

Grid Reliability and Greenhouse Gas Innovation Tariff

Center for Energy Efficiency & Renewable Technologies

Jan McFarland, Senior Advisor

Background: Preferred resources can make substantial contributions to grid reliability. This proposed Living Pilot provides an immediate opportunity to demonstrate this. We can objectively try different options and see what technologies and programs are effective and which options fall short. This proposal adds GHG reductions/savings as another important metric to the Living Pilot by tying a specific incentive to CO₂ equivalent reductions through a Grid Reliability and GHG Innovation Tariff.

Purpose: To encourage grid reliability options that will meet local capacity requirements and deploy location specific preferred resources in Southern Orange County (Johanna & Santiago Substations) based on their GHG reductions. Resources will be paid a capacity payment equivalent to what is contemplated for new gas of \$200/kw-year for any of effective flexible capacity (EFC), local capacity requirement (LCR), or verified reduction in peak load plus an energy payment related to spot peak energy prices and GHG reductions. The purpose of the tariff is to develop grid reliability GHG metrics, accounting and metering protocols, verification, evaluation and tariff adjustment. Determine what measures or technologies provide grid stability benefits along with verified GHG reductions. This tariff will also help utility customers manage their electricity footprint with GHG reductions in mind. 1 MWh of gas emits roughly 1,000 pounds of CO₂ equivalent emissions, while 1MWh of preferred resources avoids emitting 1,000 pounds of CO₂ equivalent emissions.

Eligibility: Any GHG reduction technology or measure that will also provide grid stability, resiliency or preferred resources that manage load growth i.e. energy efficiency, demand response, PV, solar thermal, energy storage, ground source heat pumps, CHP, etc.

Transparent Program Design:

- Tariff is based on GHG reductions or prevention, revenue tied to GHG reductions, the greater the GHG reduction, the greater the incentive (incentive paid based on metered output/reduction over time)
- Open architecture, public tariff program data, all projects within this program would be required to provide detailed project information on the web to spur innovation, encourage analysis and program adjustment over time. Customer confidentiality and proprietary technology information would be ensured.
- Must be harmonized with retail rate redesign effort to recognize new load shape.

Transparent Program Design (continued):

Grid Reliability and Greenhouse Gas Innovation Tariff

Center for Energy Efficiency & Renewable Technologies

Jan McFarland, Senior Advisor

- The program is essentially paying for development of appropriate metrics, protocols, metered data, and tons of CO₂ equivalent GHG reductions. Suggest a payment above the current CARB cap and trade price of \$11 per ton to a price in the range of \$50 to \$80 per ton of reduction to encourage participation and active involvement in the pilot.