**Name of Project**

Analysis of how monetary policy can affect the macroeconomic outcomes of a U.S. carbon tax

**Final Report on the Project**

**November 30, 2017**

This project is part of the Brookings Carbon Tax Initiative and builds on earlier work supported by the Alex C. Walker Foundation. In this project, Brookings scholars explored the interaction of monetary policy and climate change. Brookings scholars presented their findings in a policy brief.

The paper argued that in a carbon-constrained and climatically-disrupted world, there are important linkages between the climate change and monetary policy regimes. In light of our analysis, we expanded the original scope of the project to discuss three relevant connections. First, the question arises how central banks should anticipate and respond to inflation increases and output decreases that result from climate policy. Responding solely to the inflationary component would lead to larger output losses than using a monetary policy rule that also aims to keep output and employment high. In particular, we argue that national income targeting is an attractive approach. It avoids creating public expectations of higher future inflation, and it does not require the central bank to understand the precise nature of the climate policy shock; simple adherence to the policy rule provides a reasonable policy response. Moreover, national income targeting is less vulnerable to imprecise information about the current state of the economy than many other monetary policy rules.

Second, the design of climate policy can significantly affect how easily central bankers can respond to the direct and indirect effects of the policy. Fluctuating allowance prices under a cap and trade policy would make inflation forecasting more difficult for central banks than a policy such as a carbon tax or a hybrid approach in which carbon prices are more stable and predictable. Thus, a carbon tax or a hybrid policy with stable short term carbon prices would simplify the response of a central bank to economic shocks relative to a more volatile carbon pricing approach.

Finally, a third challenge is that climatic disruption will increase the frequency and severity of negative supply shocks, making it more difficult for central banks to forecast output gaps, and therefore to forecast inflation, a key part of some monetary policy frameworks. We conclude that nominal income targeting, which does not rely on such forecasts, is better suited to a climate-disrupted world than other monetary rules.

Overall, the interaction between climate policy and monetary policy suggests that the two be chosen jointly. Considering each regime separately can easily lead to policies that seem fine in isolation but that perform poorly in practice.

Outcomes of the Project

The outcome of this grant and allied funding for the Brookings Carbon Tax Initiative included the policy brief. Scholars expect to submit the work to a scholarly journal and present it at academic conferences and meetings.

Project Timeline

* November 2016 – Research and analysis began.
* November 2017 – Completion of the policy brief. Grant period ended.