Renewable Standard Offer

Description:

Standard Offer Contracts (RSOCs), including feed-in tariffs (FITs), refer to a policy of offering a certain value - either through credit or payment - for the generation and delivery of renewable energy to the grid.

SOCs may take a number of forms, but will generally be distinguished between wholesale energy providers (usually on the utility side of the meter) or customer generators (on the customer side of the meter). While net metering provides a credit for a kilowatt-hour (kWh) regardless of the price of that power, a standard offer provides a financial credit/kWh. In an effort to stimulate investment by the private sector, SOCs may be designed to provide a basis for an investment that is predictable and financeable over a period of time. This policy may also be an attempt at quantifying the value of the power being generated and delivered to the grid which acknowledges that, due to a variety of factors, not all kWhs have the same value.

Discussion of the Policy:

On the wholesale side, SOCs may be structured as a certain payment or "tariff" that is paid to those who can deliver power to the grid based on the characteristics of that power. This is generally a better approach for systems that are not directly tied to load.

Vermont has had a great deal of success with their standard offer. In 2013, they shifted the program from a rate setting standard offer to one based on a request for proposals (RFP) system. However, they kept the standard offer structure for farm methane projects. These projects receive 20-year contracts at 14.5¢/kWh for projects over 150MW and 19.9¢/kWh for projects under 150MW.

SOCs are attractive for offering predictable, stable, long-term revenue streams capable of drawing private investment and commercial lending to the renewable energy market. Detractors claim that the costs of long-term commitments are too high and do not reflect changing market conditions. While policies should include a mechanism allowing the rate to be adjusted to reflect market conditions, part of the attraction of SOCs is that they stabilize the guaranteed payment across an established period of time, reducing financing rates for private sector investors.

Setting of the price of the SOC may take a number of forms. For example, in a "reverse auction," bids are taken for generation and the lowest price is used to set the tariff price. In a more traditional return on investment-driven approach, the offer price is set at a level designed to repay the typical investment at a set earnings on equity level over a set period of time.

Value of Solar Tariffs (VOSTs) provide another form of standard offer. And, states could expand this concept to include other energy resources. In this approach, a value is determined in terms of the characteristics of the energy provided to the grid, rather than in terms of a specific technology.

In the debate over net metering, utilities have claimed that net metering amounts to a subsidy of solar owners from non-solar owners because the kilowatt hour (kWh) credited through a net metering policy credits not only the generation, but also the portion of the rate that is used to pay for transmission and distribution infrastructure. Solar advocates have countered that the value of the power delivered from a solar system is much higher than the credit a solar generator receives. VOSTs seek to quantify that value and compensate the solar owner accordingly.

Critical to the quantification of a value for energy that is fed into the grid is an acknowledgement that, depending on the form and character of energy, there are various benefits and costs that should be included in a comprehensive cost-benefit analysis. For example, in the development of the VOST proposal in Minnesota, the state established the following components to be included in the value calculation (see Figure 1 or this detailed study, for more information):

- Avoided Fuel Cost
- Avoided Plant O&M Cost
- Avoided Generation Capacity Cost
- Avoided Reserve Capacity Cost
- Avoided Transmission Capacity Cost
- Avoided Distribution Capacity Cost
- Avoided Environmental Cost
- Voltage Control Value
- Integration Costs (not a value, but a cost – reducing VOST price)

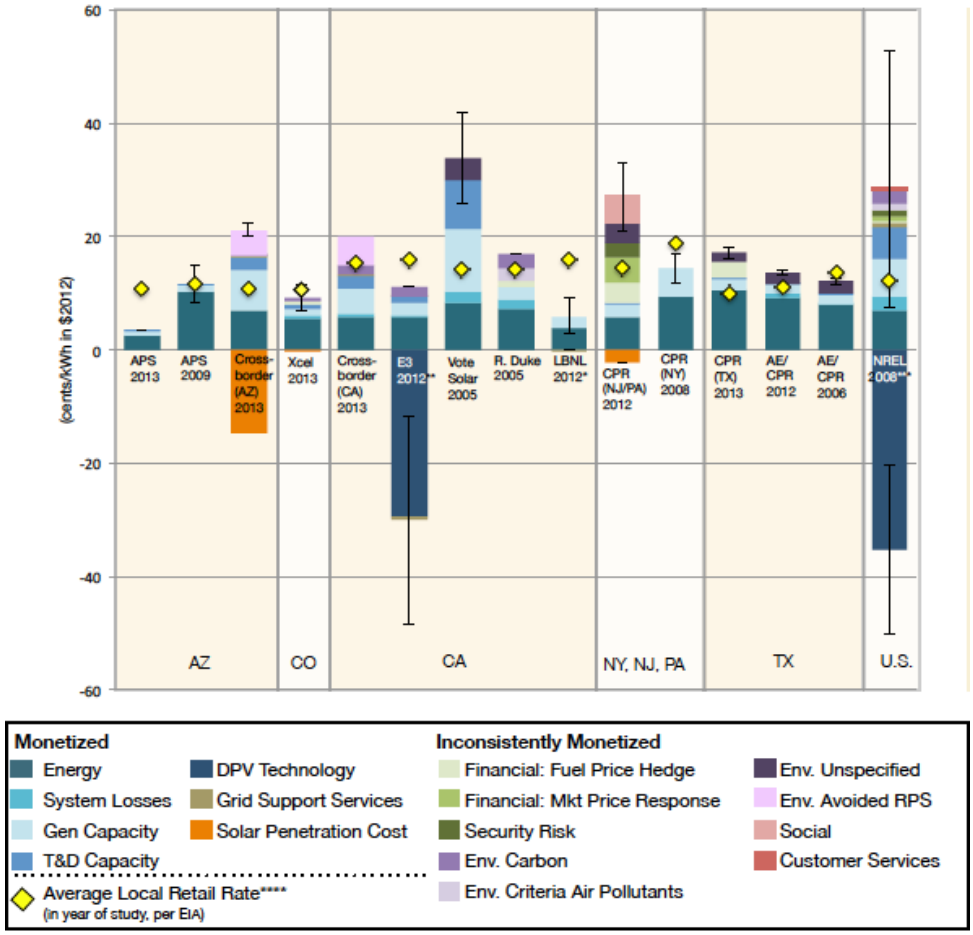

Figure 1 Energy benefit and cost assessment in a VOST Source: Rocky Mountain Institute

States may want to consider a variety of other issues associated with technologies that provide different benefits to the utility system. For example, the interconnection of storage systems may offer emergency dispatchable energy value beyond those characteristics identified here. We recommend that legislators not try and identify these values themselves, but rather instruct their utilities commission (or, as was the case in Minnesota, their commerce department) to undertake a study to determine these values.

Because of the tax implications of an individual receiving a payment for the power they deliver, when looking at customer-sited systems, the legislation should establish a credit as a primary component of the VOST - with a true-up payment to the customer for the full value on an annual basis. In this way, the customer is only paying taxes on the revenue they receive above the value of the credit.

Example State Programs:

- Austin Energy Value of Solar Rate
- Minnesota Department of Commerce, VOST
- Northern Indiana Public Service Company, Feed-in Tariff
- City and State Standard Offer Programs: California, Hawaii, Rhode Island, and Fort Collins, Colorado
- Vermont Standard Offer Program

Key Components:

Customer Side Value of Energy Standard Offer:

1. Establish the various components of value to be calculated.
2. Establish a minimum of retail net metering value and allow the customer to opt-in to a standard offer.
3. Conduct a study to determine the appropriate amount of the value of energy tariff.
4. Require that all utilities use the same developed and approved methodology.

Utility Side Standard Offers:

1. To ensure a reasonable rate of return, many successful SOC policies base the prices offered to suppliers on the levelized cost of renewable energy generation.
2. Offer long-term (20 year), must-take contracts.
3. Differentiate SOC prices by technology type, project size, and resource quality.
4. To encourage innovation and accelerate the pace of deployment, include a design feature that incorporates an incremental decrease in prices over time.
5. Minimize transaction costs by providing streamlined administrative procedures.
6. Specify how Renewable Energy Credits (RECs) will be handled. For instance, providing for whether there will be an additional payment for RECs.

More Information:

- The Alliance for Solar Choice, Feed in Tariffs and Value of Solar Tariffs
- Cleantechnica, "Is A Value Of Solar Tariff (VOST) Really Better Than Net Metering?"
- Greentech Solar, "A Rising Tension: 'Value-of-Solar' Tariff Versus Net Metering"
- Interstate Renewable Energy Council, A Regulator's Guidebook: Calculating the Benefits and Costs of Distributed Solar Generation Report
- National Renewable Energy Laboratory, Value of Solar Tariffs
- New York State Department of Public Service, Proceeding on the Value of Distributed Energy Resources
- PSEG Long Island Feed-in Tariff Program
- Rhode Island Standard Offer Statutory Language
- Rocky Mountain Institute eLab, Accurately Valuing Distributed Energy Resources