# SB2017

Measure Title: RELATING TO CLIMATE CHANGE.

Report Title: Climate Change; Greenhouse Gas Emissions; Climate

Vulnerability Assessments; Paris Climate Agreement

Requires climate vulnerability assessments for permit

Description: applications filed after December 31, 2019, to construct,

modify, relocate, or operate any regulated air pollutant

source. Takes effect 1/1/2025. (SD1)

Companion:

Package: None

Current Referral:

AEN/PSM, CPH

Introducer(s): D

INOUYE, S. CHANG, GALUTERIA, HARIMOTO, KIDANI, K. RHOADS, Baker, Dela Cruz, Gabbard, Ihara, Kim, Nishihara



#### STATE OF HAWAII DEPARTMENT OF HEALTH

P. O. Box 3378 Honolulu, HI 96801-3378 doh.testimony@doh.hawaii.gov

# Testimony in OPPOSITION to SB 2017, SD1 RELATING TO CLIMATE CHANGE

#### SENATOR ROSALYN H. BAKER, CHAIR SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Hearing Date: February 22, 2018 Room Number: 229

Time: 10:00 AM

- 1 **Fiscal Implications:** The Department of Health (Department) would require additional
- 2 permitting staff to review and evaluate climate vulnerability assessments (CVAs), and the time to
- 3 process permit applications would be lengthened. Permit applicants would incur additional costs
- 4 to prepare and submit these assessments.
- 5 **Department Testimony:** The Department respectfully opposes this bill. The bill directs the
- 6 Department to develop rules to require a CVA for permit applications for any planned building,
- 7 transportation project, or land use change that may generate significant greenhouse gas emissions
- 8 in the construction or operation phase of the project. The Department has strong concerns that
- 9 the bill's requirements would be established within the Air Pollution Control Program of the
- 10 Clean Air Branch.
- The CVA requires a life cycle analysis (LCA) of the project's carbon emissions, an
- evaluation of the project's vulnerability to climate-related disasters, and possible mitigation and
- 13 alternatives.
- The air permit program is not the appropriate place for determining a project's
- vulnerability to climate-related disasters. The program evaluates stationary source air permit
- applications based on pollutants, including greenhouse gases (GHGs), emitted directly from the
- operation of a source. Acceptable siting and project restrictions based on the projects
- susceptibility to climate related disasters, such as sea-level rise or more frequent storm surges,
- should be evaluated by the designated state and/or county land use and planning agency

responsible for regulating development and managing resources at the very beginning of a 1 2 proposed project, and not by the air permitting program. Similarly, mitigation strategies for global warming threats are more appropriately 3 addressed by climate change task forces and commissions such as Hawaii's Climate Change 4 Mitigation and Adaptation Commission, which have already been established and are working 5 6 towards reducing GHG emissions. 7 Requiring a CVA and LCA for permit applications involving any planned building, transportation project, or land use change that may generate significant GHG emissions would 8 significantly impact the permit application process. While a CVA and LCA of carbon emissions 9 10 may contribute useful information, the Department is not aware of established regulations or criteria which would be used as a basis to approve or deny a permit application, or to require 11 restrictions or limitations on the construction or operation of a project. A permit evaluation 12 should compare a proposed project to a set of limits or requirements that set an objective 13 standard for approving or denying the permit. 14 15 The Department has contacted other states and found that those that require a life cycle assessment do so in their Environmental Impact Statement (EIS) process. A life cycle 16 17 assessment belongs in a comprehensive review process like the EIS and not with the regulatory 18 air permit program. 19 Given our concerns, the climate vulnerability assessment and each of its components would not be appropriately placed within the Department. 20 21 Thank you for the opportunity to testify. 22 23 24

Submitted on: 2/21/2018 12:22:04 AM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for OCC Legislative Priorities Committee, Democratic Party of Hawaii	Support	No

Comments:

#### PRESENTATION OF THE

# OAHU COUNTY COMMITTEE ON LEGISLATIVE PRIORITIES DEMOCRATIC PARTY OF HAWAI'I

TO THE COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH

THE SENATE

TWENTY-NINTH LEGISLATURE

**REGULAR SESSION OF 2018** 

Thursday, February 22, 2018

10:00 AM

Hawaii State Capitol, Conference Room 229

RE: Testimony in Support of SB2017 SD1 OPIOID ANTAGONISTS

To the Honorable Rosalyn H. Baker, Chair; the Honorable Jill N. Tokuda, Vice-Chair, and Members of the Committee on Commerce, Consumer Protection and Health:

Good afternoon. My name is Melodie Aduja. I serve as Chair of the Oahu County Committee ("OCC") Legislative Priorities Committee of the Democratic Party of Hawaii. Thank you for the opportunity to provide written testimony on Senate Bill No. 2017 SD1, relating to Climate Change as a result of greenhouse gas emissions from regulated air pollutant sources necessitating Climate Vulnerability Assessments as per the goals of the Paris Climate Agreement.

The OCC Legislative Priorities Committee is in favor of Senate Bill No.2017 SD1 and support its passage.

Senate Bill No. 2017 SD1, is in alignment with the Platform of the Democratic Party of Hawai'i ("DPH"), 2016, as it requires climate vulnerability assessments for permit applications filed after December 31, 2019, to construct, modify, relocate, or operate any regulated air pollutant source.

Specifically, the DPH Platform states that "[t]he conservation, preservation and restoration of Hawaii's natural resources are connected to the health and welfare of our people; therefore, we support the conservation and protection of our natural environment, which includes reducing our carbon footprint for the benefit of current and future generations.

We know that climate change is a real threat to our islands and the world. We strongly urge our candidates and elected officials to take immediate action to mitigate and adapt to the consequences of climate change. This includes funding adaptation measures including coastal retreat, effective participation of indigenous peoples in climates change governance and recognition that indigenous, local, and traditional ecological knowledge is key in climate change adaptation solutions." (Platform of the DPH, P. 8, Lines 417-420, 435-439 (2016)).

Given that Senate Bill No. 2017 SD1 requires climate vulnerability assessments for permit applications filed after December 31, 2019, to construct, modify, relocate, or operate any regulated air pollutant source, it is the position of the OCC Legislative Priorities Committee to support this measure.

Thank you very much for your kind consideration.

Sincerely yours,

/s/ Melodie Aduja

Melodie Aduja, Chair, OCC Legislative Priorities Committee

Email: legislativeprorities@gmail.com, Tel.: (808) 258-8889



To: The Senate Committee on Commerce, Consumer Protection, And Health

From: Brodie Lockard, 350Hawaii.org, 808-262-1285

Date: Thursday, February 22, 2018

#### In support of SB 2017, S.D. 1

Dear Chair Baker, Vice Chair Tokuda and Committee members,

I am the founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org supports SB 2017, S.D. 1, with an amendment.

The reference to "carbon" in SB 2017 should be changed to "carbon and methane."

Methane is a global warming gas 84 times as potent as CO2 over a 20-year period [1], and has in recent years become recognized as at least as big a threat as carbon. About 25% of the manmade global warming we're experiencing today is caused by methane emissions [1], and large methane deposits in places like arctic permafrost may soon be freed by climate change that is already taking place.

The State is admirably committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

Any regulated air pollutant source, and any entity that may generate significant greenhouse gas emissions in its construction or operation phase, should be providing data on carbon emissions so we can measure and report our progress on this part of our commitment.

But methane emissions should be tracked as well.

Thank you for this opportunity to submit testimony.

Brodie Lockard, Founder 350Hawaii.org

[1] https://www.edf.org/methane-other-important-greenhouse-gas

Submitted on: 2/21/2018 8:05:01 AM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Graham	Testifying for 350.org	Support	No

#### Comments:

Dear CPH Chair Baker, Vice Chair Tokuda, and Committee members,

I support SB2017 SD1 with one change. The reference to "carbon" in SB 2017 should be changed to "carbon and methane." Methane is a far more dangerous global warming gas than CO2.

The State is committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

As the first U.S. state to pass legislation in support of the Paris Climate Agreement after President Trump's withdrawal announcement, it's crucial that Hawaii keep its promise.

Any regulated air pollutant source, and any entity that may generate significant greenhouse gas emissions, should be providing data on carbon emissions so we can measure and report our progress on this part of our commitment.

About 25% of the manmade global warming today is caused by methane emissions [1]. Large methane deposits may soon be freed by climate change that is already taking place. Methane is trapped in Alaska, northern Siberia and the arctic permafrost around the globe, both on land and subsea on the continental shelves of the continents surrounding the Arctic Ocean.

Human sources account for 64% of total methane emissions, the most important source being the production, transportation and use of fossil fuels [2].

Methane levels have more than doubled over the last 150 years, because of human activities like fossil fuel use and intensive farming [2]. Before the Industrial Revolution, natural sinks kept methane levels in a safe range.

- [1] https://www.edf.org/methane-other-important-greenhouse-gas
- [2] IPCC. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2007.
- [3] Loulergue, Laetitia, Thomas F. Stocker, Dominique Raynaud, Jean-Marc Barnola, Bénédicte Lemieux, Thomas Blunier, Valérie Masson-Delmotte, Renato Spahni, Adrian Schilt, and Jérôme Chappellaz. "Orbital And Millennial-scale Features Of Atmospheric CH4 Over The Past 800,000 years." Nature 453, no. 7193 (2008): 383-386.
- [4] Dlugokencky, E. J., E. G. Nisbet, R. Fisher, and D. Lowry. "Global atmospheric methane: budget, changes and dangers." Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 369, no. 1943 (2011): 2058-2072.

Submitted on: 2/20/2018 1:07:07 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Jonathan Boyne	Individual	Support	No	Ī

#### Comments:

Dear CPH Chair Baker, Vice Chair Tokuda, and Committee members,

I support SB2017 SD1.

Talking Points:

The reference to "carbon" in SB 2017 should be changed to "carbon and methane." Methane is a far more dangerous global warming gas than CO2.

The State is committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

As the first U.S. state to pass legislation in support of the Paris Climate Agreement after President Trump's withdrawal announcement, it's crucial that Hawaii keep its promise.

Any regulated air pollutant source, and any entity that may generate significant greenhouse gas emissions, should be providing data on carbon emissions so we can measure and report our progress on this part of our commitment.

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Human sources account for 64% of total methane emissions, the most important source being the production, transportation and use of fossil fuels [2].

Methane levels have more than doubled over the last 150 years, because of human activities like fossil fuel use and intensive farming [2]. Before the Industrial Revolution, natural sinks kept methane levels in a safe range.

Humans are creating methane emissions much faster than the Earth can remove them. During the last 800,000 years, methane concentrations have always varied between

350-800 ppb. Since the Industrial Revolution, methane levels have become 2.5 times larger [3, 4].

- [1] <a href="https://www.edf.org/methane-other-important-greenhouse-gas">https://www.edf.org/methane-other-important-greenhouse-gas</a>
- [2] IPCC. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2007.
- [3] Loulergue, Laetitia, Thomas F. Stocker, Dominique Raynaud, Jean-Marc Barnola, Bénédicte Lemieux, Thomas Blunier, Valérie Masson-Delmotte, Renato Spahni, Adrian Schilt, and Jérôme Chappellaz. "Orbital And Millennial-scale Features Of Atmospheric CH4 Over The Past 800,000 years." Nature 453, no. 7193 (2008): 383-386.
- [4] Dlugokencky, E. J., E. G. Nisbet, R. Fisher, and D. Lowry. "Global atmospheric methane: budget, changes and dangers." Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 369, no. 1943 (2011): 2058-2072.

Sincerely,

Jonathan Boyne

96822

Submitted on: 2/20/2018 1:08:39 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Harald Ebeling	Individual	Support	No

#### Comments:

Dear CPH Chair Baker, Vice Chair Tokuda, and Committee members,

I strongly support SB2017 SD1 but urge you to replace references to "carbon" with "carbon and methane", thus acknowledging the extreme danger of methane as a global-warming gas.

Mahalo!

Harald Ebeling

<u>SB-2017-SD-1</u> Submitted on: 2/20/2018 1:49:02 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Patricia Blair	Individual	Support	No	

Comments:

Submitted on: 2/20/2018 2:38:36 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Carolynn Bell-Tuttle	Individual	Support	No

#### Comments:

Dear CPH Chair Baker, Vice Chair Tokuda, and Committee members,

I support SB2017 SD1.

The reference to "carbon" in SB 2017 should be changed to "carbon and methane." Methane is a far more dangerous global warming gas than CO2.

The State is committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

As the first U.S. state to pass legislation in support of the Paris Climate Agreement after President Trump's withdrawal announcement, it's crucial that Hawaii keep its promise.

Any regulated air pollutant source, and any entity that may generate significant greenhouse gas emissions, should be providing data on carbon emissions so we can measure and report our progress on this part of our commitment.

About 25% of the manmade global warming today is caused by methane emissions [1]. Large methane deposits may soon be freed by climate change that is already taking place. Methane is trapped in Alaska, northern Siberia and the arctic permafrost around the globe, both on land and subsea on the continental shelves of the continents surrounding the Arctic Ocean.

Human sources account for 64% of total methane emissions, the most important source being the production, transportation and use of fossil fuels [2].

Methane levels have more than doubled over the last 150 years, because of human activities like fossil fuel use and intensive farming [2]. Before the Industrial Revolution, natural sinks kept methane levels in a safe range.

#### [1] https://www.edf.org/methane-other-important-greenhouse-gas

- [2] IPCC. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2007.
- [3] Loulergue, Laetitia, Thomas F. Stocker, Dominique Raynaud, Jean-Marc Barnola, Bénédicte Lemieux, Thomas Blunier, Valérie Masson-Delmotte, Renato Spahni, Adrian Schilt, and Jérôme Chappellaz. "Orbital And Millennial-scale Features Of Atmospheric CH4 Over The Past 800,000 years." Nature 453, no. 7193 (2008): 383-386.
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<u>SB-2017-SD-1</u> Submitted on: 2/20/2018 2:56:41 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sandra Fujita	Individual	Support	No

Comments:

<u>SB-2017-SD-1</u> Submitted on: 2/20/2018 3:20:07 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
B.A. McClintock	Individual	Support	No	

Comments:

Please support this important bill.

Submitted on: 2/20/2018 4:51:15 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Meredith Buck	Individual	Support	No

#### Comments:

Dear CPH Chair Baker, Vice Chair Tokuda, and Committee members,

I support SB2017 SD1.

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<u>SB-2017-SD-1</u> Submitted on: 2/20/2018 6:05:08 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
John NAYLOR	Individual	Support	No

#### Comments:

The State is committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

Submitted on: 2/20/2018 7:19:13 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
John Nix	Individual	Support	No	

#### Comments:

Dear CPH Chair Baker, Vice Chair Tokuda, and Committee members,

I support SB2017 SD1.

The reference to "carbon" in SB 2017 should be changed to "carbon and methane." Methane is a far more dangerous global warming gas than CO2.

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- [3] Loulergue, Laetitia, Thomas F. Stocker, Dominique Raynaud, Jean-Marc Barnola, Bénédicte Lemieux, Thomas Blunier, Valérie Masson-Delmotte, Renato Spahni, Adrian Schilt, and Jérôme Chappellaz. "Orbital And Millennial-scale Features Of Atmospheric CH4 Over The Past 800,000 years." Nature 453, no. 7193 (2008): 383-386.
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- [4] Dlugokencky, E. J., E. G. Nisbet, R. Fisher, and D. Lowry. "Global atmospheric methane: budget, changes and dangers." Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 369, no. 1943 (2011): 2058-2072.
- SB2668 Codifies sustainable development goals based on the United Nations' Global Goal seven, affordable and clean energy.
- SB2715 Extends the authorization to issue special purpose revenue bonds to assist Kaiuli Energy, LLC, with the financing of the planning, design, and construction of a seawater air conditioning district cooling facility and chilled water distribution system.
- SB2672 Codifies sustainable development goals based on the United Nations' Global Goal eleven, sustainable cities and communities. (SD1)
- SB2675 Codifies sustainable development goals based on the United Nations' Global Goal fourteen, life below water. (SD1)
- SB2676 Codifies sustainable development goals based on the United Nations' Global Goal fifteen, life on land. (SD1)

Submitted on: 2/20/2018 9:01:34 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
L.M. Holmes	Individual	Support	No	

#### Comments:

Good bill but it needs an amendment changing references to 'carbon' to 'carbon and methane.' Methane is one of the most serious greenhouse gases and needs to be included. About 25% of the manmade global warming today is caused by methane emissions, and more will be freed by global warming.

Submitted on: 2/20/2018 9:27:30 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dawn Morais Webster Ph.D.	Individual	Support	No

#### Comments:

The reference to "carbon" in SB 2017 should be changed to "carbon and methane." Methane is a far more dangerous global warming gas than CO2.

The State is committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

As the first U.S. state to pass legislation in support of the Paris Climate Agreement after President Trump's withdrawal announcement, it's crucial that Hawaii keep its promise.

Any regulated air pollutant source, and any entity that may generate significant greenhouse gas emissions, should be providing data on carbon emissions so we can measure and report our progress on this part of our commitment.

About 25% of the manmade global warming today is caused by methane emissions [1]. Large methane deposits may soon be freed by climate change that is already taking place. Methane is trapped in Alaska, northern Siberia and the arctic permafrost around the globe, both on land and subsea on the continental shelves of the continents surrounding the Arctic Ocean.

Human sources account for 64% of total methane emissions, the most important source being the production, transportation and use of fossil fuels [2].

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Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2007.

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<u>SB-2017-SD-1</u> Submitted on: 2/20/2018 10:17:59 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Janet Pappas	Individual	Support	No	

#### Comments:

Dear CPH Committee,

Please ensure that, in addition to carbon emissions, methane emissions are monitored in the climate vulnerability assessments being required to protect our planet.

Thank you.

Submitted on: 2/20/2018 10:50:27 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Taurie Kinoshita	Individual	Support	No	

#### Comments:

The State is committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

As the first U.S. state to pass legislation in support of the Paris Climate Agreement after President Trump's withdrawal announcement, it's crucial that Hawaii keep its promise. Any regulated air pollutant source, and any entity that may generate significant greenhouse gas emissions, should be providing data on carbon emissions so we can measure and report our progress on this part of our commitment.

About 25% of the manmade global warming today is caused by methane emissions.

Submitted on: 2/21/2018 1:12:11 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Dana Jenkins	Individual	Support	No	

#### Comments:

I support SB2017 SD1. The reference to "carbon" in SB 2017 should be changed to "carbon and methane." Methane is a far more dangerous global warming gas than CO2.

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Human sources account for 64% of total methane emissions, the most important source being the production, transportation and use of fossil fuels.

Methane levels have more than doubled over the last 150 years, because of human activities like fossil fuel use and intensive farming. Before the Industrial Revolution, natural sinks kept methane levels in a safe range.

<u>SB-2017-SD-1</u> Submitted on: 2/21/2018 1:44:06 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Samuel John	Individual	Support	No

Comments:

<u>SB-2017-SD-1</u> Submitted on: 2/21/2018 1:57:24 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Josephine	Individual	Support	No

Comments:

Submitted on: 2/21/2018 2:57:28 PM

Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Juliet Pearson	Individual	Support	No

#### Comments:

Dear CPH Chair Baker, Vice Chair Tokuda, and Committee members,

I support SB2017 SD1

The reference to "carbon" in SB 2017 should be changed to "carbon and methane." Methane is a far more dangerous global warming gas than CO2.

The State is committed to the goals of the Paris Climate Agreement. This commitment cannot be met without monitoring and measuring the life cycles of projects' gross and net carbon emissions.

As the first U.S. state to pass legislation in support of the Paris Climate Agreement after President Trump's withdrawal announcement, it's crucial that Hawaii keep its promise.

Any regulated air pollutant source, and any entity that may generate significant greenhouse gas emissions, should be providing data on carbon emissions so we can measure and report our progress on this part of our commitment.

About 25% of the manmade global warming today is caused by methane emissions [1]. Large methane deposits may soon be freed by climate change that is already taking place. Methane is trapped in Alaska, northern Siberia and the arctic permafrost around the globe, both on land and subsea on the continental shelves of the continents surrounding the Arctic Ocean.

Human sources account for 64% of total methane emissions, the most important source being the production, transportation and use of fossil fuels [2].

Methane levels have more than doubled over the last 150 years, because of human activities like fossil fuel use and intensive farming [2]. Before the Industrial Revolution, natural sinks kept methane levels in a safe range.

- [1] https://www.edf.org/methane-other-important-greenhouse-gas
- [2] IPCC. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2007.
- [3] Loulergue, Laetitia, Thomas F. Stocker, Dominique Raynaud, Jean-Marc Barnola, Bénédicte Lemieux, Thomas Blunier, Valérie Masson-Delmotte, Renato Spahni, Adrian Schilt, and Jérôme Chappellaz. "Orbital And Millennial-scale Features Of Atmospheric CH4 Over The Past 800,000 years." Nature 453, no. 7193 (2008): 383-386.
- [4] Dlugokencky, E. J., E. G. Nisbet, R. Fisher, and D. Lowry. "Global atmospheric methane: budget, changes and dangers." Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 369, no. 1943 (2011): 2058-2072.

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Testimony for CPH on 2/22/2018 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Jennifer Milholen	Individual	Support	No	

Comments:



#### Testimony by:

JADE T. BUTAY INTERIM DIRECTOR

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IN REPLY REFER TO:

# STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

869 PUNCHBOWL STREET HONOLULU, HAWAII 96813-5097

February 22, 2018 10:00 a.m. State Capitol, Room 229

#### S.B. 2017, S.D. 1 RELATING TO CLIMATE CHANGE

Senate Committee on Commerce, Consumer Protection, and Health

The Department of Transportation (DOT) submits **comments** on this bill which proposes to require the Department of Health to require climate vulnerability assessments for all permit applications required under Chapter 342B of the Hawaii Revised Statutes that involve building, transportation, or land use changes that generate significant greenhouse gas emissions.

While the DOT supports the Paris Agreement and believes that Climate Change and associated effects such as Sea Level Rise are critical issues for our state, DOT finds that requiring a vulnerability assessment for all permit applications for projects that may generate "significant greenhouse gas emissions in the construction or operation of the project" to be overly broad to meet what is expected and may affect project delivery.

DOT's specific concern is that is that the proposed new permit requirement would be applied to transportation facilities (under the definition of "project") and that there is no clear methodology or standard identified to make the required "significant greenhouse gas emissions" determination. Further, DOH, as the permitting agency, is unlikely to have the technical expertise to evaluate such assessments and determine the direct impact of such a proposal on climate vulnerability or what corrective actions an applicant would have to undertake to address any such potential impacts.

Thank you for the opportunity to provide testimony.