
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 businesses and residences, damage to marine
7 ecosystems and the natural environment, and an increase in the
8 incidence of infectious diseases, asthma, and other human
9 health-related problems.

10 Global warming will have detrimental effects on some of
11 Hawaii's largest industries, including tourism, agriculture,
12 recreational and commercial fishing, and forestry. It will also
13 increase the strain on electricity supplies necessary to meet
14 the demand for air conditioning during the hottest times of the
15 year.

16 The State has long been a leader in environmental
17 stewardship and is endeavoring to lead the way in alternative
18 renewable energy development and use. It is the intent of the



1 legislature that this air pollution reduction program will
2 continue the State's tradition of environmental leadership by
3 placing Hawaii among the nation's leaders in efforts to reduce
4 emissions of greenhouse gases. By reducing emissions here in
5 Hawaii, this program will serve as an example to other states,
6 the federal government, and other countries to protect our
7 fragile environment. Hawaii will also position its economy,
8 technology centers, financial institutions, and businesses to
9 benefit from national and international efforts to reduce
10 emissions of greenhouse gases. More importantly, investing in
11 the development of innovative and pioneering technologies will
12 assist the State in achieving the 2020 statewide limit on
13 emissions of greenhouse gases established by this Act. This Act
14 will provide an opportunity for the State to take a global
15 economic and technological leadership role in reducing emissions
16 of greenhouse gases.

17 SECTION 2. The Hawaii Revised Statutes is amended by
18 adding a new chapter to be appropriately designated and to read
19 as follows:

20 "CHAPTER
21 GREENHOUSE GAS EMISSIONS REDUCTION



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

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

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

13 "Carbon dioxide equivalent" means the amount of carbon
14 dioxide by weight that would produce the same global warming
15 impact as a given weight of another greenhouse gas, based on the
16 best available science, including from the Intergovernmental
17 Panel on Climate Change.

18 "Cost-effective" or "cost-effectiveness" means the cost per
19 unit of reduced emissions of greenhouse gases adjusted for its
20 global warming potential.

21 "Department" means the department of health.



1 "Direct emission reduction" means a greenhouse gas emission
2 reduction action made by a greenhouse gas emission source at
3 that source.

4 "Director" means the director of health.

5 "Emissions reduction measure" means programs, measures,
6 standards, and alternative compliance mechanisms authorized
7 pursuant to this chapter, applicable to sources or categories of
8 sources, that are designed to reduce emissions of greenhouse
9 gases.

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

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

17 "Greenhouse gas emission source" or "source" means any
18 source, or category of sources, of greenhouse gas emissions
19 whose emissions are at a level of significance, as determined by
20 the department, that its participation in the program
21 established under this chapter will enable the department to



1 effectively reduce greenhouse gas emissions and monitor
2 compliance with the statewide greenhouse gas emissions limit.

3 "Leakage" means a reduction in emissions of greenhouse
4 gases within the State that is offset by an increase in
5 emissions of greenhouse gases outside the State.

6 "Market-based compliance mechanism" means either of the
7 following:

- 8 (1) A system of market-based declining annual aggregate
9 emissions limitations for sources or categories of
10 sources that emit greenhouse gases; or
11 (2) Greenhouse gas emissions exchanges, banking, credits,
12 and other transactions, governed by rules and
13 protocols established by the director, that result in
14 the same greenhouse gas emission reduction, over the
15 same time period, as direct compliance with a
16 greenhouse gas emission limit or emission reduction
17 measure adopted by the director pursuant to this
18 chapter.

19 "Statewide greenhouse gas emissions" means the total annual
20 emissions of greenhouse gases in the State, including all
21 emissions of greenhouse gases from the generation and



1 consumption of electricity in Hawaii. Statewide emissions shall
2 be expressed in tons of carbon dioxide equivalents.

3 "Statewide greenhouse gas emissions limit" or "statewide
4 emissions limit" means the maximum allowable level of statewide
5 greenhouse gas emissions in 2020, as determined by the director.

6 § -2 **Administration.** The department shall administer
7 this chapter through the director. The director may delegate to
8 any person the power and authority vested in the director by
9 this chapter as the director deems reasonable and proper for the
10 effective administration of this chapter, except the power to
11 make rules.

12 § -3 **Statewide greenhouse gas emissions limit; adoption.**
13 No later than January 1, 2008, after one or more public
14 workshops, with public notice and an opportunity for all
15 interested parties to comment, the director shall determine what
16 the statewide greenhouse gas emissions level was in 1990 and
17 approve a statewide greenhouse gas emissions limit that is
18 equivalent to that level to be achieved by 2020. To ensure the
19 most accurate determination feasible of the 1990 level of
20 greenhouse gas emissions, the department shall evaluate the best
21 available scientific, technological, and economic information on
22 greenhouse gas emissions.



1 The director shall make annual reports to the governor and
2 the legislature on ways to continue reductions of greenhouse gas
3 emissions beyond 2020.

4 § -4 **Greenhouse gas emissions; limits.** (a) Before
5 January 2, 2011, the director shall adopt rules establishing
6 greenhouse gas emission limits and emission reduction measures
7 to achieve the maximum technologically feasible and cost-
8 effective reductions in greenhouse gas emissions in furtherance
9 of achieving the statewide greenhouse gas emissions limit, to
10 become operative beginning on January 1, 2012.

11 (b) The director, to the extent feasible and in
12 furtherance of achieving the statewide greenhouse gas emissions
13 limit, shall adopt rules pursuant to this section and section
14 -11 that:

15 (1) Minimize costs and maximize the total benefits to the
16 State and encourage early action to reduce greenhouse
17 gas emissions;

18 (2) Ensure that activities undertaken to comply with the
19 rules do not disproportionately impact low-income
20 communities;

21 (3) Ensure that entities that have voluntarily reduced
22 their greenhouse gas emissions prior to the



1 implementation of this section receive appropriate
2 credit for early voluntary reductions;

3 (4) Ensure that activities undertaken pursuant to the
4 rules complement, and do not interfere with, efforts
5 to achieve and maintain federal and state ambient air
6 quality standards and to reduce toxic air contaminant
7 emissions;

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

9 (6) Consider overall societal benefits, including
10 reductions in other air pollutants, diversification of
11 energy sources, and other benefits to the economy,
12 environment, and public health;

13 (7) Minimize the administration burden of implementing and
14 complying with these rules;

15 (8) Minimize leakage; and

16 (9) Consider the significance of the contribution of each
17 source or category of sources to statewide emissions
18 of greenhouse gases.

19 (c) In furtherance of achieving the statewide greenhouse
20 gas emissions limit, by January 1, 2011, the director may adopt
21 rules that establish a system of market-based declining annual
22 aggregate emission limits for sources or categories of sources.



1 that emit greenhouse gas emissions, applicable from January 1,
2 2012, to December 31, 2020, that the director determines will
3 achieve the maximum technologically feasible and cost-effective
4 reductions in greenhouse gas emissions, in the aggregate, from
5 those sources or categories of sources.

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

- 8 (1) The greenhouse gas emission reductions achieved are
9 real, permanent, quantifiable, verifiable, and
10 enforceable by the director;
- 11 (2) For rules adopted pursuant to section -11, the
12 reduction is in addition to any greenhouse gas
13 emission reduction otherwise required by law or rule
14 and any other greenhouse gas emission reduction that
15 otherwise would occur; and
- 16 (3) If applicable, the greenhouse gas emission reduction
17 occurs over the same time period and is equivalent in
18 amount to any direct emission reduction required
19 pursuant to this chapter.

20 (e) The director shall rely upon the best available
21 economic and scientific information and its assessment of



1 existing and projected technological capabilities when adopting
2 rules required by this section.

3 (f) The director shall consult with the public utilities
4 commission in the development of the rules as they affect
5 electricity and natural gas providers in order to minimize
6 duplicative or inconsistent requirements.

7 (g) After January 1, 2011, the director may revise rules
8 adopted pursuant to this section and adopt additional rules to
9 further this chapter.

10 § -5 **Mandatory greenhouse gas emissions; reporting.** (a)

11 The director, pursuant to chapter 91, shall adopt rules to
12 require the reporting and verification of statewide greenhouse
13 gas emissions and to monitor and enforce compliance with this
14 chapter.

15 (b) The rules shall:

16 (1) Require the monitoring and annual reporting of
17 greenhouse gas emissions from greenhouse gas emission
18 sources, beginning with the sources or categories of
19 sources that contribute the most to statewide
20 emissions and including greenhouse gas emissions from
21 electricity produced and consumed in the State;



- 1 (2) Provide reporting tools and formats to ensure
2 collection of necessary data; and
- 3 (3) Require greenhouse gas emission sources to maintain
4 comprehensive records of all reported greenhouse gas
5 emissions.

6 (c) The director shall periodically review and update
7 state emission reporting requirements and endeavor to make the
8 requirements consistent with the requirements of international,
9 federal, and other states' greenhouse gas emission reporting
10 programs, as necessary.

11 § -6 **Greenhouse gas emissions; reductions.** (a) The
12 director shall adopt rules to achieve the maximum
13 technologically feasible and cost-effective greenhouse gas
14 emission reductions from sources or categories of sources,
15 subject to the criteria and schedules set forth in this chapter.

16 (b) Before July 30, 2007, the director shall publish and
17 make available to the public a list of discrete early action
18 greenhouse gas emission reduction measures that can be
19 implemented prior to the measures and limits adopted pursuant to
20 this section. Before January 2, 2010, the director shall adopt
21 rules to implement the measures identified on the list published
22 pursuant to this subsection.



1 (c) The rules adopted pursuant to this section shall
2 achieve the maximum technologically feasible and cost-effective
3 reductions in greenhouse gas emissions from those sources or
4 categories of sources, in furtherance of achieving the statewide
5 greenhouse gas emissions limit.

6 (d) The rules adopted pursuant to this section shall be
7 enforceable no later than January 1, 2010.

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



1 by the director are complementary, non-duplicative, and can be
2 implemented in an efficient and cost-effective manner.

3 (b) The scoping plan developed by the director shall
4 identify and make recommendations on direct emission reduction
5 measures, alternative compliance mechanisms, market-based
6 compliance mechanisms, and potential monetary and non-monetary
7 incentives for sources and categories of sources that the
8 director finds are necessary or desirable to facilitate the
9 achievement of the maximum feasible and cost-effective
10 reductions of greenhouse gas emissions by 2020.

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

16 (d) The director shall evaluate the total potential costs
17 and total potential economic and non-economic benefits of the
18 plan for reducing greenhouse gases to the State's economy,
19 environment, and public health, using the best available
20 economic models, emission estimation techniques, and other
21 scientific methods.



1 (e) In developing the plan, the director shall consider
2 the relative contribution of each source or source category to
3 statewide greenhouse gas emissions, and the potential for
4 adverse effects on small businesses, and shall recommend a
5 minimum threshold of greenhouse gas emissions below which
6 emission reductions requirements shall not apply.

7 (f) In developing a scoping plan, the director shall
8 identify opportunities for emission reductions measures from all
9 verifiable and enforceable voluntary actions, including but not
10 limited to carbon sequestration projects and best management
11 practices.

12 (g) The director shall conduct a series of public
13 workshops to give interested parties an opportunity to comment
14 on the scoping plan. The director shall conduct at least one of
15 these workshops in each county.

16 (h) The director shall update the scoping plan for
17 achieving the maximum technologically feasible and cost-
18 effective reductions of greenhouse gas emissions at least once
19 every five years.

20 § -8 **Greenhouse gas emissions; early enactment.** Nothing
21 in this chapter shall restrict the director from adopting
22 greenhouse gas emission limits or emission reduction measures



1 prior to January 1, 2011, imposing those limits or measures
2 prior to January 1, 2012, or providing early reduction credit
3 where appropriate.

4 **§ -9 Greenhouse gas emissions; consultation.** The
5 director shall consult with other states, the federal
6 government, non-governmental organizations, and, if applicable,
7 other nations to identify effective strategies and methods to
8 reduce greenhouse gases, manage greenhouse gas control programs,
9 and to facilitate the development of integrated and cost-
10 effective regional, national, and international greenhouse gas
11 reduction programs.

12 **§ -10 Emissions programs; community opportunities.** The
13 director shall ensure that the greenhouse gas emission reduction
14 rules, programs, mechanisms, and incentives under its
15 jurisdiction, where applicable and to the extent feasible,
16 direct public and private investment toward the most
17 disadvantaged communities in the State and provide an
18 opportunity for small businesses, schools, affordable housing
19 associations, and other community institutions to participate in
20 the benefit from statewide efforts to reduce greenhouse gas
21 emissions.



1 § **-11 Market-based compliance mechanisms.** (a) The
2 director may include in the rules adopted pursuant to section
3 -4 the use of market-based compliance mechanisms to comply
4 with the rules.

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

9 (1) Consider the potential for direct, indirect, and
10 cumulative emission impacts from these mechanisms,
11 including localized impacts in communities that are
12 already adversely impacted by air pollution;

13 (2) Design any market-based compliance mechanism to
14 prevent any increase in the emissions of toxic air
15 contaminants or criteria air pollutants identified by
16 the Environmental Protection Agency; and

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

19 (c) The director shall adopt rules governing how market-
20 based compliance mechanisms may be used by regulated entities
21 subject to greenhouse gas emission limits and mandatory emission



1 reporting requirements to achieve compliance with their
2 greenhouse gas emissions limits.

3 **§ -12 Adoption of methodologies.** The director shall
4 adopt methodologies for the quantification of voluntary
5 greenhouse gas emission reductions. The director shall adopt
6 rules to verify and enforce any voluntary greenhouse gas
7 emission reductions that are authorized by the director for use
8 to comply with greenhouse gas emission limits established by the
9 director. The adoption of methodologies shall be exempt from
10 the rulemaking provisions of chapter 91.

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

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

20 (b) Any violation of any rule, order, emission limitation,
21 emissions reduction measure, or other measure adopted by the



1 director pursuant to this chapter may be subject to penalties
2 under part IV of chapter 342B.

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

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

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

19 § -16 **Environmental justice advisory committee.** (a)
20 The director, by July 1, 2007, shall convene an environmental
21 justice advisory committee, of at least three members, to advise
22 the department in developing the scoping plan pursuant to



1 section -7 and any other pertinent matter in implementing
2 this chapter. The advisory committee shall be composed of
3 representatives from communities in the State with the most
4 significant exposure to air pollution, including but not limited
5 to communities with low-income populations.

6 (b) The director shall appoint the environmental justice
7 advisory committee members from nominations received from
8 environmental justice organizations and community groups.

9 (c) The members of the committee shall serve without
10 compensation but shall be reimbursed for reasonable expenses,
11 including travel expenses, for attendance at environmental
12 justice advisory committee meetings.

13 § -17 **Economic and technology advancement advisory**
14 **committee; established.** (a) The director shall appoint an
15 economic and technology advancement advisory committee to advise
16 the department on activities that will facilitate investment in
17 and implementation of technological research and development
18 opportunities, including but not limited to: identifying new
19 technologies, research, demonstration projects; funding
20 opportunities; developing state, national, and international
21 partnerships and technology transfer opportunities; and
22 identifying and assessing research and advanced technology



1 investment and incentive opportunities that will assist in the
2 reduction of greenhouse gas emissions. The economic and
3 technology advancement advisory committee may also advise the
4 director on state, regional, national, and international
5 economic and technological developments related to greenhouse
6 gas emission reductions.

7 (b) The economic and technology advancement advisory
8 committee members shall serve without compensation but shall be
9 reimbursed for expenses, including travel expenses, necessary
10 for the performance of their duties.

11 § -18 **State agencies; efforts to reduce emissions.** (a)
12 All state agencies shall consider and implement strategies to
13 reduce their greenhouse gas emissions.

14 (b) Nothing in this chapter shall relieve any person,
15 entity, or public agency of compliance with other applicable
16 federal, state, or local laws, including state air and water
17 quality requirements, and other requirements for protecting
18 public health or the environment.

19 § -19 **Limitations on authority.** (a) Nothing in this
20 chapter shall affect the authority of the public utilities
21 commission.



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

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

6 (d) Nothing in this chapter shall limit the existing
7 authority of a state entity to adopt and implement greenhouse
8 gas emissions reduction measures, nor shall it relieve any state
9 entity of its legal obligations to comply with existing law or
10 regulation.

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

16 § -20 **Schedule of fees; establishment.** The director may
17 adopt rules that specify a schedule of fees to be paid by the
18 sources of greenhouse gas emissions regulated pursuant to this
19 chapter. The revenues collected pursuant to this section shall
20 be deposited into the clean air special fund established under
21 section 342B-32 to be used for the purposes thereof.



1 § **-21 Governor's authority to adjust deadlines.** (a) In
2 the event of extraordinary circumstances, catastrophic events,
3 or threat of significant economic harm, the governor may adjust
4 the applicable deadlines for individual regulations, or for the
5 State in the aggregate, to the earliest feasible date after that
6 deadline.

7 (b) The adjustment period may not exceed one year, unless
8 the governor makes an additional adjustment pursuant to
9 subsection (a).

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

13 SECTION 3. 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 4. 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.



1 SECTION 5. This Act shall take effect upon its approval.

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INTRODUCED BY:

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JAN 19 2007



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.

