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# A BILL FOR AN ACT

RELATING TO GREENHOUSE GAS EMISSIONS.

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

1           SECTION 1. The legislature finds that global warming poses  
2 a serious threat to the economic well-being, public health,  
3 natural resources, and the environment of Hawaii. The potential  
4 adverse impacts of global warming include a rise in sea levels  
5 resulting in the displacement of businesses and residences and  
6 the inundation of Hawaii's freshwater aquifers, damage to marine  
7 ecosystems and the natural environment, extended drought and  
8 loss of soil moisture, an increase in the spread of infectious  
9 diseases, and an increase in the severity of storms and extreme  
10 weather events.

11           On February 2, 2007, the intergovernmental panel on climate  
12 change, a body established by the United Nations, released its  
13 fourth assessment of the predicted impacts of global climate  
14 change. The panel predicted temperature rises of up to eleven  
15 and a half degrees fahrenheit by 2100 and a sea level rise of up  
16 to twenty-three inches, with an additional 7.8 inches possible  
17 if current melting of the ice sheets in Greenland and Antarctica  
18 continues.



1 Global warming will have detrimental effects on some of  
2 Hawaii's largest industries, including tourism, agriculture,  
3 recreational and commercial fishing, and forestry. It will also  
4 increase the strain on electricity supplies necessary to meet  
5 the demand for air conditioning during the hottest times of the  
6 year.

7 The State has long been a leader in environmental  
8 stewardship and is endeavoring to lead the way in alternative  
9 renewable energy development and use. It is the intent of the  
10 legislature that this air pollution reduction program will  
11 continue the State's tradition of environmental leadership by  
12 placing Hawaii among the nation's leaders in efforts to reduce  
13 emissions of greenhouse gases. By reducing emissions in Hawaii,  
14 this program will serve as an example to other states, the  
15 federal government, and other countries to protect our fragile  
16 environment. Hawaii will also position its economy, technology  
17 centers, financial institutions, and businesses to benefit from  
18 national and international efforts to reduce emissions of  
19 greenhouse gases. More importantly, investing in the  
20 development of innovative and pioneering technologies will  
21 assist the State in achieving the 2020 statewide limit on  
22 emissions of greenhouse gases established by this Act. This Act



1 will provide an opportunity for the State to take a global  
2 economic and technological leadership role in reducing emissions  
3 of greenhouse gases.

4 SECTION 2. The Hawaii Revised Statutes is amended by  
5 adding a new chapter to be appropriately designated and to read  
6 as follows:

7 **"CHAPTER**

8 **GREENHOUSE GAS EMISSIONS REDUCTION**

9 § -1 **Definitions.** As used in this chapter, unless the  
10 context otherwise requires:

11 "Allowance" means an authorization to emit, during a  
12 specified year, up to one ton of carbon dioxide equivalent.

13 "Alternative compliance mechanism" means an action  
14 undertaken by a greenhouse gas emission source that achieves the  
15 equivalent reduction of greenhouse gas emissions over the same  
16 time period as a direct emission reduction and that is approved  
17 by the department. "Alternative compliance mechanism" includes  
18 but is not limited to a flexible compliance schedule,  
19 alternative control technology, a process change, or a product  
20 substitution.

21 "Carbon dioxide equivalent" means the amount of carbon  
22 dioxide by weight that would produce the same global warming



1 impact as a given weight of another greenhouse gas, based on the  
2 best available science, including the intergovernmental panel on  
3 climate change.

4 "Cost-effective" or "cost-effectiveness" means the cost per  
5 unit of reduced emission of greenhouse gases adjusted for its  
6 global warming potential.

7 "Department" means the department of health.

8 "Direct emission reduction" means a greenhouse gas emission  
9 reduction measure taken by a greenhouse gas emission source at  
10 that source.

11 "Director" means the director of health.

12 "Emission reduction measure" means programs, measures,  
13 standards, and alternative compliance mechanisms authorized  
14 pursuant to this chapter, applicable to sources or categories of  
15 sources, that are designed to reduce the emission of greenhouse  
16 gases.

17 "Greenhouse gas" or "greenhouse gases" includes all of the  
18 following gases: carbon dioxide, methane, nitrous oxide,  
19 hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

20 "Greenhouse gas emission limit" means an authorization,  
21 during a specified year, to emit greenhouse gases up to a level



1 specified by the department and expressed in tons of carbon  
2 dioxide equivalents.

3 "Greenhouse gas emission source" or "source" means any  
4 source, or category of sources, of greenhouse gas emission whose  
5 emissions are at a level of significance, as determined by the  
6 department, that its participation in the program established  
7 under this chapter will enable the department to effectively  
8 reduce greenhouse gas emissions and monitor compliance with the  
9 statewide greenhouse gas emissions limit.

10 "Leakage" means a reduction in the emission of greenhouse  
11 gases within the state that is offset by an increase in the  
12 emission of greenhouse gases outside the state.

13 "Market-based compliance mechanism" means either of the  
14 following:

15 (1) A system of market-based declining annual aggregate  
16 emissions limitations for sources or categories of  
17 sources that emit greenhouse gases; or

18 (2) Greenhouse gas emissions exchanges, banking, credits,  
19 and other transactions, governed by rules and  
20 protocols established by the director, that result in  
21 the same greenhouse gas emission reduction, over the  
22 same time period, as direct compliance with a



1 greenhouse gas emission limit or emission reduction  
2 measure adopted by the director pursuant to this  
3 chapter.

4 "Statewide greenhouse gas emissions" means the total annual  
5 emissions of greenhouse gases in the state, including all  
6 emissions of greenhouse gases from the generation and  
7 consumption of electricity in Hawaii. Statewide emissions shall  
8 be expressed in tons of carbon dioxide equivalents.

9 "Statewide greenhouse gas emissions limit" or "statewide  
10 emissions limit" means the maximum allowable level of statewide  
11 greenhouse gas emissions in 2020, as determined by the director.

12 § -2 **Administration.** The department shall administer  
13 this chapter through the director. The director may delegate to  
14 any person the power and authority vested in the director by  
15 this chapter as the director deems reasonable and proper for the  
16 effective administration of this chapter, except the power to  
17 make rules.

18 § -3 **Statewide greenhouse gas emissions limit; adoption.**

19 No later than January 1, 2008, after one or more public  
20 workshops, with public notice and an opportunity for all  
21 interested parties to comment, the director, in consultation  
22 with the department of business, economic development, and



1 tourism, shall determine what the statewide greenhouse gas  
2 emissions level was in 1990 and approve a statewide greenhouse  
3 gas emissions limit that is equivalent to that level to be  
4 achieved by 2020. To ensure the most accurate determination  
5 feasible of the 1990 level of greenhouse gas emissions, the  
6 department shall evaluate the best available scientific,  
7 technological, and economic information on greenhouse gas  
8 emissions.

9 The director, in consultation with the department of  
10 business, economic development, and tourism, shall submit no  
11 later than twenty days prior to the convening of each regular  
12 session, an annual report to the governor and the legislature on  
13 ways to continue reductions of greenhouse gas emissions beyond  
14 2020.

15 § -4 **Greenhouse gas emissions; limits.** (a) Before July  
16 2, 2011, the director shall adopt rules pursuant to chapter 91  
17 to establish greenhouse gas emission limits and emission  
18 reduction measures to achieve the maximum technologically  
19 feasible and cost-effective reductions in greenhouse gas  
20 emissions in furtherance of achieving the statewide greenhouse  
21 gas emissions limit, to become operative beginning on July 1,  
22 2012.



1 (b) The director, to the extent feasible to achieve the  
2 statewide greenhouse gas emissions limit, shall adopt rules  
3 pursuant to chapter 91 to implement this section and section  
4 -11 that:

5 (1) Minimize costs and maximize the total benefits to the  
6 state and encourage early action to reduce greenhouse  
7 gas emissions;

8 (2) Ensure that activities undertaken to comply with the  
9 rules do not disproportionately impact low-income  
10 communities;

11 (3) Ensure that entities that have voluntarily reduced  
12 their greenhouse gas emissions prior to the  
13 implementation of this section receive appropriate  
14 credit for early voluntary reductions;

15 (4) Ensure that activities undertaken pursuant to the  
16 rules complement, and do not interfere with, efforts  
17 to achieve and maintain federal and state ambient air  
18 quality standards and to reduce toxic air contaminant  
19 emissions;

20 (5) Consider cost-effectiveness of these rules;

21 (6) Consider overall societal benefits, including  
22 reductions in other air pollutants, diversification of





1 energy sources, and other benefits to the economy,  
2 environment, and public health;

3 (7) Minimize the administration burden of implementing and  
4 complying with these rules;

5 (8) Minimize leakage; and

6 (9) Consider the significance of the contribution of each  
7 source or category of sources to statewide emissions  
8 of greenhouse gases.

9 (c) To achieve the statewide greenhouse gas emissions  
10 limit, by July 1, 2011, the director may adopt rules that  
11 establish a system of market-based declining annual aggregate  
12 emission limits for sources or categories of sources that emit  
13 greenhouse gas emissions, applicable from July 1, 2012, to  
14 December 31, 2020, that the director determines will achieve the  
15 maximum technologically feasible and cost-effective reductions  
16 in greenhouse gas emissions, in the aggregate, from those  
17 sources or categories of sources.

18 (d) Any rule adopted by the director pursuant to this  
19 section or section -11 shall ensure all of the following:

20 (1) The greenhouse gas emission reductions achieved are  
21 real, permanent, quantifiable, verifiable, and  
22 enforceable by the director;



1 (2) For rules adopted pursuant to section -11, the  
2 reduction is in addition to any greenhouse gas  
3 emission reduction otherwise required by law or rule  
4 and any other greenhouse gas emission reduction that  
5 otherwise would occur; and

6 (3) If applicable, the greenhouse gas emission reduction  
7 occurs over the same time period and is equivalent in  
8 amount to any direct emission reduction required  
9 pursuant to this chapter.

10 (e) The director shall rely upon the best available  
11 economic and scientific information and its assessment of  
12 existing and projected technological capabilities when adopting  
13 rules required by this section.

14 (f) The director shall consult with the public utilities  
15 commission in the development of the rules as they affect  
16 electricity and natural gas providers to minimize duplicative or  
17 inconsistent requirements.

18 (g) After July 1, 2011, the director may revise rules  
19 adopted pursuant to this section and adopt additional rules  
20 pursuant to chapter 91 to implement this chapter.

21 **§ -5 Mandatory greenhouse gas emissions; reporting.** (a)

22 The director, pursuant to chapter 91, shall adopt rules to



1 require the reporting and verification of statewide greenhouse  
2 gas emissions and to monitor and enforce compliance with this  
3 chapter.

4 (b) The rules shall:

5 (1) Require the monitoring and annual reporting of  
6 greenhouse gas emissions from greenhouse gas emission  
7 sources, beginning with the sources or categories of  
8 sources that contribute the most to statewide  
9 emissions and including greenhouse gas emissions from  
10 electricity produced and consumed in the state;

11 (2) Provide reporting tools and formats to ensure  
12 collection of necessary data; and

13 (3) Require greenhouse gas emission sources to maintain  
14 comprehensive records of all reported greenhouse gas  
15 emissions.

16 (c) The director shall periodically review and update  
17 state emission reporting requirements to make the requirements  
18 consistent with the requirements of international, federal, and  
19 other states' greenhouse gas emission reporting programs, as  
20 necessary.

21 § -6 Greenhouse gas emissions; reductions. (a) The  
22 director shall adopt rules to achieve the maximum



1 technologically feasible and cost-effective greenhouse gas  
2 emission reductions from sources or categories of sources,  
3 subject to the criteria and schedules set forth in this chapter.

4 (b) Before December 31, 2007, the director shall publish  
5 and make available to the public a list of discrete early action  
6 greenhouse gas emission reduction measures that can be  
7 implemented prior to the measures and limits adopted pursuant to  
8 this section. Before July 1, 2010, the director shall adopt  
9 rules to implement the measures identified on the list published  
10 pursuant to this subsection.

11 (c) The rules adopted pursuant to this section shall  
12 achieve the maximum technologically feasible and cost-effective  
13 reductions in greenhouse gas emissions from those sources or  
14 categories of sources, in furtherance of achieving the statewide  
15 greenhouse gas emissions limit.

16 (d) The rules adopted pursuant to this section shall be  
17 enforceable no later than July 1, 2010.

18 § -7 **Scoping plan.** (a) Before July 1, 2009, the  
19 director shall prepare and approve a scoping plan for achieving  
20 the maximum technologically feasible and cost-effective  
21 reductions in greenhouse gas emissions from sources or  
22 categories of sources of greenhouse gases by 2020 under this



1 chapter. The director shall consult with all state agencies  
2 with jurisdiction over sources of greenhouse gases, including  
3 the public utilities commission, on all elements of its plan  
4 that pertain to energy-related matters, including but not  
5 limited to electrical generation, load based-standards or  
6 requirements, the provision of reliable and affordable  
7 electrical service, petroleum refining, and statewide fuel  
8 supplies, to ensure the greenhouse gas emissions reduction  
9 activities to be adopted and implemented by the director are  
10 complementary, minimize duplication, and can be implemented in  
11 an efficient and cost-effective manner.

12 (b) The scoping plan developed by the director shall  
13 identify and make recommendations on direct emission reduction  
14 measures, alternative compliance mechanisms, market-based  
15 compliance mechanisms, and potential monetary and non-monetary  
16 incentives for sources and categories of sources that the  
17 director finds are necessary or desirable to facilitate the  
18 achievement of the maximum feasible and cost-effective  
19 reductions of greenhouse gas emissions by 2020.

20 (c) In making the determinations under subsection (b), the  
21 director shall consider all relevant information pertaining to  
22 greenhouse gas emissions reduction programs in other states,



1 localities, and nations, including California, the northeastern  
2 states of the United States, Canada, and the European Union.

3 (d) The director shall evaluate the total potential costs  
4 and total potential economic and non-economic benefits of the  
5 plan for reducing greenhouse gases to the State's economy,  
6 environment, and public health, using the best available  
7 economic models, emission estimation techniques, and other  
8 scientific methods.

9 (e) In developing the plan, the director shall consider  
10 the relative contribution of each source or source category to  
11 statewide greenhouse gas emissions, and the potential for  
12 adverse effects on small businesses, and shall recommend a  
13 minimum threshold of greenhouse gas emissions below which  
14 emission reductions requirements shall not apply.

15 (f) In developing a scoping plan, the director shall  
16 identify opportunities for emission reductions measures from all  
17 verifiable and enforceable voluntary actions, including but not  
18 limited to carbon sequestration projects and best management  
19 practices.

20 (g) The director shall conduct a series of public  
21 workshops to give interested parties an opportunity to comment



1 on the scoping plan. The director shall conduct at least one of  
2 these workshops in each county.

3 (h) The director shall update the scoping plan for  
4 achieving the maximum technologically feasible and cost-  
5 effective reductions of greenhouse gas emissions at least once  
6 every five years.

7 § -8 **Greenhouse gas emissions; early enactment.** Nothing  
8 in this chapter shall restrict the director from adopting  
9 greenhouse gas emission limits or emission reduction measures  
10 prior to July 1, 2011, imposing those limits or measures prior  
11 to July 1, 2012, or providing early reduction credit where  
12 appropriate.

13 § -9 **Greenhouse gas emissions; consultation.** The  
14 director shall consult with other states, the federal  
15 government, non-governmental organizations, and, if applicable,  
16 other nations to identify effective strategies and methods to  
17 reduce greenhouse gases, manage greenhouse gas control programs,  
18 and to facilitate the development of integrated and cost-  
19 effective regional, national, and international greenhouse gas  
20 emission reduction programs.

21 § -10 **Emissions programs; community opportunities.** The  
22 director shall ensure that the greenhouse gas emission reduction



1 rules, programs, mechanisms, and incentives under its  
2 jurisdiction, where applicable and to the extent feasible,  
3 direct public and private investment toward the most  
4 disadvantaged communities in the state and provide an  
5 opportunity for small businesses, schools, affordable housing  
6 associations, and other community institutions to participate in  
7 the benefit from statewide efforts to reduce greenhouse gas  
8 emissions.

9       **§ -11 Market-based compliance mechanisms.** (a) The  
10 director may include in the rules adopted pursuant to section  
11 -4 the use of market-based compliance mechanisms to comply  
12 with the rules.

13       (b) Prior to the inclusion of any market-based compliance  
14 mechanism in the rules, to the extent feasible and in  
15 furtherance of achieving the statewide greenhouse gas emissions  
16 limit, the director shall:

- 17       (1) Consider the potential for direct, indirect, and  
18           cumulative emission impacts from these mechanisms,  
19           including localized impacts in communities that are  
20           already adversely impacted by air pollution;
- 21       (2) Design any market-based compliance mechanism to  
22           prevent any increase in the emissions of toxic air





1 contaminants or criteria air pollutants identified by  
2 the Environmental Protection Agency; and

3 (3) Maximize additional environmental and economic  
4 benefits for Hawaii, as appropriate.

5 (c) The director shall adopt rules governing how market-  
6 based compliance mechanisms may be used by regulated entities  
7 subject to greenhouse gas emission limits and mandatory emission  
8 reporting requirements to achieve compliance with their  
9 greenhouse gas emissions limits.

10 § -12 **Limitations on director's authority.** Nothing in  
11 this chapter confers any authority on the director to alter any  
12 programs administered by other state agencies for the reduction  
13 of greenhouse gas emissions.

14 § -13 **Enforcement.** (a) The director shall monitor  
15 compliance with and enforce any rule, order, emission  
16 limitation, emissions reduction measure, or market-based  
17 compliance mechanism adopted by the director pursuant to this  
18 chapter.

19 (b) Any violation of any rule, order, emission limitation,  
20 emissions reduction measure, or other measure adopted by the  
21 director pursuant to this chapter may be subject to penalties  
22 under part IV of chapter 342B.



1 (c) Any violation of any rule, order, emission limitation,  
2 emissions reduction measure, or other measure adopted by the  
3 director pursuant to this chapter shall be deemed to result in  
4 an emission of an air pollutant or regulated air pollutant as  
5 defined in section 342B-1, for the purposes of the penalty  
6 provisions of part IV of chapter 342B.

7 (d) The director may develop a method to convert a  
8 violation of any rule, order, emission limitation, or other  
9 emissions reduction measure adopted by the director pursuant to  
10 this chapter into the number of days in violation, where  
11 appropriate, for the purposes of the penalty provisions of part  
12 IV of chapter 342B.

13 § -14 **Mobile sources of emissions.** The director may  
14 adopt rules to control mobile sources of greenhouse gas  
15 emissions to achieve reductions in statewide greenhouse gas  
16 emissions.

17 § -15 **State agencies; efforts to reduce emissions.** (a)  
18 All state agencies shall consider and implement strategies to  
19 reduce their greenhouse gas emissions.

20 (b) Nothing in this chapter shall relieve any person,  
21 entity, or public agency of compliance with other applicable  
22 federal, state, or local laws, including state air and water



1 quality requirements, and other requirements for protecting  
2 public health or the environment.

3       **§ -16 Limitations on authority.** (a) Nothing in this  
4 chapter shall affect the authority of the public utilities  
5 commission.

6       (b) Nothing in this chapter shall affect the obligation of  
7 an electrical corporation to provide customers with safe and  
8 reliable electric service.

9       (c) Nothing in this chapter shall limit or expand the  
10 existing authority of any county.

11       (d) Nothing in this chapter shall limit the existing  
12 authority of a state entity to adopt and implement greenhouse  
13 gas emissions reduction measures, nor shall it relieve any state  
14 entity of its legal obligations to comply with existing law or  
15 regulations.

16       (e) Nothing in this chapter shall preclude, prohibit, or  
17 restrict the construction of any new facility or the expansion  
18 of an existing facility subject to rule under this chapter if  
19 all applicable requirements are met and the facility is in  
20 compliance with the rules adopted pursuant to this chapter.

21       **§ -17 Schedule of fees; establishment.** The director may  
22 adopt rules that specify a schedule of fees to be paid by the



1 sources of greenhouse gas emissions regulated pursuant to this  
2 chapter. The revenues collected pursuant to this section shall  
3 be deposited into the clean air special fund established under  
4 section 342B-32 to be used for the purposes thereof.

5       **§ -18 Governor's authority to adjust deadlines.** (a) In  
6 the event of extraordinary circumstances, catastrophic events,  
7 or threat of significant economic harm, the governor may adjust  
8 the applicable deadlines for individual regulations, or for the  
9 State in the aggregate, to the earliest feasible date after that  
10 deadline.

11       (b) The adjustment period may not exceed one year, unless  
12 the governor makes an additional adjustment pursuant to  
13 subsection (a).

14       (c) The governor, within ten days of invoking subsection  
15 (a), shall provide written notification to the legislature of  
16 the action undertaken."

17       SECTION 3. There is appropriated out of the environmental  
18 response revolving fund the sum of \$            or so much thereof  
19 as may be necessary for fiscal year 2007-2008 and the same sum  
20 or so much thereof as may be necessary for fiscal year 2008-2009  
21 for the department of health to carry out the purposes of this  
22 Act, including the hiring of necessary staff.



1           The sums appropriated shall be expended by the department  
2 of health for the purposes of this Act.

3           SECTION 4. This Act does not affect rights and duties that  
4 matured, penalties that were incurred, and proceedings that were  
5 begun, before its effective date.

6           SECTION 5. If any provision of this Act, or the  
7 application thereof to any person or circumstance is held  
8 invalid, the invalidity does not affect other provisions or  
9 applications of the Act, which can be given effect without the  
10 invalid provision or application, and to this end the provisions  
11 of this Act are severable.

12          SECTION 6. This Act shall take effect on July 1, 2020.



**Report Title:**

Environmental Quality; Greenhouse Gas Emissions

**Description:**

Requires the Department of Health to adopt reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance. Requires adoption of a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. Requires the adoption of rules to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions. Authorizes the adoption of market-based compliance mechanisms. (HD1)

