

Primer on the Yale Carbon Charge

YALE UNIVERSITY

Carbon charge staff sent this primer ahead of key meetings in the winter and spring of 2017, a period of outreach across campus to introduce leaders and staff to the carbon charge. It provided talking points and a reference document to leave behind.

Background

- Fossil fuel use, land use changes, and agriculture are causing emissions of CO₂ and other gases that are changing the climate.¹
- Climate change harms human health, property, and ecosystems across the world through heat waves, floods, wildfires, crop decline, infectious diseases, violence, and conflict.²
- Estimates of these harms can be quantified. The social cost of carbon (SCC) is “the economic cost caused by an additional ton of carbon-dioxide emissions or its equivalent.”³ Yale’s Carbon Charge Task Force selected \$40/metric ton of carbon dioxide equivalent as the starting SCC,⁴ based on estimates by the U.S. federal government.⁵
- Charging energy users for greenhouse gas emissions may be the most politically feasible and economically efficient policy for reducing emissions that cause climate change.⁶

Yale Carbon Charge Goals

For planning units with financial responsibility for buildings, Yale is integrating a carbon charge into fiscal year 2018 budgets. The university aims to:

- Advance best practices for putting a price on carbon emissions in order to inform policy development around the world.
- Incorporate the social costs of climate change into university decisions.
- Engage the campus community in applied research on carbon pricing.
- Reduce emissions that cause climate change.

Mechanism

- Charge: Yale buildings will be charged \$40/metric ton of CO₂ equivalents emitted each year.
- Dividend: Each year, the sum of all charges will be divided and returned to units based on each building’s percentage of Yale’s averaged FY2011–15 emissions.
- The dividend is revenue neutral across Yale; the university will retain none (\$0) of the revenues.

Rationale for this Charge Design

- Why revenue-neutral?
 - » No surplus to allocate and no budget risk for the university;
 - » Models a scheme with the strongest chance of national implementation.⁷
- Why provide dividends based on a fixed, averaged FY2011–15 baseline?
 - » A fixed baseline is forward-looking—it neither punishes nor rewards for pre-FY2016 choices;
 - » FY2011–15 covers a range of building conditions while capturing most of current building programming.

Implementation

- The Office of the Provost provided the Budget Office estimates of each unit's charge. This was incorporated into FY2018 budgets as a new expense type, labeled "utilities carbon charge."
- A new transfer expense was incorporated into unit budgets to handle their share of the carbon charge return.

Next Steps

- In Q2 of 2017, each participating Yale building will receive informational energy use statements to prepare for FY2018, when monthly bills showing energy use and carbon charges will begin.
- Starting July 1, 2017, each participating building will receive a monthly carbon charge, which will be assessed twice a year, once in the autumn and once at the end of the fiscal year.

Contact

- Contact your lead administrator with questions regarding carbon charge implementation in your department
- For help reducing the carbon footprint of a building, contact your facilities superintendent.

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February 2017

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2. *Smithsonian Magazine*, 2014: Eight Ways That Climate Change Hurts Humans [Zielinski, S.]. Smithsonian, Washington, DC. Accessed 12/4/16: <http://www.smithsonianmag.com/science-nature/eight-ways-climate-change-hurts-humans-180950475/>
3. Nordhaus, W., 2011: *Estimates of the Social Cost of Carbon*, Cowles Foundation for Research in Economics, Yale University
4. Yale Carbon Charge Task Force, Report to the President and Provost of Yale University, Findings and Recommendations on a Carbon-Charge Program at Yale April 10, 2015. Accessed 10/31/16: <http://carbon.yale.edu/sites/default/files/files/Carbon-charge-report-041015.pdf>
5. White House: Technical Support Document: - Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis—Under Executive Order 12866—Interagency Working Group on Social Cost of Carbon, United States Government. May 2013. Accessed 12/4/16: <https://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf>
6. Tax Policy Center, 2015: *Taxing Carbon: What, Why and How* [Marron, D., E. Toder, L. Austin]. Urban Institute & Brookings Institution. Accessed 10/8/16: <http://www.taxpolicycenter.org/publications/taxing-carbon-what-why-and-how/full>
7. While only providing two data points, November 2016 saw two US ballot measures on carbon taxation: The State of Washington rejected a referendum proposing a statewide carbon tax replacing some income tax with a carbon tax, which did not quite achieve revenue neutrality; while the city of Middleton, WI approved a carbon fee and dividend that returned 100% of collected revenues, divided equally among all taxpayers. See Gundersen, A. *A Tale of Two Climate Referenda*, Milwaukee Journal Sentinel, 11/27/16, Accessed 11/28/16 <http://www.jsonline.com/story/opinion/contributors/2016/11/27/gundersen-tale-two-climate-referenda/94518704/>