



**STATE OF HAWAII**  
**HAWAII CLIMATE CHANGE MITIGATION & ADAPTATION**  
**COMMISSION**  
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**Testimony of**  
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**Before the House Committee on**  
**ENERGY & ENVIRONMENTAL PROTECTION**

**Tuesday, March 17, 2020**  
**9:00 AM**  
**State Capitol, Conference Room 325**

**In support of**  
**SENATE BILL 3150 SD2 PROPOSED HD1**  
**RELATING TO TAXATION**

Senate Bill 3150 SD2 Proposed HD1 proposes to establish a carbon emissions tax, establish a refundable tax credit for lower-income individuals, establish a special fund to be used to administer the tax credit, establish a special fund for climate adaptation, and allocate carbon emissions tax revenues to the special funds.

**On behalf of the Hawaii Climate Change Mitigation and Adaptation Commission (Commission), I support this measure.**

The Hawaii Climate Change Mitigation and Adaptation Commission “recognizes the urgency of climate threats and the need to act quickly. It promotes ambitious, climate-neutral, culturally responsible strategies for climate change adaptation and mitigation in a manner that is clean, equitable and resilient.” The Commission, established by Act 32 SLH 2017 to uphold the United States’ pledges under the Paris Agreement, is the coordinating body for policies on climate change mitigation and adaptation for the state. It is a high-level multi-jurisdictional body that guides the priorities of the state’s climate response. Co-chaired by DLNR and Office of Planning, it consists of 20 members—chairs of four legislative committees, and executive department heads at the county and state levels.

The Commission believes that putting a price on carbon is the most effective single action that will achieve Hawaii’s ambitious and necessary emissions reduction goals. This is supported by various expert organizations, including the International Monetary Fund, the Inter-Governmental

**Co-Chairs:**  
Chair, DLNR  
Director, Office of Planning

**Commissioners:**  
Chair, Senate AEN  
Chair, Senate WTL  
Chair, House EEP  
Chair, House WTH  
Chairperson, HTA  
Chairperson, DOA  
CEO, OHA  
Chairperson, DHHL  
Director, DBEDT  
Director, DOT  
Director, DOH  
Chairperson, DOE  
Director, C+C DPP  
Director, Maui DP  
Director, Hawai'i DP  
Director, Kaula'i DP  
The Adjutant General  
Manager, CZM

Panel on Climate Change, and Hawaii's *Transportation Energy Analysis* (2015).<sup>1</sup> According to IMF Working Paper *Macroeconomic and Financial Policies for Climate Change Mitigation: A Review of the Literature* "There is growing agreement between economists and scientists that the tail risks are material and the risk of catastrophic and irreversible disaster is rising, implying potentially infinite costs of unmitigated climate change, including, in the extreme, human extinction (see, e.g., Weitzman 2009)."<sup>2</sup> Recently, economists at reputable investment banks such as JP Morgan have stated that "the most extreme risks of climate change can't be ruled out—including the collapse of human civilization."<sup>3</sup>

This measure aims to establish a price on carbon dioxide, in order to reflect the full cost of using fuels that produce carbon dioxide to discourage behavior that is expensive to life, property and nature--and thereby decrease these emissions.

**Carbon tax and the social cost of carbon.** A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or – more commonly – on the carbon content of fossil fuels. It is different from an Emissions Trading System in that the emission reduction outcome of a carbon tax is not pre-defined, but the carbon price is.<sup>4</sup>

A good carbon pricing mechanism, therefore, sets the carbon tax at the social cost of carbon at the very least, and higher if emissions targets for under 2 degrees warming are to be achieved.

EPA's Social Cost of Carbon (SSC) is defined as "a measure, in dollars, of the long-term damage done by a ton of carbon dioxide (CO<sub>2</sub>) emissions in a given year."<sup>5</sup> EPA and other federal agencies use estimates of the SSC to value the climate impacts of rulemakings. Per its 2016 Fact Sheet, EPA estimates that the average SSC in 2020 would be \$42 per MT.

**The rate for Hawaii.** Rounding this up, generally accounting for inflation and using the CPI based on UHERO's information, to \$45 in 2020 is a plausible starting point, and puts us at \$15 per barrel.<sup>6</sup> Currently, Hawaii's barrel tax is \$1.05 per barrel, or approximately \$3.15 per MT CO<sub>2</sub>e.

While these figures may appear high, they are actually on the low side of the World Bank's recommendations for a carbon tax range from \$40 to \$80 per MT CO<sub>2</sub>e by 2020 and \$50-100 per ton by 2030, according to the High-Level Commission on Carbon Prices, co-chaired by Joseph Stiglitz and Lord Nicholas Stern.<sup>7</sup> The EPA additionally recommends high-impact increases of \$123 by 2020 and \$152 by 2030 per MT CO<sub>2</sub>e.

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<sup>1</sup> Hawaii Climate Change Mitigation and Adaptation Commission's statement (Nov 2018), available at: <http://climate.hawaii.gov/wp-content/uploads/2018/11/NR-Climate-Commission-Recommends-Urgent-Action-to-Combat-Emissions-Nov.-28-2018.pdf>

<sup>2</sup> *Macroeconomic and Financial Policies for Climate Change Mitigation: A Review of the Literature*. Signe Krogstrup and William Oman. IMF Working Paper 2019

<sup>3</sup> *JP Morgan Warns of Climate as a Threat to 'Human Life as We Know It.'* Katia Dmitrieva. February 21, 2020. Bloomberg Green, available at: <https://www.bloomberg.com/news/articles/2020-02-21/jpmorgan-warns-of-climate-threat-to-human-life-as-we-know-it>

<sup>4</sup> See Carbon Pricing Leadership Coalition (CLPC), available at: <https://www.carbonpricingleadership.org/>

<sup>5</sup> *EPA Fact Sheet*. Environmental Protection Agency (2016), available at: [https://www.epa.gov/sites/production/files/2016-12/documents/social\\_cost\\_of\\_carbon\\_fact\\_sheet.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf)

<sup>6</sup> "UHERO Consumer Price Index" (2020) US Department of Labor, Bureau of Labor Statistics, available at: [https://data.uhero.hawaii.edu/#/series?id=147933&data\\_list\\_id=56&sa=true](https://data.uhero.hawaii.edu/#/series?id=147933&data_list_id=56&sa=true)

<sup>7</sup> "Report of the High-level Commission on Carbon Prices" (2017), Carbon Pricing Leadership Coalition, available at: <https://www.carbonpricingleadership.org/report-of-the-highlevel-commission-on-carbon-prices/>

**Carbon taxes in the real world.** According to the US Climate Leadership Council, an escalating carbon fee offers the most cost-effective climate policy solution<sup>8</sup>. Some may say these estimates are theoretical. However, in reality, more than 74 nations, states, and cities have implemented carbon pricing all over the world<sup>9</sup>. In the US, ten states have implemented SCC carbon pricing in assessing new projects<sup>10</sup>. Even as far back as 2008, the Canadian province of British Columbia (BC) implemented the first comprehensive and substantial carbon tax in North America. By 2012, the tax had reached a level of C\$30 per MT CO<sub>2</sub>e, and covered approximately three-quarters of all greenhouse gas emissions in the province.

On January 21st, Wisconsin Democrats introduced Bill 766 in the Assembly, which requires utilities to assess the social cost of carbon when assessing new projects.<sup>11</sup> While this is not a direct price on carbon that utilities have to pay, it does set a \$50 fee per MT CO<sub>2</sub>e that participating utilities must consider when establishing new projects, and will take into account the impacts that carbon emissions have on society. States of Washington, Minnesota, and Colorado all currently have policies similar to the proposed Wisconsin bill.

**Carbon tax's effect on the economy and emissions.** Jurisdictions worried about what effects carbon pricing has on their economies look again to British Columbia. According to a Nicholas Institute 2015 paper:<sup>12</sup>

- a. Empirical and simulation models suggest that the tax has reduced emissions in the province by 5–15%.
- b. At the same time, models show that the tax has had negligible effects on aggregate economic performance, though certain emissions-intensive sectors have faced challenges.
- c. Studies differ on the effects of the policy on income distribution but agree that they are relatively small.
- d. Finally, polling data show that the public initially opposed the tax but now generally supports it.

However, although one of the longest running carbon tax experiments, BC's example more recently shows that a carbon tax will have to be much higher than its intent to go as high as \$50 per MT to achieve climate goals. According to one source, "while BC's emissions are lower than they would have been without the carbon tax, the fact they have only levelled off underscores that either a higher carbon price or more aggressive complementary measures are needed to achieve the absolute reductions in emissions."<sup>13</sup> BC's example shows that neither its economy nor its government toppled.

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<sup>8</sup> *A Winning Trade: How Replacing the Obama-Era Climate Regulations with a Carbon Dividends Program Starting at \$40/Ton Would Yield Far Greater Emission Reductions* (2018) David Bailey, US Climate Leadership Council.

<sup>9</sup> *State and Trends of Carbon Pricing 2019* (2019) World Bank Group, Open Knowledge Repository, available at: <https://www.carbonpricingleadership.org/who>

<sup>10</sup> "US State Carbon Pricing Policies". Center for Climate and Energy Solutions, available at: <https://www.c2es.org/document/us-state-carbon-pricing-policies/>

<sup>11</sup> "Wisconsin Considers the Social Cost of Carbon" (2020) Carlie Clarq, ClimateXChange, available at: [https://climate-xchange.org/2020/02/06/wisconsin-considers-the-social-cost-of-carbon-with-newly-filed-bill/?mc\\_cid=a5b60cdfa4&mc\\_eid=576365dee0](https://climate-xchange.org/2020/02/06/wisconsin-considers-the-social-cost-of-carbon-with-newly-filed-bill/?mc_cid=a5b60cdfa4&mc_eid=576365dee0)

<sup>12</sup> "British Columbia's Revenue-Neutral Carbon Tax: A Review of the Latest "Grand Experiment" in Environmental Policy". Murray, Brian, et al. (2015) Nicholas Institute of Environmental Policy Solutions, available at: <https://nicholasinstitute.duke.edu/climate/publications/british-columbias-revenue-neutral-carbon-tax-review-latest-grand-experiment>

<sup>13</sup> "Lessons from British Columbia's carbon tax: (July 11, 2019) Kathryn Harrison, Policy Options Politiques, available at: <https://policyoptions.irpp.org/magazines/july-2019/lessons-from-british-columbias-carbon-tax/>

**Justice/Equity issues.** Additionally, I ask the Committees to draw their attention to the Commission’s strong focus on equity, in its carbon pricing statement:

While the specific mechanisms behind a carbon fee program are not yet outlined, the Commission emphasized the urgent need for such a program, and supports legislation that endeavors to establish one, but also recognizes that any carbon pricing mechanism:

- Must be equitable, and appropriate for the people of Hawaii.
- Must demonstrate how this is a critical policy tool to protect the future—of Hawaii’s keiki and ‘āina.
- Must be adequate to change behavior.

I support the establishment of two special funds—one that would address the equity considerations directly through a tax credit; and the other that would help with much needed climate adaptation in Hawaii.

**What mechanism: Tax credit or dividend?** The current draft of the measure addresses these equity concerns by proposing a refundable tax credit for lower income families. To minimize the impacts on this group, I urge the Committee to consider also appropriately increasing the tax credit over the years. Alternatively, the Committee might consider a fee and dividend mechanism rather than a tax credit, as the former is a more “visible” payment, lacks ambiguity, and is easier to administer—and generally may be more publicly “palatable.” It could also be structured to increase with increases in the price on carbon. For over a decade, BC has demonstrated that carbon fee and dividend systems represent a viable solution to carbon emission reduction for complex economies.<sup>14</sup> BC first implemented a carbon tax in 2008, and recently increased its rate from \$35-\$40 per tCO<sub>2</sub>e as part of an innovative carbon fee and dividend system.<sup>15</sup> The carbon “fee” portion is planned to increase by \$5 per tCO<sub>2</sub>e until reaching \$50 per tCO<sub>2</sub>e in 2021. As for the “dividend” portion, BC is funneling the revenues from the increased carbon tax back to households at \$154.50 per adult and \$45.50 per child. In addition, BC uses revenues to provide tax relief, ensure equity, maintain industry competitiveness, and encourage new green initiatives.<sup>16</sup>

**Climate Adaptation fund.** Hawaii is the second most regressive state in the nation for taxation. Having the revenues from a carbon tax go into special fund to addresses such regressivity. However, any such special fund, if it is not specifically geared towards the lower income and more vulnerable populations runs the danger of subsidizing the rich/middle class yet again. I suggest items such as buybacks of coastal (and flood prone) properties for low income people and communities. In addition, I suggest, along the lines of priorities established by the Commission, to fund vulnerable infrastructure assessments, prioritization and implementation --of agencies and

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<sup>14</sup> The Economic, Climate, Fiscal, Power, and Demographic Impact of a National Fee-and-Dividend Carbon Tax (2014) Regional Economic Models, Inc., available at: <https://citizensclimatelobby.org/wp-content/uploads/2014/06/REMI-carbon-tax-report-62141.pdf>

<sup>15</sup> *State and Trends of Carbon Pricing* (2019) World Bank Group, available at: <http://documents.worldbank.org/curated/en/191801559846379845/pdf/State-and-Trends-of-Carbon-Pricing-2019.pdf>

<sup>16</sup> “British Columbia’s Carbon Tax” (2020) Government of British Columbia, available at: <https://www2.gov.bc.ca/gov/content/environment/climate-change/planning-and-action/carbon-tax>

departments--but especially in the low income and vulnerable areas of the state, so that it is not the wealthier areas that get climate protection first, but the poorer and more vulnerable.

I also urge the Committee to consider passing this measure this year, rather than waiting till next year, as the cost of inaction is great—climate change impacts are being felt in Hawaii already, and all science-based projections indicate they will continue to worsen. These impacts will be felt disproportionately by the vulnerable lower income communities, and life will get more expensive and worse for them if nothing is done to address these inequities. This measure is the most effective tool in a suite of many other policy tools that need to be undertaken, and is one that would address much needed equity and regressivity issues that already exist in Hawaii. By putting a structure in place now would not only acknowledge the deep crisis that we are in, but actually take effective action to address the crisis, and make things right for those who need it most.

Thank you for the opportunity to offer testimony on this measure.