

U.S. Department of Energy
Quadrennial Energy Review
Second Installment
Stakeholder Meeting #6: Los Angeles, CA
Generating and Delivering Electricity to Meet GHG Targets
May 10, 2016
Written Statement of Jana Ganion, Energy Director, Blue Lake Rancheria, California

Good day everyone, it is an honor to be in such accomplished company in terms of generating and delivering electricity to meet GHG targets. For example, Sacramento Municipal Utility District (SMUD) built the nation's first utility-scale solar array, and Pacific Gas and Electric Company (PG&E) has more residential customers using solar – over 200,000 – than anywhere else in the U.S. My sincere thanks to the Department of Energy (DOE) for convening this planning effort and these important public stakeholder meetings.

I am Jana Ganion, Energy Director for the Blue Lake Rancheria, a federally recognized Native American tribal government. I oversee and deploy the Tribe's clean energy strategy. Our goals are to reduce greenhouse gas (GHG) emissions eventually to zero, reduce and levelize costs of energy, create jobs, increase energy security and community resilience, and reverse the causes of climate change. And I can tell you from first-hand experience, building green infrastructure successfully achieves all of those goals – through energy efficiency projects alone we are saving \$40,000 a month on power bills and we have increased employment by 10%.

The Tribe is located in rural northwestern California, 5 miles inland from the Pacific Coast. The Tribe is an appointee to the U.S. Department of Energy, Office of Indian Energy, Indian Country Energy and Infrastructure Working Group (ICEIWG), where we work with other tribal governments on energy policy. Due to the Tribe's GHG reduction and community resilience activities, it was selected by the White House as a 2015-2016 "Climate Action Champion," one of 16 communities in the U.S. to receive this honor.

Both the Tribe and the State of California have adopted aggressive GHG reduction targets, and this alignment of goals has created a productive nexus for clean energy deployment. Our comprehensive energy efficiency, distributed-generation renewable energy, green fuel biodiesel manufacturing and electric vehicle (EV) infrastructure and fleet migration, and other projects have been achieved with the help of state funding and incentives.

Our current project is a low-carbon, community-scale microgrid. The microgrid includes a 0.5MW solar array, 1MWh of battery storage, and a central management control system which will balance ~1.5 MW in combined generation with about 1MW in combined loads across a 6-building campus. This project will be online by the end of this year (2016), and will power the Tribe's critical facilities – including government offices, economic enterprises, and an American Red Cross shelter-in-place. In business-as-usual mode the microgrid will reduce the use of fossil energy by ~40% and increase our demand response capabilities. In an emergency it will provide 'life, health, and safety-level' power in islanded mode for as long as needed.

As exciting as our projects have been, they won't make any difference in global climate health by themselves, so we are also actively communicating lessons learned to hopefully ease and

support replication. This QER calls for input on research, development, analytical tools, and data. From our clean energy activities to date, we have compiled the following recommendations, notably with input from the Schatz Energy Research Center at Humboldt State University – a key partner on all our clean energy initiatives.

Technology Innovation and Smart Grid – The Tribe has made significant investments in new energy technologies. With due respect to those who think new tools are the only solution to climate mitigation: we already have the technology we need to reach GHG targets. We need fast-tracked innovation to make them work *better*. We need hardware and technology on the customer and utility side to easily allow bi-directional flow of power, and to integrate and control distributed generation and distributed energy storage. As a specific example, we need to work with inverter manufacturers to – very safely – enable remote control and transitions between islanded and grid-connected modes. Admittedly, these things aren't as sexy as cold fusion, but they will reverse climate change now.

Distributed Generation (DG) – We need regulatory and pricing programs for streamlined and economical DG installations. We need more modeling of interconnection scenarios to inform utility and regulatory policy and incentives. Thresholds governing the size of DG systems should be eased, and we need to standardize equipment and components so that costs and technologies are readily understood by utility and DG project teams. As an example from our microgrid, exceeding a somewhat arbitrary – but regulated – 1MW nameplate limit added over \$400,000 to our project. We reduced our generation by 38kW, and virtually eliminated this line item. For all low-GHG projects we need more standardized and reliable information, telemetry, and SCADA that allow for real-time load balancing, to adjust the output of DG exports according to the constraints and load conditions of the grid. And more policy and incentive support for net metering, and virtual aggregated net metering programs would be immediately effective. The good news is that most states already have net metering policy:

<http://www.ncsl.org/research/energy/net-metering-policy-overview-and-state-legislative-updates.aspx>, we just need to maintain and expand these programs.

State-Level Blueprints for Increased Deployment of Clean Energy – We are fortunate to be in California, where Governor Brown, the California Energy Commission, the California Public Utilities Commission, and leading-edge utilities like PG&E are all pulling toward an aligned set of low-GHG goals. This has resulted in real investment in projects like our microgrid, heavily supported by state funding through the California Energy Commission's EPIC program. We have also benefitted from California's decoupling of energy efficiency measures from utility kilowatt-hour sales structures – vastly improving utilities' ability to deliver cost-effective services. Investing in energy efficiency – reducing use – is often the most cost-effective way to deliver the total electricity we need. We recommend the DOE support each state creating a blueprint for low-GHG strategies – reflecting the unique 'starting points' of each. DOE can facilitate knowledge transfer (e.g. decoupling energy efficiency from utility rates) from one region to another.

Building Local Capacity – To implement low-GHG sources of energy, we need to build local capacity. While the DOE and national labs are the superstars of renewable energy, we also need local expertise to implement specific projects. For example, the Tribe is a very small government, and has sourced engineering, technical, financial, and policy expertise by partnering with our local Humboldt State University, our local Schatz Energy Research Center,

and the local joint powers Redwood Coast Energy Authority. To be clear: without these local partners, our projects would not have been possible.

Consumer Choice – We need more policies and programs that give consumers the ability to choose clean energy sources, including utility-sponsored ‘green power’ programs such as PG&E’s “Solar Choice,” community solar programs, and Community Choice Aggregation (CCA) programs, among others. These programs allow millions of commercial and residential consumers to ‘vote with their feet’ to move their power bills to green power purchasing that helps meet GHG targets, and creates widespread financial support for utilities’ increased investment in clean energy. Commercial-scale customers in particular can move an avalanche of investment into green power with modest regulatory, policy, and incentive support.

- Green pricing: <http://apps3.eere.energy.gov/greenpower/markets/pricing.shtml?page=0>
- Green power marketing: <http://apps3.eere.energy.gov/greenpower/markets/marketing.shtml>
- CCA: http://apps3.eere.energy.gov/greenpower/markets/community_choice.shtml

National Energy and Climate Policy – We need a national energy policy that moves us toward a renewable energy economy. This should include a *national renewable portfolio standard*, and *national pricing for carbon emissions*. An example is the **Clean Power Plan/Clean Energy Incentive Program**, which we enthusiastically support for its national carbon trading market and early investment in zero-emission power components.

State of Energy Emergency – Finally, we need to move *faster*. We need a State of Energy Emergency in this country where federal, state, tribal, and local authorities and agencies (the White House, DOE, FERC, NARUC, DOI, EPA, etc.) declare fast-tracked actions to transition to low-GHG sources of energy as fast as possible.

Thank you.

Jana Ganion
Energy Director
Blue Lake Rancheria, California
www.bluelakerancheria-nsn.gov
jganion@bluelakerancheria-nsn.gov