

Carbon Pricing Study – TRC

DRAFT Scope of Work

July 15, 2021

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The Hawai‘i State Energy Office (HSEO) released “Carbon Pricing Assessment for Hawai‘i: Economic and Greenhouse Gas Impacts” in April 2021. The State Legislature authorized the study in Act 122, Session Laws of Hawai‘i 2019. HSEO contracted with Principal Investigator Coffman to complete the work. This scope of work serves as an extension of the final study, hereby referred to as ‘the Report,’ available at <http://energy.hawaii.gov/carbon-pricing-study>.

The Report utilized a computable general equilibrium (CGE) model of Hawai‘i’s economy to assess the economic and GHG impacts of two levels of a carbon tax. The first carbon price pathway was set to the Obama Administration’s adopted “social cost of carbon.” The second carbon price pathway assumed a much higher tax rate that reached \$1,000/MTCO_{2e} by the year 2045. The Report also considered two ways to use the tax revenues, assuming that the tax is levied on all sources of non-military fossil fuels. The first revenue scenario is that tax revenues are used by the state government to fund existing state services. The second revenue scenario returns tax revenues to households (represented by income quintiles) in equal shares, with the exception of tax revenues from air travel due to restrictions imposed by the federal Anti-Head Tax Act.

There will be two parts to this work. The first part, and what can be considered the major extension to the currently developed CGE model, will be to analyze a wider range of scenarios under the social cost of carbon tax level relating to: 1) sectors taxed, specifically removing the carbon tax on domestic air travel based on the federal Anti-Head Tax Act, and 2) assumptions about the return of revenues to households. Here we will examine several alternative choices regarding distribution of dividends among household income quintiles: first, a scenario where the households in quintiles 1 through 4 receive 80% of the revenues via dividends and 20% goes to government spending; second, a scenario where all households receive 80% of the revenues and

20% goes to government spending;¹ and third, a scenario where all revenues are distributed equally between quintiles 1 through 4. Revenues could be dedicated to spending on climate change resilience, but the costs of such interventions are outside this scope of work. This study will motivate these scenarios with discussion of best practices from academic literature as well as from other jurisdictions; however, detailed legal assessment of taxation implications are outside this scope of work. For these scenarios, we will display many of the economic metrics that appeared in the Report. This study will also compare the welfare and dividend income of these new scenarios to with the welfare and dividend scenarios presented in the Report.

The second part will be a descriptive analysis of multiple considerations important for practical implementation of a carbon tax. By looking at best practices within the academic literature as well as lessons learned from other jurisdictions with a carbon tax, this part will provide considerations for:

- Administration of the tax; for example, through an extension of the current “barrel tax” and the \$/unit translation.
- The form of a dividend payment; for example, how frequently should the payment be made and through what mechanisms?
- Taxation of dividend income.
- Other potential implications for public finance.

Timeline:

September 1, 2021 to January 31, 2022

*If the contract is delayed past September 1, 2021, deliverables may also be delayed.

September-October 2021

Part I: Model extensions and result analysis.

Part II: Research on best practices from academic literature review and relevant publicly available resources.

Late October/Early November

Present preliminary findings in a presentation to the TRC.

October-November 2021

Part I: Scenario and result write-up.

Part II: Continued research and write-up.

Deliver Final Draft Report to the TRC by November 30, 2021.

Final Report by TBD based on conversation with the TRC.

Budget:

¹ Pending the outcome of the first two scenarios, we may run several other sensitivity tests that look at alternative splits of government spending.

Budget Category	Description	Total
Service-Fee Basis	Project Support RCUH UHERO*	\$ 60,010
Indirect Costs	10% State of Hawai'i	\$ 6,001
Total Costs		\$ 66,011

*"Project Support RCUH UHERO" covers research time for Maja Schjervheim, Paul Bernstein, and Sumner La Croix.