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**DATE** Sunday, February 4, 2018  
**FROM** Randall Pozdena, PhD CFA • [pozdena@quantecon.com](mailto:pozdena@quantecon.com)  
**TO** The House Committee on Energy and Environment  
**RE** HB 4001  
**SUBJECT** Why Cap and Trade is Bad for the Oregon Environment and Economy

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## BACKGROUND

The Oregon legislature is considering passage of a bill to create so-called “cap-and-trade” regulations to control greenhouse gas (GHG) emissions. Put simply, the cap-and-trade mechanism (1) requires establishment of a progressively tighter cap on overall GHG emissions in the state, (2) requires affected businesses to obtain permits to produce GHG emissions, and (3) creates a mechanism by which entities with excess permits can sell those permits to firms that cannot easily contain their emissions. It also allows entities that perform carbon sequestering activities to sell their carbon-reducing capability to entities needing more emissions capacity.

The basic hope is that the trading of permits or sequestering capacity would lead to reductions in total emissions in a more cost effective manner than across the board regulation of emissions on an entity by entity basis. Although this approach is in use elsewhere, it is plagued by bureaucracy, and corruption of emissions permitting, and sequestering measurements scandals. It is also conceptually and demonstrably less desirable than levying a revenue neutral carbon tax. This finding is corroborated by many economists, most recently by Stanford’s Goulder and Schein (2013)<sup>1</sup> who found cap-and-trade an inferior alternative to a simple carbon tax in 6 out of 7 key dimensions of impact.

## WHY CAP-AND-TRADE IS AN UNDESIRABLE POLICY

The trading of emissions permits has the potential to encourage emissions reductions by forcing firms to obtain emission permits and by encouraging compliance by those whom can do so at least cost. This is good, but there are serious disadvantages of using this method of emissions reductions over a revenue-neutral, direct carbon tax levy approach.

1. First of all, would cap-and-trade reduce emissions without seriously damaging the economy? By one reading of the evidence, the answer is, “No”. The European Union initiated the world’s largest cap-and-trade program in 2005. The US did nothing. From 2005 to 2008, the declines in total tons of CO<sub>2</sub> in the two regions were identical, at approximately 3.29 percent. On a per capita basis, the decline was actually slightly faster

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<sup>1</sup> Goulder, L and A. Schein (2013). Carbon Taxes vs Cap and Trade: A Critical Review. *Climate Change Economics*, vol. 4, no. 3.

in the US. From 2008 to 2012, the decline in total tons was faster in the EU at 10.7 percent over the period versus 10.1 percent in the US. However, on a per capita basis, the EU seriously lagged the US with its 11.5 percent decline versus the US decline of 16.3 percent. The US continues to produce approximately 40 more carbon emissions than the EU. However, considering that the US economy grew over this period at nearly 6 times the rate of the EU, either the US is better than Euroland at doing more without increasing emissions, or the EU paid a horrific price in slow growth by its adoption of cap-and-trade.<sup>2</sup>

2. The establishment of emissions caps is inferior to a mechanism that explicitly establishes the long-term cost to the environment of emissions on a per unit GHG basis. Even if cap-and-trade was regulated perfectly and at low cost to firms, the true cost of the emission reductions obtained is difficult to measure under a cap-and-trade approach. It may easily exceed the benefit of any GHG reductions obtained by incorrect setting of cap and permit endowments. In contrast, a carbon tax policy explicitly levies a tax that is believed equal to the environmental and economic cost burden of emissions. Thus, the incentives to reduce GHG production are transparent and affected firms can balance the trade-off between modifying their activities versus paying the tax without bureaucratic negotiation or oversight. It is thus both a more transparent policy and one that can have more granular and wide-spread effects.
3. In contrast, cap-and-trade regulation requires an intrusive and costly bureaucracy in order to be implemented. Government must perform measurement and monitoring activities to establish permit levels by entity. This intrusive and labor-intensive effort must be performed more or less continuously to set permit quantities accurately and fairly. In contrast, under a carbon tax policy, only the GHG potential of production inputs need be known, with the tax levied on the wholesale purchase of such products.
4. The prices at which permits are traded in cap-and-trade programs have been notoriously volatile. This is inherent in the nature of the programs because there are relatively few entities in the permit trading marketplace and the future paths of permit prices is unknowable. Price volatility is not just an inconvenience; it is well known to be toxic to business decision making in general and stock market support for businesses that are subject to such volatility.
5. Managing the crediting to new carbon sequestration services is particularly problematic and plagued by corruption, according to the UN.<sup>3</sup> For example, new tree plantations and other sequestering activities are potentially important means by which atmospheric carbon can be reduced. However, regulators must determine whether

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<sup>2</sup> Emissions data is from <http://www.globalcarbonatlas.org/en/CO2-emissions>. The economic growth data are from the Federal Reserve Bank of St. Louis.

<sup>3</sup> "Corruption has become a serious threat to the sustainability of climate control mechanisms, especially cap-and-trade systems," according to the latest bulletin from the United Nations Environmental Program (UNEP). UNEP: *Corruption Threatens Carbon Trade*, Published: Thursday, 04 April 2013 17:36

- these are new activities or ones that would have occurred anyway. In actual practice, this has been a major means by which cap-and-trade programs have suffered from corruption. In contrast, a carbon tax creates natural incentives for the substitution of low-emission versus high-emission processes and facilities without oversight and dubious deal-making with regulators.
6. The inherently cumbersome and inflexible nature of regulatory processes create barriers to entry by new firms and incentives for existing firms to exit Oregon markets. A new firm will have to acquire permits and faces uncertainty regarding how many permits at an uncertain cost—both now and in the future. Instigation of a carbon tax might also discourage new or additions to existing business activities to some degree. However, a carbon tax can be made revenue neutral, i.e., the revenues raised can be returned to private economy via a reduction in other taxes on businesses and/or households. This would serve as a counterbalance to any locational distortions caused by the carbon tax. In contrast, the far-greater infrastructure and operational costs of the cap-and-trade approach will actually require an increase in tax revenues in order to be sustained.

## **CONCLUSION**

By pursuing cap-and-trade as a remedy to GHG emissions production, the State is choosing an opaque, costly and burdensome regulatory approach. In the end, if cap-and-trade is adopted, the challenge of improving the environment while maintaining a healthy economy will not be well served. The US has been reducing its carbon emissions without doing great harm to its economy. If one wishes to accelerate that pace, a truly transparent and market-oriented policy such as a revenue-neutral carbon tax should be used. There is no need to follow the EU and California down an opaque and bureaucratic rabbit hole.

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## **ABOUT THE AUTHOR**

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