The Objectives for Implementing an Internal Carbon Charge at a Major Research University

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Why Is a Stanford Professor at Yale?

Stanford's choice

By Frank A. Wolak

Instead of not investing in coal, how about a revenue-neutral carbon tax?

LA Times, May 17,2014

SIEPR policy brief

Stanford Institute for Economic Policy Research

Universities Can Do Better Than Symbolism: A Revenue-Neutral Carbon Tax

By Frank Wolak

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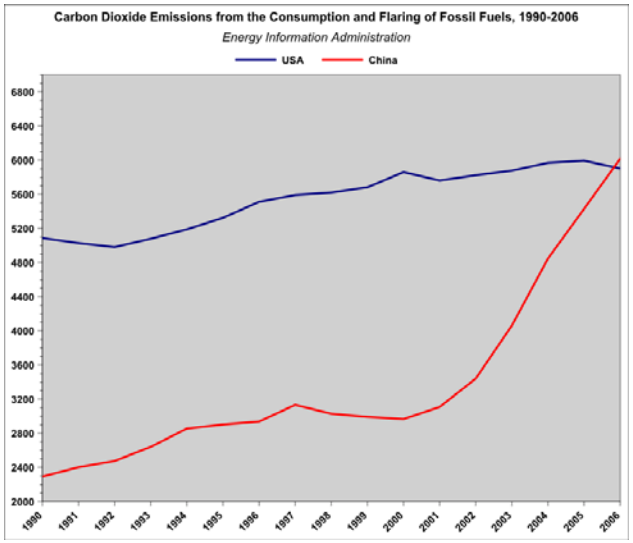
Goal of University Carbon Charge

- The goal of climate policy is a "credible and predictable price of carbon into the distant future"
- Given the magnitude of investments needed to address the greenhouse gas (GHG) emissions problem, solutions must come from private sector
- Private sector investment responds to price signals
  - A stable and predictable GHG emissions forward price curve will give private investors the confidence to invest in GHG control technologies
  - Investment in GHG control technology eliminates need to pay a GHG charge to emit over life of investment
    - Uncertain GHG charge dulls incentive to invest

Goal of University Carbon Charge

- Even if all major US research universities completely eliminated their GHG emissions footprint, this would not have a noticeable impact on global GHG emissions
- To put things in perspective, California's total GHG emissions reduction goals under AB 32 from 2013 to 2020 are offset by a few months of China's increase in GHG emissions
- Conclusion--On a direct benefit/cost ratio test, a university-level carbon charge fails
  - Direct costs are higher than direct climate benefits



Goal of University Carbon Tax

- How can a university carbon charge satisfy expected benefits versus cost test?
  - "Demonstration Effect"
- Primary role of major research universities is teaching and research
- Many extremely challenging technical, economic, and political issues are associated with implementing a price on GHG emissions
  - Experience as member of Emissions Market Assessment Committee of California Air Resources Board
- Virtually all of these questions are ideally suited to be addressed by students and faculty at major research universities
  - Many fundamentally interdisciplinary problems to be solved

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Goal of University Carbon Tax

- Demonstration effect
  - "If it can work here, it can work anywhere"
  - Universities share many features in common with small open economies
  - If an effective carbon pricing system can be put in place at major research universities, then it will be easier to transfer it to national and international jurisdictions
- Universities can even link their carbon pricing programs, similar to how certain regional cap-and-trade programs have been linked
  - On January 1, 2014, California and Quebec linked their cap and trade programs for GHG emissions
- Sharing of lessons learned across universities

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Dimensions of Demonstration Effect

- Channels student passion for addressing climate change into pointed study of real challenges that must be overcome to achieve a lower-carbon world
- Students and faculty use the university as a laboratory for working through the technical and practical challenges of pricing carbon
  - Fits with expertise of major research university
- Prepares students and faculty to bring their knowledge gained to real-world policy arena in state and country capitals
- Creates improved tools for measuring, & more awareness of an individual's carbon footprint

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Guiding Principles

- Academically rigorous and transparent process for determining life-cycle carbon content of products and activities
- Minimize additional administrative overhead to implement carbon price
- Relate carbon charge to daily activities of all members of the university community
  - Smart phone applications can provide feedback
- Amount of carbon charge paid should not be excessive
  - Recall earlier direct cost versus benefits calculation
- Encourage interaction and sharing of experiences with other interested parties
  - Maximize global demonstration effect

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Possible Areas for Further Study

- Tax and general legal implications of a non-profit institution assessing a carbon charge and refunding some or all of the revenues to students, faculty and staff
- Need for widespread investments in GHG emissions monitoring and measuring technology
  - If you can't measure it, you can't price it
  - Resolving source-based versus consumption-based measurement trade-off
- Pricing carbon content of goods and services consumed by university
  - Analogy to "border adjustments"
- Potential changes in university budgeting process with a price of carbon
  - Recall major source of benefits is demonstration effect

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Concluding Comments

- "Don't let the perfect be the enemy of the good"
  - Start with the easy to track and price sources of carbon
    - Increase salience of carbon implications of university activities
- Recognize that this is an ongoing process rather than a task to be completed
  - Initial program is bound to have flaws, so build in process of continuous improvement
  - Climate challenge is a long-term problem that requires "lifestyle" changes
- Ultimate goal is to price all carbon produced by university-related activities in manner that is scalable to real world
  - Maximize demonstration effect

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Questions/Comments

For more information

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