

2014 Tribal Renewable Energy Webinar Series

Questions and Answers

“Net Metering for Renewable Energy” Webinar June 25, 2014

Speakers: Lori Bird lori.bird@nrel.gov; Patrick McCulley Patrick@blackrocksolar.org; Lenny Gold lgold@utility-strategies.com; Susie Chang schang@gridalternatives.org

Attendees: 84

Q: What is the definition of net metering?

A: An arrangement with the electric utility that provides for surplus energy, measured by an electric meter, to be netted from the amount of energy being delivered by the electric utility to the customer. The customer pays the electric utility only for the net energy delivered to the customer. Should the surplus energy exceed the energy used by the customer, the electric utility will apply that surplus energy to future months. At the end of the year remaining surplus energy will be settled on a cash basis.

Or...From the Database of State Incentives for Renewables & Efficiency (DSIRE) -
<http://www.dsireusa.org/glossary/>

For electric customers who generate their own electricity, net metering allows for the flow of electricity both to and from the customer – typically through a single, bi-directional meter. When a customer’s generation exceeds the customer’s use, electricity from the customer flows back to the grid, offsetting electricity consumed by the customer at a different time during the same billing cycle. In effect, the customer uses excess generation to offset electricity that the customer otherwise would have to purchase at the utility’s full retail rate.

Q: The Grid Alternatives speaker, Susie Chang, mentioned there are green jobs training and potential paid employment opportunities for tribal members in the growing field of solar installation. What is the training and certification process for tribes to choose this as a career?

A: On August 21, 2014, Solar Energy International (SEI) in partnership with American Sustainable Housing Initiative (NASHI) completed a 5-day solar electric grid-tie training and installation project on Pine Ridge reservation in South Dakota. An exciting collaboration of partners involved in this workshop included SEI, NASHI, Thunder Valley Community Development Corporation, Oglala Lakota College (OLC), South Dakota School of Mines (SDSM), and Genpro Energy Solutions. Students and faculty from both OLC and SDSM attended the week long training as part of larger effort each school has undertaken to integrate solar energy into existing coursework and to provide demonstration projects for a strong emphasis on practical application as well as continued community awareness.





Photo courtesy of Solar Energy International

During the workshop participants, installed a 4.5kW grid-tie system on a straw-bale home recently constructed as part of a "net zero energy" research project funded through HUD's Office of Policy Development and Research.

Also, The North American Board of Certified Energy Practitioners (NABCEP) offers entry level knowledge assessment, professional certification, and company accreditation programs to renewable energy professionals throughout North America. Raising industry standards and promoting consumer confidence, NABCEP is known as the "gold standard" for PV and Solar Heating Installation and PV Technical Sales Certifications.

- Q: The webinar stated that regular non-renewable generating customers will subsidize customers with renewable generation systems. It also stated that rebates and rate subsidization has a significant impact on smaller utilities with a low income customer base. Does this data show the non-energy benefits of renewable energy? Assuming it does not, is there a way to quantify non-energy benefits?
- A: It is widely argued that there are benefits associated with and attributable to renewable energy. Most non-energy benefits (NEBs) are related to energy efficiency such as reduced building operating costs, increased value, comfort, health, and safety. NEBs are difficult to quantify and typically they are not factored into the utility cost rate structure. Because these rely on self-report surveys, and represent "hard to measure" benefit categories (comfort, etc.), significant work is needed. In a recent review of selected states, 5 NEBs were included in Total Resource Cost (TRC) calculations, usually as an "adder" to the benefits side (Daykin et al. 2011). The value tended to hold steady at 10%, but could be 25% for low-income programs (in Colorado). There is little data that would convince utilities that net metering of renewable energy does not cost the utility significant amounts that subsidization from non-renewable energy customers is approved by the PUC.
- Q: What challenges do Native American communities have in deploying renewable energy, including the advantages of net metering? How are these challenges overcome?
- A: Renewable energy can be a great benefit to tribes at the commercial, facility and community scale. Tribal members living in remote areas could especially benefit. The high up-front cost of renewables is likely the biggest barrier. Resources to overcome this barrier include, workshops and trainings on strategic energy planning (SEP), project management, technology overviews and financial strategies. All resources should be developed with extensive tribal mentoring and input. In addition technical assistance is offered. To access these resources please see "Links to Helpful Resources" at the end of this FAQ.
- Q: Alaska's has a unique landscape and climate. Will DOE's Indian Energy and Tribal Energy be addressing this?
- A: The Department of Energy (DOE) Office of Indian Energy (IE) is focusing efforts on the unique state of Alaska. IE held a training on August 21 & 22, 2014, in Nome, Alaska. IE will develop more resources and workshops



by region to accommodate the varied regional climate and conditions of Alaska. For more information, watch the DOE IE website. <http://energy.gov/indianenergy/resources/alaska-native-villages>

The U.S. Department of Energy Office of Indian Energy Policy and Programs (DOE office of Indian Energy), in partnership with the Denali Commission, provides Alaska Native villages with resources, technical assistance, skills, and analytical tools needed to develop sustainable energy strategies and implement viable solutions to community energy challenges.

START ALASKA PROGRAM

Through the Alaska START Program, federally recognized Alaska Native villages apply to receive community-based technical assistance with preparing tribal energy and infrastructure projects for financing and construction. See [START projects in Alaska](#).

ON-DEMAND TECHNICAL ASSISTANCE

Alaska Native villages and regional and village corporations can apply to receive up to 40 hours of technical assistance with residential energy efficiency, grantee support, strategic energy planning, transmission, interconnection of regional grids, and research and analysis.

FINANCIAL ASSISTANCE

Eligible Alaska Native villages and corporations can apply to receive financial assistance through the DOE Tribal Energy Program's competitive grant program, which focuses on evaluating, developing, and deploying energy efficiency and renewable energy projects.

Q: Are most Public Utilities Commissions or other regulatory bodies in favor of net metering for PV residential (or commercial)? What usually determines policy of net metering?

A: Most states do have net metering for residential customers and the PUCs implement that. Often net metering is established by law. The DSIRE database has more details on the origin and background on net metering in each state <http://www.dsireusa.org/>

Q: Do the IOUs in California apply the net metering policies fairly consistently?

A: Yes, the net metering is applied pretty consistently across the IOUs in CA. This article provides more information on net metering for all three of California's IOUs:

Aggregate net metering a reality for all three California IOUs

By [Susannah Churchill July 14, 2014](#)

Sometimes a single energy customer has multiple neighboring electricity meters. Farmers, for example, might have water pumping stations on more than one parcel of land. For a number of reasons, it makes sense to allow these customers to install just one solar array to reduce their electricity demand and utility bills at those various nearby locations. It lowers the cost to the customer, it reduces the administrative burden of serving that customer, and it generally supports a more efficient approach to clean energy. Californians in all three major utility territories can now take this commonsense approach to solar through the state's new aggregate net metering policy.

Late last week, the California Public Utilities Commission [approved a resolution](#) authorizing Southern California Edison and San Diego Gas & Electric to join PG&E in allowing their customers to aggregate their meters on adjacent properties. Making this policy a reality in the Golden State has been a long time coming. Today's approval is the final step in the implementation of SB 594, an aggregate net metering bill from Senator Wolk that was passed in 2012. Along the way, solar advocates pointed out problems with the advice letters first filed by the utilities to implement the law in October 2013. PG&E's revised tariff was [approved by the Energy Division](#) in February, but it took longer to resolve remaining issues for the two SoCal IOUs. Once the California Solar Initiative (CSI) rules have also been modified to allow state incentives to be applied to a net metering system sized to offset the entire aggregated load, we call this a job well done. Many thanks to the hardworking CPUC staff who saw it through!

SOURCE: The Vote Solar Initiative: <http://votesolar.org/>

Q: When the utility already has a decoupled structure, ie. a connection charge, shouldn't the renewable rate equal the retail rate and/or an accurate time of use rate, not a lower "avoided" cost rate, particularly given that most of the power will be used by the customer itself?

A: Decoupling is not the same as a connection charge. Decoupling is a policy that enables utilities to meet their revenue requirements even in the case of lower revenues – it is designed to make them indifferent to



energy efficiency and other types of customer actions that result in revenue loss. Under net metering, the crediting is at the retail rate with the exception of net excess generation at the end of a specified period (usually the end of the calendar year). So the net metering credit rolls from month to month until December. If there is a credit in December some utilities compensate that at a different rate, such as an avoided cost rate. These details differ under net metering laws, however. In some cases, there is continuous crediting. And the rate used for crediting at the end of the year can also vary, in locations where the crediting is done that way.

Links to Helpful Resources

There are many resources available to help Tribes decide which renewable resource is best for them. These include:

- The DOE Office of Indian Energy offers [education and training](#) on project development and financing and renewable energy fundamentals and an [Energy Resource Library](#).
- Tribal-specific renewable energy curriculum developed by the DOE Office of Indian Energy can be accessed any time on the [National Training Education Resource website](#).
- Basic information on the [types of renewable energy](#), as well as [tools and resources](#) for assessing renewable energy potential, are available on the NREL website.
- [Energy 101](#) videos developed by the DOE Office of Energy Efficiency and Renewable Energy provide short, basic overviews of the various types of renewable energy.
- The DOE Office of Indian Energy and Tribal Energy Program offer up to 40 hours of in-depth [technical assistance](#) for federally recognized Indian Tribes, tribal energy resource development organizations, and other organized tribal groups and communities to advance tribal renewable energy and energy efficiency projects.

Answers are provided by the National Renewable Energy Laboratory. If you have additional questions, email indianenergy@hq.doe.gov. The Tribal Renewable Energy Webinar Series is sponsored by the DOE Office of Indian Energy, Tribal Energy Program, and Western Area Power Administration.

