
A BILL FOR AN ACT

RELATING TO GREENHOUSE GAS EMISSIONS.

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

1 PART I

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

13 On February 2, 2007, the United Nations Intergovernmental
14 Panel on Climate Change released their fourth assessment of the
15 predicted impacts of global climate change. The panel predicted
16 temperature rises of up to 11.5 degrees Fahrenheit by 2100, and
17 a sea level rise of up to 23 inches, with an additional 7.8



1 inches possible if current melting of the Greenland and
2 Antarctica ice sheets continue.

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

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



1 assist the State in achieving the 2020 statewide limit on
2 emissions of greenhouse gases established by this Act. This Act
3 will provide an opportunity for the State to take a global
4 economic and technological leadership role in reducing emissions
5 of greenhouse gases.

6 SECTION 2. The department of health shall conduct a
7 thorough greenhouse gas emissions inventory of Hawaii sources
8 and shall update the past report prepared by the department of
9 business, economic development, and tourism and the department
10 of health entitled "Inventory of Hawaii Greenhouse Gas Emissions
11 Estimates for 1990", dated July 1997.

12 The department of health shall submit the inventory and the
13 updated report, as well as any additional information as deemed
14 appropriate, to the legislature no later than twenty days prior
15 to the convening of the regular sessions of 2008 and 2009.

16 SECTION 3. There is appropriated out of the environmental
17 response revolving fund established in chapter 128D, Hawaii
18 Revised Statutes, the sum of \$ or so much thereof as
19 may be necessary for fiscal year 2007-2008 and the same sum or
20 so much thereof as may be necessary for fiscal year 2008-2009
21 for carrying out the purposes of this Act, including the hiring
22 of two positions to update the assessment.



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

3 SECTION 4. There is appropriated out of the general
4 revenues of the State of Hawaii the sum of \$ or so much
5 thereof as may be necessary for fiscal year 2007-2008 for the
6 Hawaii energy policy forum of the University of Hawaii at Manoa
7 to convene stakeholders to develop a coherent plan with a
8 timetable for implementation to reduce greenhouse emissions in
9 Hawaii, using the principles embodied in S.B. No. 1612, S.D. 1
10 (2007); provided that the Hawaii energy policy forum shall
11 report its findings and recommendations to the legislature not
12 later than twenty days prior to the convening of the regular
13 session of 2008; provided further that the Hawaii energy policy
14 forum shall also analyze part II of this Act and report to the
15 legislature with proposed modifications prior to the
16 implementation of the scoping plan described in section -8 of
17 the new chapter created in part II of this Act.

18 The sum appropriated shall be expended by the Hawaii energy
19 policy forum of the University of Hawaii at Manoa for the
20 purposes of this Act.



PART II

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

"CHAPTER

GREENHOUSE GAS EMISSIONS REDUCTION

§ -1 Short title. This chapter shall be known and may be cited as the Global Warming Solutions Act of 2007.

§ -2 Definitions. As used in this chapter unless the context otherwise requires:

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

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

"Carbon dioxide equivalent" means the amount of carbon 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 from the Intergovernmental
3 Panel on Climate Change.

4 "Cost-effective" or "cost-effectiveness" means the cost per
5 unit of reduced emissions 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 action made by a greenhouse gas emission source at
10 that source.

11 "Director" means the director of health.

12 "Emissions 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 emissions 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 source" or "source" means any
21 source, or category of sources, of greenhouse gas emissions
22 whose emissions are at a level of significance, as determined by



1 the department, that its participation in the program
2 established under this chapter will enable the department to
3 effectively reduce greenhouse gas emissions and monitor
4 compliance with the statewide greenhouse gas emissions limit.

5 "Greenhouse gas emissions limit" means an authorization,
6 during a specified year, to emit up to a level of greenhouse
7 gases specified by the department expressed in tons of carbon
8 dioxide equivalents.

9 "Leakage" means a reduction in emissions of greenhouse
10 gases within the State that is offset by an increase in
11 emissions of greenhouse gases outside the State.

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

- 14 (1) A system of market-based declining annual aggregate
15 emissions limitations for sources or categories of
16 sources that emit greenhouse gases; or
- 17 (2) Greenhouse gas emissions exchanges, banking, credits,
18 and other transactions, governed by rules and
19 protocols established by the director, that result in
20 the same greenhouse gas emission reduction, over the
21 same time period, as direct compliance with a
22 greenhouse gas emission limit or emission reduction



1 measure adopted by the director pursuant to this
2 chapter.

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

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

11 § -3 **Administration.** The department shall administer
12 this chapter through the director. The director may delegate to
13 any person the power and authority vested in the director by
14 this chapter as the director deems reasonable and proper for the
15 effective administration of this chapter, except the power to
16 make rules.

17 § -4 **Statewide greenhouse gas emissions limit, adoption.**
18 No later than January 1, 2008, after one or more public
19 workshops, with public notice and an opportunity for all
20 interested parties to comment, the director, in consultation
21 with the department of business, economic development, and
22 tourism, shall determine what the statewide greenhouse gas



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

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

14 § -5 **Greenhouse gas emissions, limits.** (a) Before
15 July 2, 2011, the director shall adopt rules under chapter 91,
16 establishing greenhouse gas emission limits and emission
17 reduction measures to achieve the maximum technologically
18 feasible and cost-effective reductions in greenhouse gas
19 emissions in furtherance of achieving the statewide greenhouse
20 gas emissions limit, to become operative beginning on July 1,
21 2012.



1 (b) The director, to the extent feasible to achieve the
2 statewide greenhouse gas emissions limit, shall adopt rules
3 under chapter 91 and pursuant to this section and section -12
4 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 under
 11 chapter 91 that establish a system of market-based declining
 12 annual aggregate emission limits for sources or categories of
 13 sources that emit greenhouse gas emissions, applicable from
 14 July 1, 2012, to December 31, 2020, that the director determines
 15 will achieve the maximum technologically feasible and cost-
 16 effective reductions in greenhouse gas emissions, in the
 17 aggregate, from those sources or categories of sources.

18 (d) Any rule adopted by the director pursuant to this
 19 section or section -12 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 -12, 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 in order to minimize
17 duplicative or inconsistent requirements.
- 18 (g) After July 1, 2011, the director may revise rules
19 adopted pursuant to this section and adopt additional rules to
20 further this chapter.
- 21 § -6 **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 and endeavor to make the
18 requirements consistent with the requirements of international,
19 federal, and other states' greenhouse gas emission reporting
20 programs, as necessary.

21 § -7 Greenhouse gas emissions; reductions. (a) The
22 director shall adopt rules under chapter 91, to achieve the

1 maximum technologically feasible and cost-effective greenhouse
2 gas 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 2, 2010, the director shall adopt
9 rules under chapter 91 to implement the measures identified on
10 the list published 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 § -8 **Scoping plan.** (a) Before July 2, 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 § -9 **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 credits where
12 appropriate.

13 § -10 **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 reduction programs.

21 § -11 **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 **§ -12 Market-based compliance mechanisms.** (a) The
10 director may include in the rules adopted pursuant to section
11 -5 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 under chapter 91
6 governing how market-based compliance mechanisms may be used by
7 regulated entities subject to greenhouse gas emission limits and
8 mandatory emission reporting requirements to achieve compliance
9 with their greenhouse gas emissions limits.

10 § -13 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 § -14 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 § -15 **Mobile sources of emissions.** The director may
14 adopt rules under chapter 91 to control mobile sources of
15 greenhouse gas emissions to achieve reductions in statewide
16 greenhouse gas emissions.

17 § -16 **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 § -17 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 utility 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 rule.

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 § -18 Schedule of fees; establishment. The director may
22 adopt rules under chapter 91 that specify a schedule of fees to



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

6 § -19 Governor's authority to adjust deadlines. (a) In
7 the event of extraordinary circumstances, catastrophic events,
8 or threat of significant economic harm, the governor may adjust
9 the applicable deadlines for individual regulations, or for the
10 State in the aggregate, to the earliest feasible date after that
11 deadline.

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

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

18 SECTION 6. There is appropriated out of the environmental
19 response revolving fund established in chapter 128D, Hawaii
20 Revised Statutes, the sum of \$ or so much thereof as
21 may be necessary for fiscal year 2007-2008 and the same sum or
22 so much thereof as may be necessary for fiscal year 2008-2009



1 for carrying out the purposes of this Act, including the hiring
2 of necessary staff.

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

5 SECTION 7. This Act does not affect rights and duties that
6 matured, penalties that were incurred, and proceedings that were
7 begun, before its effective date.

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

14 SECTION 9. This Act shall take effect on July 1, 2007;
15 provided that sections 5 and 6 shall take effect on July 1,
16 2020.



Report Title:

Environmental Quality; Greenhouse Gas Emissions

Description:

Requires the Department of Health to conduct a thorough greenhouse gas emissions inventory of Hawaii sources. Requires the department 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. (SD2)

