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# A BILL FOR AN ACT

RELATING TO RENEWABLE ENERGY.

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

1           SECTION 1. The legislature finds that pursuant to Act 97,  
2 Session Laws of Hawaii 2015, Hawaii has committed to achieving a  
3 one hundred per cent renewable portfolio standard by December  
4 31, 2045. This transition away from imported fossil fuels  
5 toward locally available renewable energy sources is critical  
6 for ensuring the State's energy independence, economic  
7 sustainability, and environmental resilience.

8           The legislature further finds that the transition to a  
9 clean energy economy requires customer-friendly processes to  
10 enable widespread adoption of distributed energy resources and  
11 electrification technologies. Current interconnection and  
12 utility service upgrade processes have at times led to delays,  
13 unexpected costs, and increased customer dissatisfaction,  
14 hindering progress toward achieving the State's clean energy  
15 goals. These challenges also result in localized power quality  
16 issues and power outages when customers increase loads without  
17 informing the utility.



1       The legislature also finds that establishing streamlined  
2 and transparent interconnection processes will encourage  
3 consumer adoption, enable proactive utility planning, and ensure  
4 reliability and cost-effectiveness in the power system. The  
5 integration of smart inverters and other customer-sited  
6 technologies is critical to minimizing grid investments and  
7 achieving a clean, sustainable energy future.

8       Accordingly, the purpose of this Act is to establish a  
9 grid-ready home interconnection process that supports the rapid  
10 adoption of clean energy technologies, facilitates smart utility  
11 investments, and ensures power system reliability by  
12 retrofitting existing homes or building new homes with grid-  
13 ready capabilities.

14       SECTION 2. Section 269-141, Hawaii Revised Statutes, is  
15 amended by adding a new definition to be appropriately inserted  
16 and to read as follows:

17       "Grid-ready home" means any residential property equipped  
18 or modified to anticipate and streamline the integration of  
19 clean electrification technologies such as electric vehicle  
20 chargers and heat pumps, distributed energy resources such as  
21 photovoltaic systems, energy storage batteries leveraging



1 current national standards for functionality such as  
2 Underwriters Laboratories, Inc., (UL) 1741 and UL 3141, and  
3 advanced grid modernization technology."

4 SECTION 3. Section 269-142, Hawaii Revised Statutes, is  
5 amended to read as follows:

6 "[+]§269-142[+] **Reliability standards; interconnection**  
7 **requirements; adoption and development; force and effect.** (a)

8 The commission may adopt, by rule or order, reliability  
9 standards and interconnection requirements. Reliability  
10 standards and interconnection requirements adopted by the  
11 commission shall apply to any electric utility and any user,  
12 owner, or operator of the Hawaii electric system. The  
13 commission shall not contract for the performance of the  
14 functions under this subsection to any other entity as provided  
15 under section 269-147.

16 (b) The commission may develop reliability standards and  
17 interconnection requirements as it determines necessary or upon  
18 recommendation from any entity, including an entity contracted  
19 by the commission to serve as the Hawaii electricity reliability  
20 administrator provided for under this part, for the continuing  
21 reliable design and operation of the Hawaii electric system.



1 Any reliability standard or interconnection requirement  
2 developed by the commission shall be adopted by the commission  
3 in accordance with subsection (a) [~~in order~~] to be effective.  
4 The commission shall not contract for the performance of the  
5 functions under this subsection to any other entity as provided  
6 under section 269-147.

7 (c) The commission shall have jurisdiction over matters  
8 concerning interconnection requirements and interconnections  
9 located in the State between electric utilities, any user,  
10 owner, or operator of the Hawaii electric system, or any other  
11 person, business, or entity connecting to the Hawaii electric  
12 system or otherwise applying to connect generation or equipment  
13 providing ancillary services to, or operate generation and  
14 equipment providing ancillary services in parallel with the  
15 Hawaii electric system under processes established in accordance  
16 with section 269-145. Nothing in this subsection is intended to  
17 give the commission general supervision authority over any user,  
18 owner, or operator of the Hawaii electric system or any other  
19 person, business, or entity that is not a public utility as  
20 defined in section 269-1.



1        (d) The commission shall establish a streamlined grid-  
2 ready home interconnection process to equip existing and new  
3 homes with customer-sited and grid-tied renewable energy  
4 generation and storage systems. The process shall include:

5        (1) A streamlined notification and approval process for  
6 customers seeking to install distributed energy  
7 resources systems using Underwriters Laboratories,  
8 Inc., (UL) 1741, UL 3141, or equivalent certified  
9 functionality;

10       (2) A tiered cost-sharing mechanism to facilitate payment  
11 by interconnecting customers for service upgrades and  
12 interconnection costs attributable to their  
13 installation, consistent with applicable cost  
14 causation principles, to be paid by the owner of the  
15 customer generating facility as follows:

16       (A) \$50 for a customer generating facility with a  
17 capacity no more than twenty-five kilowatts;

18       (B) \$5 per kilowatt for a customer generating  
19 facility with a capacity greater than twenty-five  
20 kilowatts and no more than one hundred kilowatts;

21       and



1           (C) \$10 per kilowatt for a customer generating  
2           facility with a capacity greater than one hundred  
3           kilowatts;  
4           provided that the cost-sharing schedule shall be  
5           reviewed and may be adjusted every six months upon  
6           approval by the commission, based on the actual costs  
7           of service upgrades completed by the public utility  
8           during the preceding two years to facilitate  
9           interconnection; provided further that nothing in this  
10          paragraph shall be construed to modify, waive, or  
11          shift established cost causation principles, and  
12          interconnecting customers shall remain responsible for  
13          the reasonable and necessary grid upgrade costs caused  
14          by their interconnection project; provided further  
15          that for the purposes of this paragraph, "customer  
16          generating facility" means a customer-sited and grid-  
17          tied renewable energy generation and storage system;  
18          (3) Procedural timelines for public utility action,  
19          including requiring the public utility to:  
20          (A) Notify the customer applying for interconnection  
21          that the customer's application is complete or if



1           not, the specific information that is missing, no  
2           later than five business days after receipt of  
3           the application;  
4           (B) Provide the customer an executable  
5           interconnection agreement no later than five  
6           business days after confirming the completeness  
7           of the interconnection application; and  
8           (C) Provide the customer a fully executed  
9           interconnection agreement, process necessary  
10           notifications, and grant interconnection no later  
11           than five business days after receiving the  
12           customer's executed interconnection agreement and  
13           verifying that all required permits have been  
14           issued by the appropriate authority;  
15           (4) Provisions to allow distributed energy resources  
16           operation with managed power export and import where  
17           service upgrades are required; provided that the  
18           upgrades shall be completed within three months of  
19           notification to the interconnecting customer by the  
20           public utility;



- 1       (5) Protocols for virtual commissioning and issuing of
- 2       interconnection agreements within one week of the
- 3       submission of a commissioning packet; and
- 4       (6) Requirements obligating regulated public utilities to
- 5       update their interconnection rules to allow for the
- 6       interconnection and use of vehicle-to-grid and
- 7       vehicle-to-home capable electric vehicles and electric
- 8       vehicle charging equipment, including recognition of
- 9       applicable national safety and interoperability
- 10       standards, such as Underwriters Laboratories, Inc.,
- 11       (UL) 1741 and other relevant certifications, to enable
- 12       electric vehicles to provide grid services, backup
- 13       power, and load management functionality."

14       SECTION 4. Section 269-145, Hawaii Revised Statutes, is  
 15 amended to read as follows:

16       "**[+]§269-145[+] Grid access; procedures for**  
 17 **interconnection; dispute resolution.** (a) Each user, owner, or  
 18 operator of the Hawaii electric system, or any other person,  
 19 business, or entity seeking to make an interconnection on the  
 20 Hawaii electric system shall do so in accordance with procedures  
 21 to be established by the commission by rule or order.



1 (b) The commission shall have the authority to make final  
 2 determinations regarding any dispute between any user, owner, or  
 3 operator of the Hawaii electric system, or any other person,  
 4 business, or entity connecting to the Hawaii electric system,  
 5 concerning either an existing interconnection on the Hawaii  
 6 electric system or an interconnection to the Hawaii electric  
 7 system created under the processes established by the commission  
 8 under this section.

9 (c) In establishing a rule or order for the utility  
 10 interconnection process for renewable energy and storage systems  
 11 for grid-ready homes, the commission shall ensure the process:

12 (1) Allows licensed electricians to isolate electrical  
 13 service at utility meters for meter panel replacement,  
 14 meter socket adapter installation, or main panel  
 15 upgrades; provided that access shall be subject to:

16 (A) Notification by the public utility to the owner  
 17 of the grid-ready home of the planned service  
 18 disconnection on the morning of the planned  
 19 service disconnection;

20 (B) Confirmation of passed inspections by the  
 21 appropriate authority; and



1           (C) Confirmation of reconnection procedures; and  
2           (2) Establishes a virtual commissioning process whereby  
3           system installers may submit documentation confirming  
4           compliance with filed settings and operational  
5           requirements of the installed distributed energy  
6           resources."

7           SECTION 5. Section 269-145.5, Hawaii Revised Statutes, is  
8 amended to read as follows:

9           "**§269-145.5 Advanced grid modernization technology;**  
10 **principles.** (a) The commission, in carrying out its  
11 responsibilities under this chapter, shall consider the value of  
12 improving electrical generation, transmission, and distribution  
13 systems and infrastructure within the State through the use of  
14 advanced grid modernization technology [~~in order~~] to improve the  
15 overall reliability and operational efficiency of the Hawaii  
16 electric system.

17           (b) In advancing the public interest, the commission shall  
18 balance technical, economic, environmental, and cultural  
19 considerations associated with modernization of the electric  
20 grid, based on principles that include but are not limited to:



- 1 (1) Enabling a diverse portfolio of renewable energy  
2 resources;
- 3 (2) Expanding options for customers to manage their energy  
4 use;
- 5 (3) Maximizing interconnection of distributed generation  
6 to the State's electric grids on a cost-effective  
7 basis at non-discriminatory terms and at just and  
8 reasonable rates, while maintaining the reliability of  
9 the State's electric grids, and allowing [~~such~~] access  
10 and rates through applicable rules, orders, and  
11 tariffs as reviewed and approved by the commission;
- 12 (4) Determining fair compensation for electric grid  
13 services and other benefits provided to customers and  
14 for electric grid services and other benefits provided  
15 by distributed generation customers and other non-  
16 utility service providers; and
- 17 (5) Maintaining or enhancing grid reliability and safety  
18 through modernization of the State's electric grids.
- 19 (c) The commission, in carrying out its responsibilities  
20 under this chapter, shall ensure the grid-ready home  
21 interconnection process established pursuant to section 269-142



1 aligns with principles of advanced grid modernization technology

2 by:

3 (1) Streamlining customer access to renewable energy and  
4 storage resources;

5 (2) Enhancing customer participation in reliance-enhancing  
6 energy programs through rapid integration; and

7 (3) Optimizing grid operations to accommodate increased  
8 electrification while minimizing infrastructure  
9 costs."

10 SECTION 6. Section 269-149, Hawaii Revised Statutes, is  
11 amended by amending subsection (b) to read as follows:

12 "(b) The Hawaii electricity reliability administrator  
13 shall report to the commission each year on the date of  
14 agreement under section 269-147 following the original  
15 contracting between the Hawaii electricity reliability  
16 administrator and the commission on [~~the~~]:

17 (1) The status of its operations, financial position, and  
18 a projected operational budget for the fiscal year  
19 following the date of the report[~~+~~]; and



- 1        (2) The status, effectiveness, and outcomes of the grid-
- 2        ready home interconnection process established
- 3        pursuant to section 269-142, including:
- 4        (A) The number of customers served under the process;
- 5        (B) Average timelines for interconnection approvals
- 6        and upgrades;
- 7        (C) Total fees collected by the public utility under
- 8        the process;
- 9        (D) Total costs recovered by the public utility in
- 10       service of the process; and
- 11       (E) Value of infrastructure upgrades deferred or
- 12       avoided as a result of the process."

13       SECTION 7. Statutory material to be repealed is bracketed  
14 and stricken. New statutory material is underscored.

15       SECTION 8. This Act shall take effect on July 1, 3000;  
16 provided that sections 2 to 6 of this Act shall take effect on  
17 January 1, 2027.



**Report Title:**

PUC; Renewable Energy; Grid-Ready Homes Interconnection Process;  
Hawaii Electricity Reliability Administrator; Report

**Description:**

Requires the Public Utilities Commission to establish a streamlined grid-ready homes interconnection process. Expands reporting requirements of the Hawaii Electricity Reliability Administrator to include reporting on the grid-ready home interconnection process. Effective 7/1/3000. (HD1)

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