

**Subcommittee on Environment and Climate Change
Hearing on
“Building a 100 Percent Clean Economy:
Solutions for Economy-Wide Deep Decarbonization”
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The Honorable John Shimkus (R-IL)

1. What are your views on a “border carbon adjustment” or a tax on imports to protect U.S. manufacturers from being economically disadvantaged by the burdens of climate policies?

RESPONSE: A comprehensive climate policy strategy should not harm the competitiveness of U.S. businesses or encourage emissions “leakage” (i.e. emissions sources relocating abroad). A well-designed border carbon adjustment (BCA) is one way to accomplish these goals.

- a. How would border adjustments work in practice given that countless thousands of consumer products that may be impacted by energy prices?

RESPONSE: By limiting the universe of products subject to the BCA. A proposal could say that only products that exceed a certain carbon-intensity are included in the BCA program. This could ensure protection for vulnerable industries while retaining administrative feasibility.

- b. What analyses have you performed on border adjustments?

RESPONSE: None. But there is an extensive literature on BCAs. One example of a study that describes the mechanisms of how a BCA could be implemented in some depth is the following:

Flannery, Brian, Jennifer A. Hillman, Jan W. Mares, and Matthew Porterfield. 2018. “Framework Proposal for a US Upstream Greenhouse Gas Tax with WTO-Compliant Border Adjustments,” Georgetown University Law Center.

2. The Energy Futures Initiative noted in an August 2019 report that: “While the concept of border adjustments is often cited as an element of a carbon pricing policy, the mechanics of how it would be implemented and the integration of carbon border adjustments into trade policy have not been studied in any depth.”

- a. What analyses have you performed on border adjustments?

RESPONSE: Please see answer to 1b.

- b. What is necessary to analyze the mechanics of how a border adjustment could be implemented within the framework of current trade policy?

RESPONSE: To analyze the mechanics of BCAs, the primary needs are data on imports and exports of carbon-intensive products and the countries from/to which the products are imported/exported. It is also important to explore the range of potential responses of trading partners, including their adoption of additional policy measures (see also response 3b).

3. The European Union is actively working to develop a border adjustment—or carbon-based tax on imports. Recently, an [article](#) in Reuters reported that China is lashing out at this effort as trade protectionism. The story says “Any border tax would likely raise the price of Chinese goods in the European market, and Beijing believes it would violate a core principle of the Paris agreement on climate change.” Related to this, Article 3 of the UN Framework Convention on Climate Change, which is the umbrella treaty under which the Paris Agreement was developed, prohibits countries from trade discrimination for climate purposes.

- a. How are such climate tariffs compatible with WTO rules and the UN Framework Convention itself?

RESPONSE: This falls outside my area of expertise, but legal scholars have studied this question in some depth. The following study is one example:

Trachtman, Joel P., *WTO Law Constraints on Border Tax Adjustment and Tax Credit Mechanisms to Reduce the Competitive Effects of Carbon Taxes* (January 25, 2016). Resources for the Future Discussion Paper 16-03. Available at SSRN: <https://ssrn.com/abstract=2738752>

Trachtman concludes: “It is possible to design an import border tax adjustment that would pose a reduced risk of violating World Trade Organization (WTO) law, and, in the event a violation is found, an increased likelihood of satisfying the requirements for an exception.” (Page 1).

- b. What are your proposals for ensuring that climate and trade issues do not merge into a single, mega issue?

RESPONSE: The best way to alleviate concerns about adverse trade-related impacts of United States climate policy is to retain a leadership role in the international climate change framework and negotiations. This would reduce the likelihood of unexpected responses from major trading partners. It could also

reduce the need for BCAs among certain trading partners with similar climate policies.

4. Does the modeling you reference in your testimony assume effective border adjustments?

RESPONSE: Yes. Our recent modeling has included BCAs because every carbon pricing policy proposed to the U.S. Congress in recent years has included a BCA. Specifically, we adjust macroeconomic parameters in the model to avoid significant changes in the imports or exports of carbon-intensive products.

- a. To the extent modeling has been run without assumed border adjustments, what has it shown?

RESPONSE: In the modeling reference in my testimony, we did not include any scenarios without BCAs.

- b. What are your plans to use or run an “open economy” version of the model you have used?

RESPONSE: I am not sure what you mean by “an ‘open economy’ version of the model.” I would be eager to discuss this issue further with you or your staff. In general, I consider the United States a mostly open economy, with or without a BCA in place. We are likely to model climate policy scenarios without BCAs if we see legislative proposal emerge with alternative approaches to protecting the competitiveness of US industries.

- c. Would climate policy deliberations benefit from modeling that seeks to project potential competitive impacts of carbon taxes or other climate policies?

RESPONSE: Several research initiatives have studied the potential economic impacts of carbon pricing policies, including the following recent studies:

Diamond, John and George Zodrow. 2018. “The effects of carbon tax policies on the US economy and the welfare of households.” *Prepared by the Baker Institute for Public Policy at Rice University for Columbia SIPA Center on Global Energy Policy*. <http://energypolicy.columbia.edu/our-work/topics/climatechange-environment/carbon-tax-researchinitiative/carbon-tax-initiative-research>

Nick Macaluso, Sugandha Tuladhar, Jared Woollacott, James R. McFarland, Jared Creason and Jefferson Cole. “The Impact of Carbon Taxation and Revenue Recycling on U.S. Industries” *Climate Change Economics*. Vol. 09, No. 01, 1840005 (2018). <https://doi.org/10.1142/S2010007818400055>

Given the continuously changing landscape, climate policy deliberations would

benefit from additional modeling of this type in the future, both for carbon pricing policies and for other climate policies.