
A BILL FOR AN ACT

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that a modern electrical
2 grid is essential to meeting Hawaii's clean energy goals. In
3 recent years, Hawaii's electric utilities have integrated
4 significant levels of new renewable energy projects on each
5 island grid, and distributed generation in the form of rooftop
6 photovoltaic systems has been the fastest growing share of new
7 renewable energy generation each year. To date, Hawaii's
8 electric utilities are on track to exceed the next renewable
9 portfolio standard goal in 2015. However, moving beyond the
10 current levels of renewable energy on each grid will likely
11 require further investment in advanced grid modernization
12 technology to meet the State's aggressive clean energy goals and
13 maintain a reliable electricity grid.

14 The legislature believes further investments in advanced
15 grid modernization technology may be needed because Hawaii's
16 island grids are reaching significant levels of variable
17 renewable energy that can affect both the overall operation of
18 the grid at the system level and the ability of utilities to



1 provide safe and reliable service at the point of delivery to
2 customers. Continued growth in renewable energy, particularly
3 distributed generation, will require investment to modernize the
4 grid to interconnect higher levels of distributed generation and
5 to support other new customer energy options such as electric
6 vehicles and demand response technologies.

7 The legislature also finds that the rapid growth of the
8 State's solar industry has reduced Hawaii's dependence on
9 imported oil, created thousands of jobs during a statewide
10 economic downturn, and provided thousands of households and
11 businesses new options to manage their energy bills. The
12 legislature believes a long-term, sustainable solar industry is
13 in the State's interest.

14 The legislature further finds that the solar industry is
15 significantly impaired by the current interconnection process.
16 As Hawaii transitions from the early stages of its clean energy
17 transformation, the State needs a more transparent and timely
18 process for electricity customers to exercise their options to
19 manage their energy use.

20 The legislature additionally finds that, as distributed
21 generation plays an increasingly significant role in the State's
22 clean energy transition, the utility's processes for



1 interconnection and distribution system planning must evolve
2 along with new rules and tariffs for distributed generation.
3 The current rules and tariffs for distributed generation were
4 developed to support a nascent and emerging solar industry. Now
5 that this energy source and industry have achieved a significant
6 portion of the electricity system's energy mix, tariffs for
7 distributed generation need to be developed and adopted that
8 compensate the utility for grid services provided to customers
9 and that compensate customers for the grid services provided to
10 the utility by distributed generation. These modified tariffs
11 will also set the stage for further technological innovation in
12 this sector as advanced information, photovoltaic inverters, and
13 energy storage systems expand the nature of services offered by
14 customer-sited resources to the electric grid operator.

15 The legislature finds that the resolution of the matters
16 noted in this measure require detailed discussion of technical,
17 policy, and economic issues, and a process that will expedite
18 decision-making on near-term, high priority issues. In
19 recognition of the importance of these issues, the purpose of
20 this Act is to:



- 1 (1) Establish guiding principles and outline a timely
- 2 regulatory process to address modernization of the
- 3 Hawaii electric system; and
- 4 (2) Dedicate sufficient resources to the public utilities
- 5 commission and division of consumer advocacy of the
- 6 department of commerce and consumer affairs to support
- 7 a timely and expert review and resolution of the
- 8 various identified issues related to grid
- 9 modernization.

10 SECTION 2. Section 269-145.5, Hawaii Revised Statutes, is
 11 amended to read as follows:

12 "[+]§269-145.5[+] **Advanced grid modernization technology;**
 13 **principles.** (a) The commission, in carrying out its
 14 responsibilities under this chapter, shall consider the value of
 15 improving electrical generation, transmission, and distribution
 16 systems and infrastructure within the State through the use of
 17 advanced grid modernization technology in order to improve the
 18 overall reliability and operational efficiency of the Hawaii
 19 electric system.

20 (b) In advancing the public interest, the commission shall
 21 balance technical, economic, environmental, and cultural



1 considerations associated with modernization of the electric
2 grid, based on the following principles:

- 3 (1) Enable a diverse portfolio of renewable energy
4 resources;
- 5 (2) Expand options for customers to manage their energy
6 use;
- 7 (3) Maximize interconnection of distributed generation to
8 the State's electric grids on a cost-effective basis
9 at non-discriminatory terms and at just and reasonable
10 rates, while maintaining the reliability of the
11 State's electric grids, and allow such access and
12 rates through applicable rules, orders, and tariffs as
13 reviewed and approved by the commission;
- 14 (4) Determine fair compensation for electric grid services
15 provided to customers and for services provided to the
16 electric grid by distributed generation customers and
17 other non-utility service providers; and
- 18 (5) Maintain or enhance grid reliability and safety
19 through modernization of the State's electric grids."

20 SECTION 3. (a) By July 1, 2014, the public utilities
21 commission shall commence regulatory action to address the
22 technical, policy, and economic issues associated with the



1 modernization of the State's electric grids, based on the
2 principles identified in section 269-145.5(b), Hawaii Revised
3 Statutes; provided that the commission may commence additional
4 regulatory actions to resolve issues associated with grid
5 modernization at its discretion.

6 (b) Regulatory actions commenced by the public utilities
7 commission pursuant to this section may include forming and
8 facilitating working groups or opening proceedings in order to
9 promote the efficient and timely resolution of issues. Any
10 regulatory action shall encompass one or more procedural
11 timelines, as determined by the public utilities commission,
12 including an expedited timeline for resolving short-term, high
13 priority issues associated with grid modernization.

14 (c) The public utilities commission shall submit a final
15 report of its findings and recommendations to the legislature no
16 later than twenty days prior to the convening of the regular
17 session of 2016, and shall include an interim report of progress
18 as part of its annual report submitted in January of 2015
19 pursuant to section 269-5, Hawaii Revised Statutes.

20 (d) The public utilities commission and the division of
21 consumer advocacy of the department of commerce and consumer
22 affairs shall be exempt from section 103D-304, Hawaii Revised



1 Statutes, in the procurement of any professional services needed
2 to conduct any regulatory actions required pursuant to this
3 section.

4 SECTION 4. There is appropriated out of the public
5 utilities commission special fund under section 269-33, Hawaii
6 Revised Statutes, the sum of \$1,000,000 or so much thereof as
7 may be necessary for fiscal year 2014-2015 for the public
8 utilities commission to conduct any regulatory actions required
9 pursuant to section 3 of this Act; provided that the public
10 utilities commission shall provide intervener parties access to
11 professional services procured by the commission to support this
12 proceeding as deemed necessary and appropriate by the
13 commission.

14 The sum appropriated shall be expended by the public
15 utilities commission for the purposes of this Act.

16 SECTION 5. There is appropriated out of the public
17 utilities commission special fund under section 269-33, Hawaii
18 Revised Statutes, the sum of \$750,000 or so much thereof as may
19 be necessary for fiscal year 2014-2015 for the division of
20 consumer advocacy of the department of commerce and consumer
21 affairs to represent the interests of consumers in accordance
22 with section 269-51, Hawaii Revised Statutes, in the course of



1 any regulatory actions required pursuant to section 3 of this
2 Act.

3 The sum appropriated shall be expended by the department of
4 commerce and consumer affairs for the purposes of this Act.

5 SECTION 6. Statutory material to be repealed is bracketed
6 and stricken. New statutory material is underscored.

7 SECTION 7. This Act shall take effect upon its approval;
8 provided that sections 4 and 5 shall take effect on July 1,
9 2014.



Report Title:

Grid Modernization; Hawaii Electric System; Public Utilities Commission; Appropriation

Description:

Amends the public utilities commission principles regarding the modernization of the electric grid. Requires the commission to commence regulatory action no later than July 1, 2014, to address the technical, policy, and economic issues associated with the modernization of the State's electric grids. Appropriates funds to cover costs of the proceeding. (SD1)

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