
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 the exacerbation of
5 air quality problems, a rise in sea levels resulting in the
6 displacement of businesses and residences and the inundation of
7 Hawaii's freshwater aquifers, damage to marine ecosystems and
8 the natural environment, extended drought and loss of soil
9 moisture, and an increase in the incidence of infectious
10 diseases, and an increase in the severity of storms and extreme
11 weather events.

12 On February 2, 2007, the United Nations Intergovernmental
13 Panel on Climate Change released their fourth assessment of the
14 predicted impacts of global climate change. The panel predicted
15 temperature rises of up to 11.5 degrees Fahrenheit by 2100, and
16 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 Hawaii Revised Statutes is amended by
7 adding a new chapter to be appropriately designated and to read
8 as follows:

9 **"CHAPTER**

10 **GREENHOUSE GAS EMISSIONS REDUCTION**

11 **§ -1 Short Title.** This chapter shall be known and may
12 be cited as the Global Warming Solutions Act of 2007.

13 **§ -2 Definitions.** As used in this chapter unless the
14 context otherwise requires:

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

17 "Alternative compliance mechanism" means an action
18 undertaken by a greenhouse gas emission source that achieves the
19 equivalent reduction of greenhouse gas emissions over the same
20 time period as a direct emission reduction and that is approved
21 by the department. "Alternative compliance mechanism" includes
22 but is not limited to a flexible compliance schedule,



1 alternative control technology, a process change, or a product
2 substitution.

3 "Carbon dioxide equivalent" means the amount of carbon
4 dioxide by weight that would produce the same global warming
5 impact as a given weight of another greenhouse gas, based on the
6 best available science, including from the Intergovernmental
7 Panel on Climate Change.

8 "Cost-effective" or "cost-effectiveness" means the cost per
9 unit of reduced emissions of greenhouse gases adjusted for its
10 global warming potential.

11 "Department" means the department of health.

12 "Direct emission reduction" means a greenhouse gas emission
13 reduction action made by a greenhouse gas emission source at
14 that source.

15 "Director" means the director of health.

16 "Emissions reduction measure" means programs, measures,
17 standards, and alternative compliance mechanisms authorized
18 pursuant to this chapter, applicable to sources or categories of
19 sources, that are designed to reduce emissions of greenhouse
20 gases.



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

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

11 "Greenhouse gas emissions limit" means an authorization,
12 during a specified year, to emit up to a level of greenhouse
13 gases specified by the department expressed in tons of carbon
14 dioxide equivalents.

15 "Leakage" means a reduction in emissions of greenhouse
16 gases within the State that is offset by an increase in
17 emissions of greenhouse gases outside the State.

18 "Market-based compliance mechanism" means either of the
19 following:

20 (1) A system of market-based declining annual aggregate
21 emissions limitations for sources or categories of
22 sources that emit greenhouse gases; or



1 (2) Greenhouse gas emissions exchanges, banking, credits,
2 and other transactions, governed by rules and
3 protocols established by the director, that result in
4 the same greenhouse gas emission reduction, over the
5 same time period, as direct compliance with a
6 greenhouse gas emission limit or emission reduction
7 measure adopted by the director pursuant to this
8 chapter.

9 "Statewide greenhouse gas emissions" means the total annual
10 emissions of greenhouse gases in the State, including all
11 emissions of greenhouse gases from the generation and
12 consumption of electricity in Hawaii. Statewide emissions shall
13 be expressed in tons of carbon dioxide equivalents.

14 "Statewide greenhouse gas emissions limit" or "statewide
15 emissions limit" means the maximum allowable level of statewide
16 greenhouse gas emissions in 2020, as determined by the director.

17 **§ -3 Administration.** The department shall administer
18 this chapter through the director. The director may delegate to
19 any person the power and authority vested in the director by
20 this chapter as the director deems reasonable and proper for the
21 effective administration of this chapter, except the power to
22 make rules.



1 **§ -4 Statewide greenhouse gas emissions limit; adoption.**

2 No later than January 1, 2008, after one or more public
3 workshops, with public notice and an opportunity for all
4 interested parties to comment, the director, in consultation
5 with the department of business, economic development, and
6 tourism, shall determine what the statewide greenhouse gas
7 emissions level was in 1990 and approve a statewide greenhouse
8 gas emissions limit that is equivalent to that level to be
9 achieved by 2020. To ensure the most accurate determination
10 feasible of the 1990 level of greenhouse gas emissions, the
11 department shall evaluate the best available scientific,
12 technological, and economic information on greenhouse gas
13 emissions.

14 The director, working in consultation with the department
15 of business, economic development, and tourism, shall make
16 annual reports to the governor and the legislature on ways to
17 continue reductions of greenhouse gas emissions beyond 2020.

18 **§ -5 Greenhouse gas emissions; limits.** (a) Before
19 July 2, 2011, the director shall adopt rules establishing
20 greenhouse gas emission limits and emission reduction measures
21 to achieve the maximum technologically feasible and
22 cost-effective reductions in greenhouse gas emissions in



1 furtherance of achieving the statewide greenhouse gas emissions
2 limit, to become operative beginning on July 1, 2012.

3 (b) The director, to the extent feasible and in
4 furtherance of achieving the statewide greenhouse gas emissions
5 limit, shall adopt rules pursuant to this section and section
6 -12 that:

- 7 (1) Minimize costs and maximize the total benefits to the
8 State and encourage early action to reduce greenhouse
9 gas emissions;
- 10 (2) Ensure that activities undertaken to comply with the
11 rules do not disproportionately impact low-income
12 communities;
- 13 (3) Ensure that entities that have voluntarily reduced
14 their greenhouse gas emissions prior to the
15 implementation of this section receive appropriate
16 credit for early voluntary reductions;
- 17 (4) Ensure that activities undertaken pursuant to the
18 rules complement, and do not interfere with, efforts
19 to achieve and maintain federal and state ambient air
20 quality standards and to reduce toxic air contaminant
21 emissions;
- 22 (5) Consider cost-effectiveness of these rules;



1 (6) Consider overall societal benefits, including
2 reductions in other air pollutants, diversification of
3 energy sources, and other benefits to the economy,
4 environment, and public health;

5 (7) Minimize the administration burden of implementing and
6 complying with these rules;

7 (8) Minimize leakage; and

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

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

20 (d) Any rule adopted by the director pursuant to this
21 section or section -12 shall ensure all of the following:



- 1 (1) The greenhouse gas emission reductions achieved are
2 real, permanent, quantifiable, verifiable, and
3 enforceable by the director;
- 4 (2) For rules adopted pursuant to section -12, the
5 reduction is in addition to any greenhouse gas
6 emission reduction otherwise required by law or rule
7 and any other greenhouse gas emission reduction that
8 otherwise would occur; and
- 9 (3) If applicable, the greenhouse gas emission reduction
10 occurs over the same time period and is equivalent in
11 amount to any direct emission reduction required
12 pursuant to this chapter.
- 13 (e) The director shall rely upon the best available
14 economic and scientific information and its assessment of
15 existing and projected technological capabilities when adopting
16 rules required by this section.
- 17 (f) The director shall consult with the public utilities
18 commission in the development of the rules as they affect
19 electricity and natural gas providers in order to minimize
20 duplicative or inconsistent requirements.



1 (g) After July 1, 2011, the director may revise rules
2 adopted pursuant to this section and adopt additional rules to
3 further this chapter.

4 **§ -6 Mandatory greenhouse gas emissions; reporting. (a)**

5 The director, pursuant to chapter 91, shall adopt rules to
6 require the reporting and verification of statewide greenhouse
7 gas emissions and to monitor and enforce compliance with this
8 chapter.

9 (b) The rules shall:

- 10 (1) Require the monitoring and annual reporting of
11 greenhouse gas emissions from greenhouse gas emission
12 sources, beginning with the sources or categories of
13 sources that contribute the most to statewide
14 emissions and including greenhouse gas emissions from
15 electricity produced and consumed in the State;
- 16 (2) Provide reporting tools and formats to ensure
17 collection of necessary data; and
- 18 (3) Require greenhouse gas emission sources to maintain
19 comprehensive records of all reported greenhouse gas
20 emissions.

21 (c) The director shall periodically review and update
22 state emission reporting requirements and endeavor to make the



1 requirements consistent with the requirements of international,
2 federal, and other states' greenhouse gas emission reporting
3 programs, as necessary.

4 **§ -7 Greenhouse gas emissions; reductions.** (a) The
5 director shall adopt rules to achieve the maximum
6 technologically feasible and cost-effective greenhouse gas
7 emission reductions from sources or categories of sources,
8 subject to the criteria and schedules set forth in this chapter.

9 (b) Before December 31, 2007, the director shall publish
10 and make available to the public a list of discrete early action
11 greenhouse gas emission reduction measures that can be
12 implemented prior to the measures and limits adopted pursuant to
13 this section. Before July 2, 2010, the director shall adopt
14 rules to implement the measures identified on the list published
15 pursuant to this subsection.

16 (c) The rules adopted pursuant to this section shall
17 achieve the maximum technologically feasible and cost-effective
18 reductions in greenhouse gas emissions from those sources or
19 categories of sources, in furtherance of achieving the statewide
20 greenhouse gas emissions limit.

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



1 **§ -8 Scoping plan.** (a) Before July 2, 2009, the
2 director shall prepare and approve a scoping plan, as that term
3 is understood by the director, for achieving the maximum
4 technologically feasible and cost-effective reductions in
5 greenhouse gas emissions from sources or categories of sources
6 of greenhouse gases by 2020 under this chapter. The director
7 shall consult with all state agencies with jurisdiction over
8 sources of greenhouse gases, including the public utilities
9 commission, on all elements of its plan that pertain to energy-
10 related matters, including but not limited to electrical
11 generation, load based-standards or requirements, the provision
12 of reliable and affordable electrical service, petroleum
13 refining, and statewide fuel supplies, to ensure the greenhouse
14 gas emissions reduction activities to be adopted and implemented
15 by the director are complementary, minimize duplication, and can
16 be implemented in an efficient and cost-effective manner.

17 (b) The scoping plan developed by the director shall
18 identify and make recommendations on direct emission reduction
19 measures, alternative compliance mechanisms, market-based
20 compliance mechanisms, and potential monetary and non-monetary
21 incentives for sources and categories of sources that the
22 director finds are necessary or desirable to facilitate the



1 achievement of the maximum feasible and cost-effective
2 reductions of greenhouse gas emissions by 2020.

3 (c) In making the determinations under subsection (b), the
4 director shall consider all relevant information pertaining to
5 greenhouse gas emissions reduction programs in other states,
6 localities, and nations, including California, the northeastern
7 states of the United States, Canada, and the European Union.

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

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

20 (f) In developing a scoping plan, the director shall
21 identify opportunities for emission reductions measures from all
22 verifiable and enforceable voluntary actions, including but not



1 limited to carbon sequestration projects and best management
2 practices.

3 (g) The director shall conduct a series of public
4 workshops to give interested parties an opportunity to comment
5 on the scoping plan. The director shall conduct at least one of
6 these workshops in each county.

7 (h) The director shall update the scoping plan for
8 achieving the maximum technologically feasible and cost-
9 effective reductions of greenhouse gas emissions at least once
10 every five years.

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

17 **§ -10 Greenhouse gas emissions; consultation.** The
18 director shall consult with other states, the federal
19 government, non-governmental organizations, and, if applicable,
20 other nations to identify effective strategies and methods to
21 reduce greenhouse gases, manage greenhouse gas control programs,
22 and to facilitate the development of integrated and cost-



1 effective regional, national, and international greenhouse gas
2 reduction programs.

3 **§ -11 Emissions programs; community opportunities.** The
4 director shall ensure that the greenhouse gas emission reduction
5 rules, programs, mechanisms, and incentives under its
6 jurisdiction, where applicable and to the extent feasible,
7 direct public and private investment toward the most
8 disadvantaged communities in the State and provide an
9 opportunity for small businesses, schools, affordable housing
10 associations, and other community institutions to participate in
11 the benefit from statewide efforts to reduce greenhouse gas
12 emissions.

13 **§ -12 Market-based compliance mechanisms.** (a) The
14 director may include in the rules adopted pursuant to section
15 -5 the use of market-based compliance mechanisms to comply
16 with the rules.

17 (b) Prior to the inclusion of any market-based compliance
18 mechanism in the rules, to the extent feasible and in
19 furtherance of achieving the statewide greenhouse gas emissions
20 limit, the director shall do all of the following:

21 (1) Consider the potential for direct, indirect, and
22 cumulative emission impacts from these mechanisms,



1 including localized impacts in communities that are
2 already adversely impacted by air pollution;

3 (2) Design any market-based compliance mechanism to
4 prevent any increase in the emissions of toxic air
5 contaminants or criteria air pollutants identified by
6 the Environmental Protection Agency; and

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

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

14 **§ -13 Limitations on director's authority.** Nothing in
15 this chapter confers any authority on the director to alter any
16 programs administered by other state agencies for the reduction
17 of greenhouse gas emissions.

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



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

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

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

17 **§ -15 Mobile sources of emissions.** The director may
18 adopt rules to control mobile sources of greenhouse gas
19 emissions to achieve reductions in statewide greenhouse gas
20 emissions.



1 **§ -16 State agencies; efforts to reduce emissions.** (a)

2 All state agencies shall consider and implement strategies to
3 reduce their greenhouse gas emissions.

4 (b) Nothing in this chapter shall relieve any person,
5 entity, or public agency of compliance with other applicable
6 federal, state, or local laws, including state air and water
7 quality requirements, and other requirements for protecting
8 public health or the environment.

9 **§ -17 Limitations on authority.** (a) Nothing in this
10 chapter shall affect the authority of the public utilities
11 commission.

12 (b) Nothing in this chapter shall affect the obligation of
13 an electrical utility to provide customers with safe and
14 reliable electric service.

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

17 (d) Nothing in this chapter shall limit the existing
18 authority of a state entity to adopt and implement greenhouse
19 gas emissions reduction measures, nor shall it relieve any state
20 entity of its legal obligations to comply with existing law or
21 rule.



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

6 **§ -18 Schedule of fees; establishment.** The director may
7 adopt rules that specify a schedule of fees to be paid by the
8 sources of greenhouse gas emissions regulated pursuant to this
9 chapter. The revenues collected pursuant to this section shall
10 be deposited into the clean air special fund established under
11 section 342B-32 to be used for the purposes thereof.

12 **§ -19 Governor's authority to adjust deadlines.** (a) In
13 the event of extraordinary circumstances, catastrophic events,
14 or threat of significant economic harm, the governor may adjust
15 the applicable deadlines for individual regulations, or for the
16 State in the aggregate, to the earliest feasible date after that
17 deadline.

18 (b) The adjustment period may not exceed one year, unless
19 the governor makes an additional adjustment pursuant to
20 subsection (a).



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

4 SECTION 3. There is appropriated out of the environmental
5 response revolving fund established in chapter 128D, Hawaii
6 Revised Statutes, the sum of \$, or so much thereof as
7 may be necessary for fiscal year 2007-2008, and the same sum, or
8 so much thereof as may be necessary for fiscal year 2008-2009,
9 for carrying out the purposes of this Act, including the hiring
10 of necessary staff.

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

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

16 SECTION 5. If any provision of this Act, or the
17 application thereof to any person or circumstance is held
18 invalid, the invalidity does not affect other provisions or
19 applications of the Act, which can be given effect without the
20 invalid provision or application, and to this end the provisions
21 of this Act are severable.

22 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. (SD1)

