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# A BILL FOR AN ACT

RELATING TO RENEWABLE ENERGY TECHNOLOGIES.

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

1           SECTION 1. Act 240, Session Laws of Hawaii 2006, is  
2 amended by amending section 1 to read as follows:

3           "SECTION 1. The legislature finds that Hawaii's dependence  
4 on petroleum for about ninety per cent of its energy needs is  
5 more than any other state in the nation. This makes the State  
6 extremely vulnerable to any oil embargo, supply disruption,  
7 international market dysfunction, and many other factors beyond  
8 the control of the State. Furthermore, the continued  
9 consumption of conventional petroleum fuel negatively impacts  
10 the environment. At the same time, Hawaii has among the most  
11 abundant renewable energy resources in the world, in the form of  
12 solar, geothermal, wind, biomass, and ocean energy assets.

13           The legislature also finds that increased energy efficiency  
14 and use of renewable energy resources would increase Hawaii's  
15 energy self-sufficiency, achieving broad societal benefits,  
16 including increased energy security, resistance to increases in



1 oil prices, environmental sustainability, economic development,  
2 and job creation.

3 Over the years, the legislature has worked steadily to  
4 encourage the deployment of renewable energy resources and  
5 energy efficiency initiatives. This includes:

6 (1) Establishing a net energy metering program,  
7 interconnection standards, and renewable energy tax  
8 credits;

9 (2) Establishing greenhouse gas and energy consumption  
10 reduction goals for state facilities and requiring the  
11 use of energy efficient products in state facilities;  
12 and

13 (3) Providing incentives for the deployment of solar  
14 energy devices.

15 The legislature also established an enforceable renewable  
16 energy portfolio standard under which twenty per cent of  
17 Hawaii's electricity is to be generated from renewable resources  
18 by the end of 2020.

19 There now exists an unprecedented, historical opportunity  
20 for Hawaii to emerge as a leader in the hydrogen economy.

21 Hydrogen technology development is already attracting  
22 billions of dollars in investment capital not only in the United



1 States, but also in other countries in Europe, and Japan. On a  
2 national level, federal initiatives are resulting in the  
3 development of hydrogen and fuel cell technologies in  
4 partnership with automakers and major energy companies.  
5 Analysts predict that these initiatives, along with efforts in  
6 other countries, will lead to the development of markets for  
7 hydrogen and supportive hydrogen fuel cell technologies and  
8 infrastructure. The question is no longer "if", but "when."

9 Current and potential commercial hydrogen energy  
10 technologies have a viable path forward and can lead to future  
11 market adoption of renewable hydrogen technologies. The  
12 legislature recognizes the need for programs around renewable  
13 and nonrenewably generated hydrogen, available today with  
14 current technologies, to increase customer acceptance and public  
15 awareness that will ultimately lead to statewide adoption of  
16 hydrogen for both transportation fuel and electricity.

17 Locally, the historic confluence of the State's desire for  
18 energy self-sufficiency through development of renewable energy  
19 with the global opportunity of the emerging hydrogen economy  
20 calls for a major, far-sighted initiative, sustainable over the  
21 long-term, to develop Hawaii's renewable energy resources and,



1 ultimately, to transition Hawaii to an indigenous-resource-based  
2 energy economy.

3 Right now, the greatest immediate opportunity to achieve  
4 this vision resides on the island of Hawaii.

5 On the island of Hawaii, more electricity is produced from  
6 renewable resources than can currently be used. Several wind  
7 projects are expected to be completed in the near term,  
8 exacerbating this problem. Furthermore, the Puna geothermal  
9 project is planning to increase its energy contribution only if  
10 the electric utility can take and use the energy. This provides  
11 an opportunity to use excess geothermal and other renewable  
12 energy resources to produce hydrogen using water electrolysis.  
13 This clean, renewable hydrogen would then be used as an energy  
14 carrier for stationary power and transportation fuels, making  
15 the island self-sufficient.

16 Hydrogen could also be exported to Oahu and other islands  
17 as the clean fuel of choice for power generation and  
18 transportation fuels, achieving greater self-sufficiency for the  
19 State of Hawaii.

20 To shape Hawaii's energy future and achieve the goal of  
21 energy self-sufficiency for the State of Hawaii, our efforts  
22 must continue on all fronts, integrating new and evolving



1 technologies, seizing upon economic opportunities to become more  
2 energy efficient and economically diversified, and providing  
3 incentives and assistance to address barriers.

4 The purpose of this Act is to provide [a] one segment of a  
5 larger comprehensive approach to achieving energy self-  
6 sufficiency for the State by:

- 7 (1) Increasing the renewable energy technologies income  
8 tax credit for certain solar-thermal, wind-powered,  
9 ~~[and]~~ photovoltaic energy, and hydrogen energy systems  
10 and removing the tax credits' 2008 sunset date;
- 11 (2) Establishing a program and strategy for increased  
12 hydrogen and biofuel research and use in the State;
- 13 (3) Establishing state support for achieving alternate  
14 fuels standards; and
- 15 (4) Establishing the pay as you save pilot project to  
16 provide a financing mechanism to make purchases of  
17 residential solar hot water heater systems more  
18 affordable."

19 SECTION 2. Section 235-12.5, Hawaii Revised Statutes, is  
20 amended by amending subsections (a) and (b) to read as follows:

21 "(a) When the requirements of subsection (c) are met, each  
22 individual or corporate taxpayer that files an individual or



1 corporate net income tax return for a taxable year may claim a  
2 tax credit under this section against the Hawaii state  
3 individual or corporate net income tax. The tax credit may be  
4 claimed for every eligible renewable energy technology system  
5 that is installed and placed in service in the State by a  
6 taxpayer during the taxable year. This credit shall be  
7 available for systems installed and placed in service in the  
8 State after June 30, 2003. The tax credit may be claimed as  
9 follows:

- 10 (1) Solar thermal energy systems for:
- 11 (A) Single-family residential property: thirty-five  
12 per cent of the actual cost or \$2,250, whichever  
13 is less;
- 14 (B) Multi-family residential property: thirty-five  
15 per cent of the actual cost or \$350 per unit,  
16 whichever is less; and
- 17 (C) Commercial property: thirty-five per cent of the  
18 actual cost or \$250,000, whichever is less;
- 19 (2) Wind-powered energy systems for:
- 20 (A) Single-family residential property: twenty per  
21 cent of the actual cost or \$1,500, whichever is  
22 less;



- 1 (B) Multi-family residential property: twenty per  
2 cent of the actual cost or \$200 per unit,  
3 whichever is less; and
- 4 (C) Commercial property: twenty per cent of the  
5 actual cost or \$500,000, whichever is less; ~~and~~
- 6 (3) Photovoltaic energy systems for:
- 7 (A) Single-family residential property: thirty-five  
8 per cent of the actual cost or \$5,000, whichever  
9 is less;
- 10 (B) Multi-family residential property: thirty-five  
11 per cent of the actual cost or \$350 per unit,  
12 whichever is less; and
- 13 (C) Commercial property: thirty-five per cent of the  
14 actual cost or \$500,000, whichever is less; and
- 15 (4) Hydrogen energy systems for:
- 16 (A) Single-family residential property: thirty-five  
17 per cent of the actual cost or \$5,000 per unit,  
18 whichever is less;
- 19 (B) Multi-family residential property: thirty-five  
20 per cent of the actual cost or \$10,000 per unit,  
21 whichever is less; and



1           (C) Commercial property: thirty-five per cent of the  
2           actual cost or \$15,000 per unit, whichever is  
3           less;

4 provided that multiple owners of a single system shall be  
5 entitled to a single tax credit; and provided further that the  
6 tax credit shall be apportioned between the owners in proportion  
7 to their contribution to the cost of the system.

8           In the case of a partnership, S corporation, estate, or  
9 trust, the tax credit allowable is for every eligible renewable  
10 energy technology system that is installed and placed in service  
11 in the State by the entity. The cost upon which the tax credit  
12 is computed shall be determined at the entity level.

13 Distribution and share of credit shall be determined pursuant to  
14 section 235-110.7(a).

15           (b) For the purposes of this section:

16           "Actual cost" means costs related to the renewable energy  
17 technology systems under subsection (a), including accessories  
18 and installation, but not including the cost of consumer  
19 incentive premiums unrelated to the operation of the system or  
20 offered with the sale of the system and costs for which another  
21 credit is claimed under this chapter.





1        "Hydrogen energy system" means equipment that utilizes  
2 electricity generated from a renewable energy source such as  
3 solar, wind, geothermal, or hydroelectric to generate hydrogen;  
4 or equipment, such as a fuel cell, that produces or utilizes  
5 hydrogen in an electrochemical process to generate energy,  
6 electricity, or the transfer of heat.

7        "Renewable energy technology system" means a new system  
8 that captures and converts a renewable source of energy, such as  
9 wind, heat (solar thermal), or light (photovoltaic) from the sun  
10 into:

- 11        (1) A usable source of thermal or mechanical energy;  
12        (2) Electricity; or  
13        (3) Fuel.

14        "Solar or wind energy system" means any identifiable  
15 facility, equipment, apparatus, or the like that converts  
16 insolation or wind energy to useful thermal or electrical energy  
17 for heating, cooling, or reducing the use of other types of  
18 energy that are dependent upon fossil fuel for their  
19 generation."

20        SECTION 3. Statutory material to be repealed is bracketed  
21 and stricken. New statutory material is underscored.



1 SECTION 4. This Act shall take effect upon its approval  
2 and shall apply to taxable years beginning after December 31,  
3 2007.



**Report Title:**

Renewable Energy Technologies; Tax Credit; Hydrogen Energy  
Systems

**Description:**

Expands the renewable energy technologies tax credit to include  
hydrogen energy systems. Defines "hydrogen energy system".  
(SB2455 SD2)

