



HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

January 31, 2012, 8:15 A.M.

Room 325

(Testimony is 4 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 2525

Chair Coffman and members of the Committee:

The Blue Planet Foundation strongly supports HB 2525, a measure which authorizes the Public Utilities Commission (PUC) to perform necessary electric system reliability and grid access oversight functions and to allow the commission to contract for the services of a Hawaii Electricity Reliability Administrator (HERA) to support the commission in carrying out those critical functions throughout the State.

Rationale

Blue Planet views establishment of the HERA as a keystone clean energy legislation to enable more accessible, fair, transparent, and predictable grid interconnection for renewable energy generators while maintaining reliable system operations for the grid. Adoption of this policy will provide quasi-independent oversight of grid interconnection and operations to ensure that the utility is doing everything it can to reliably maximize the amount of renewable energy Hawaii uses.

Numerous technical, operational, and regulatory issues concerning Hawaii's century-old electrical system are stifling the full potential of renewable energy production. The proposed policy in HB 2525 can help clear the path by proposing a separate entity within the PUC to oversee grid interconnection and reliability. HERA would open the doors to greater integration of renewables while establishing formal, objective, and verifiable reliability and interconnection standards for Hawaii's electricity grids. Clear regulatory oversight of the state's grids would ensure system reliability, resiliency, and accountability.

What are reliability standards?

Blue Planet believes that all generators of electricity who plug into the various island electricity grids should be governed by formal electric system reliability standards similar to those promulgated by the North American Electric Reliability Corporation (NERC). Although Federal Power Act provisions concerning electric reliability standards do not apply in Hawaii, electric utility companies electric system planning and operations, including decisions concerning the interconnection and curtailment of renewable energy providers, should be governed by formal reliability standards.

Reliability standards are planning and operating rules that utilities follow to ensure system reliability. These standards are typically developed using a stakeholder-driven process similar to the current Reliability Standards Working Group. On the mainland, once the standards are approved by the U.S. Federal Energy Regulatory Commission (FERC), NERC reliability standards become legally binding on all owners, operators and users of the bulk power system. NERC has the legal authority to enforce compliance with NERC reliability standards, which it achieves in part through the imposition of financial penalties.

Successful models elsewhere

The experience of New Zealand demonstrates that formal reliability standards are appropriate and utilized not only in North America, but on isolated island electric grids similar to those in Hawaii. The electric system in New Zealand consists of two separate island grids with limited interconnection via a high voltage direct current undersea cable. The bulk power electric system is subject to formal reliability standards established by the New Zealand Electricity Commission¹. These New Zealand standards are comparable to NERC reliability standards governing North America.

For example, under New Zealand reliability standards, "Principal Performance Obligations," or PPOs, establish real-time reliability standards (i.e., system frequency and voltage control) the bulk electric system operator must comply with to ensure reliable operation of generation and transmission². Similarly, grid reliability standards set forth the requirements for the design and upgrade of the high voltage transmission system; these requirements are analogous to NERC reliability standards related to transmission planning³. The grid system operator is also required

¹ Available at www.electricitycommission.govt.nz/opdev/transmis/gridreliability/index.html#grs

² Available at www.electricitycommission.govt.nz/pdfs/rulesandregs/rules/rulespdfpartC-20Jul09.pdf

³ Available at www.electricitycommission.govt.nz/opdev/transmis/gridreliability/index.html#grs.

to submit monthly system performance reports to the Electricity Commission. The reports must summarize power system performance, including compliance with system frequency PPOs⁴.

Formal reliability standards similar to the NERC reliability standards are appropriate to guide Hawaii's transition to electric grids supplied by increasing amounts of renewable energy. Grid reliability has emerged as a critical issue in the addition of greater amounts of variable energy resources (solar, wind, etc.) to Hawaii's grid. Addressing the various technical impacts of increasing amounts of variable renewable energy on the electric grids demands formal reliability standards and operating practices tailored for Hawaii. Formal reliability standards (such as the NERC standards) may be particularly valuable in Hawaii because they provide an objective basis to assess any grid reliability impacts and ensure reliable grid operation.

Funding

House Bill 2525 contemplates establishing a surcharge to fund the reliability standards and the HERA. Blue Planet supports this surcharge but we note that a surcharge could be avoided by simply appropriating a greater share of the PUC special fund to the PUC.

Currently, the PUC is funded through the PUC special fund which collects funding from various sources, most significantly an annual fee of one-half of one per cent of the gross income of the public utility's previous year's business. About half of the revenue in this special fund—which receives approximately \$17 million to \$18 million annually—is diverted to the state's general fund, however. The PUC is currently deliberating dockets that will fundamentally reshape Hawaii's electric utility sector. Smart grid, reliability standards, on-bill financing, integrated resource planning—these dockets require thorough deliberation, research, and expert input. The PUC must have the talent and resources to adequately investigate and develop the right policies for Hawaii's 21st century electricity industry. The total funding available to them through their revenues should be available for their work.

The public utilities commission needs funding to navigate the multi-billion dollar transition to Hawaii's clean energy economy. Adoption of formal reliability and interconnection standards and HERA is a necessary additional expense. Appropriating the full amount of the PUC special fund to the PUC for the purposes of this important new role is a possible sensible solution to avoid an additional surcharge.

⁴ Available at www.systemoperator.co.n2/fl947.26087875/so-system-perf-repon-dec-09.pdf

Achieving the preferred system of energy self-sufficiency for Hawaii—one where wind and solar are no longer considered “alternative” energy—requires restructuring established paradigms in electricity production and distribution. An effective first step is replacing utility control of grid access with control by a neutral entity tasked with establishing reliability and interconnection rules that encourage clean energy development in all appropriate forms. Such a third-party oversight model for grid access has succeeded elsewhere in democratizing power production.

MINOR SUGGESTED AMENDMENTS

1. Page 1, Line 15: after “reliability” insert “and interconnection standards”
2. Page 2, Line 5: after “operating” insert “criteria and”
3. Page 3, Line 10: at the beginning insert “In addition to those standards and protocols contained in General Order No. 7,” the public...
4. Page 6, Line 20 through Page 7, Line 11: In this definition it would seem that “owner” could refer to the utility. The key point is that anyone selling or providing energy to the utility is not defined as a utility and under the jurisdiction of the PUC which as it should be. On Line 7, Page 7 insert after “utility”: “ ,as defined in section 269-1,”

Thank you for the opportunity to testify.