected to the larger electricity grid system outside, or grid-connected solar panels on a roof.

Net Metering: Net metering is a way for utilities to measure how much electricity has been used in a given month against how much was produced through distributed energy resources. Typically, at the end of each month, the utility will count the electricity consumed against electricity produced and either discount the bill or provide credit on future bills, if appropriate. In 2005, Congress directed states to consider implementing net energy metering, and as a result, 43 states and the District of Columbia have adopted some form of net metering.¹

DER Growth: Solar is the fastest growing form of DER and, indeed, electricity generation. In 2008, a nearly negligible amount of residential solar was installed in the United States. However, in 2012, approximately 500 MW was installed. Last year, 1,231 MW – or approximately 186,000 individual installations – was installed, representing the third consecutive year with more than 50 percent growth. That growth is expected to continue into the future.² DER is not only about individual energy sovereignty either. In fact, the Army recently announced that Fort Knox will soon rely 100 percent on distributed energy to help ensure the continued operation and security of the facility in the event of emergencies. The transition to DER is estimated to save an approximately \$8 million per year in energy costs, and is the result of a long-term power outage due to an ice storm.³ DER provides resilience to the grid, individual choice, and national security, often at a cost savings.

The Problem: Net metering is often referred to as a blunt instrument, which means it does not accurately account for the complex value relationship between the grid and DER and can lead to utilities not being properly compensated. For example, net metering often encourages people to orient their solar panels to face south in order to collect energy in the morning and the middle of the day when the grid does not really need it. In response, many utilities have levied charges on consumers who utilize DER. For example, the Salt River Project – an Arizona Utility – proposed a fee as high as \$50 per month for DER users, which disincentivizes consumers from investing in DER technologies.⁴ However, high connection fees and high electricity costs combined with falling prices for storage may also encourage people to completely disconnect from the grid, especially in places like Hawaii.⁵

The Solution: The electricity grid is changing and policies must change, too. Electricity rate structures must account for the value of the grid and the value of DER and send rational and more sophisticated price signals to the market. For example, in order to encourage DER users to generate electricity when it is needed, utilities could charge more for electricity consumed, and pay more for electricity generated, at times of peak demand. In fact, many states, like New York, are completely rethinking their utility structure.⁶

The Free Market Energy Act of 2015 would establish a set of parameters for the governance of distributed energy resources and retain the authority of each state to design its own set of rules within those parameters to properly reflect the state’s needs. Importantly, the parameters would protect the right of consumers to connect their distributed resources to the grid for a reasonable price while also ensuring that grid owners and operators receive proper compensation through a more sophisticated electricity rate design that would maximize the potential of distributed energy resources in relation to the grid.

¹ http://energy.gov/sites/prod/files/2014/05/f15/fupwg_may2014_net_metering.pdf

² <http://www.seia.org/research-resources/solar-market-insight-report-2014-q4>

³ http://www.army.mil/article/145354/Twenty_years_of_energy_investments_pay_off_for_Fort_Knox/

⁴ <https://www.greentechmedia.com/articles/read/solarcity-files-lawsuit-against-salt-river-project-for-antitrust-violations>

⁵ http://www.nytimes.com/2015/04/19/business/energy-environment/solar-power-battle-puts-hawaii-at-forefront-of-worldwide-changes.html?_r=0

⁶ <http://cleantechnica.com/2015/03/17/a-look-at-new-yorks-reforming-the-energy-vision-rev-initiative/>