



# *Carbon Tax*

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*“There is always an easy solution to every human problem—neat, plausible, and wrong.”*

H. L. MENCKEN, “The Divine Afflatus,” *A Mencken Chrestomathy*, chapter 25, p. 443 (1949)

In politics there are often pressures to “do something” about a perceived problem even if we do not know what is the correct something, what is the correct amount of something, or even if doing something is the correct thing to do?. A carbon tax may be an example—we do not know if it is the correct thing to do, what the “correct” amount should be, nor whether it will improve on doing nothing.

Although there was almost no mention of climate change legislation during the 2012 presidential election, proponents of carbon taxes are circulating plans to implement them nationally and even internationally. One example is a forum at the American Enterprise Institute (AEI) in November 2012 cosponsored with the Brookings Institution, International Monetary Fund, and Resources for the Future. The panelists proposed carbon taxes not just as a way to reduce CO<sub>2</sub> production, but also as a fix for the US fiscal system. Also in November 2012, Royal Dutch Shell and more than 100 companies released a request for “a clear, transparent, and unambiguous price on carbon emissions. ” The requested pricing system is necessary, the companies say, in order to “deliver substantial greenhouse gas emissions reductions by mid-century.<sup>1</sup>” Prince Charles’s Corporate Leaders Group on Climate Change coordinated the statement.

### Choosing Political Actions

Most of us, including our politicians, fear change. Political scientist Aaron Wildavsky wrote about that fear in his book, *Searching for Safety*<sup>2</sup>. He made the counter-intuitive claim that adapting to change is preferable to attempting to prevent change. Someone who proposes adapting to climate change rather than

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<sup>1</sup> Morales, Alex, “Shell, Unilever lead 100 companies calling for CO<sub>2</sub> Price. Bloomberg Businessweek, 19 November, 2012. Retrieved 31 December, 2012 from the World Wide Web at <http://www.businessweek.com/news/2012-11-18/shell-edf-lead-100-companies-calling-for-carbon-price>

<sup>2</sup> Wildavsky, A. (1988). *Searching for safety*. Piscataway, NJ: Transaction Publishers.

legislating policies that attempt to prevent it is Indur Goklany, an analyst in the U.S. Department of the Interior. He concludes that even if we accept the worst-case scenarios from current climate models, adaptation is more effective and less expensive than implementing prevention measures (Indur Goklany, “What to Do about Climate Change,” Policy Analysis 609, Cato Institute, February 5, 2008.).

Waiting to adapt is, unfortunately, a poor political strategy. Politicians must rank the electoral costs or benefits higher than efficiency gains from alternative actions, if they wish to remain in office. That is, a policy that costs votes in the next election must be preferred over a policy that promotes social welfare but is politically unpopular. Voters reward politicians who appear to solve problems. Waiting to adapt is a policy that can easily be characterized as doing nothing, which is not a characterization that many politicians prefer. Thus, they have strong electoral incentives to appear to be taking steps to prevent future harms.

To be fair to the U.S. Congress, they have so far not taken the “we must do something now” road. In fact, the Senate rejected the American Energy and Security Act of 2009; a bill ostensibly addressing climate change that passed the Democratically controlled House of Representatives by one vote. The bill would have instituted a market for carbon credits made possible by a government-mandated cap on carbon emissions. Since the defeat of the American Energy and Security Act, political strategies for preventing or reducing effects of anthropogenic climate change have focused on two fronts—regulation and a carbon tax. Increased regulation was made possible by the 2007 Supreme Court decision<sup>3</sup> that found that the Environmental Protection Agency (EPA) has authority to regulate green gas (GHG) emissions under the Clean Air Act. A Carbon tax could replace but would most likely augment EPA regulations.

EPA plans a regulatory regime that will affect mobile and stationary sources. The first part of that regime was the Obama administration increasing the Corporate Average Fuel Economy (CAFE) standards. The increases took effect with the 2012

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<sup>3</sup> Massachusetts v. EPA, 549 US 497 (2007).

model year automobiles and require 5 percent annual increases in fuel efficiency. The second regulatory action was to adopt new regulations for major new and modified sources of GHGs. The regulations will affect about 900 construction projects per year. The third strategy has yet to be implemented but will enforce new performance standards for new and existing facilities.<sup>4</sup>

#### A US Carbon Tax?

Most economists agree that carbon taxes are likely to be more effective and efficient than outright regulation. In addition, they expect carbon taxes would correct what many perceive as externalities of using carbon-based fuels. A carbon tax would, supposedly, reduce the externality by reducing the use of carbon-based fuels and, therefore, improve social welfare.

Many, such as Harvard economist N. Gregory Mankiw, call a carbon tax a Pigouvian tax, after one of the early economists to propose taxation as a way for legislators to address pollution problems. Pigou said, "Smoke in large cities inflicts a heavy uncharged loss on the community, in injury to buildings, vegetation, expenses for washing clothes and cleaning rooms, expenses for the provision of artificial light, and in many other ways" (Pigou 1920, 184). He suggested that government tax actions it wants to discourage. The right amount of tax would encourage those being taxed to produce the correct combination of products and pollution. Each firm would reduce its production to produce the correct combination of pollution and products. Any further reduction would be more costly than paying the tax. Presumably, the marginal cost of abatement would be equalized for all firms, minimizing the costs of abatement.

Comparing carbon taxes to regulation, such as CAFE standards, shows how much more effective the carbon tax could be. According to President Obama, his recently negotiated CAFÉ standards will nearly double the average fuel economy for cars and light trucks. Simply increasing taxes on gasoline would produce the same

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<sup>4</sup> See Burtraw, Dallas and Matt Woreman, "US Status on Climate Change Mitigation," Resources for the Future Discussion Paper, October 2012, RFF DP 12-48. Accessed January 5, 2012 at <http://www.rff.org/RFF/Documents/RFF-DP-12-48.pdf>.

effect at far less cost. As one analyst explained, “Fuel-efficiency standards do not really change drivers’ behavior in a helpful way. Gas taxes do” (Porter, 2012).<sup>5</sup> He went on to explain that the new mileage rules are so expensive that, when all factors are considered, they are more costly than the effects of climate change they are supposed to mitigate. That is, the costs of CAFÉ standards exceed the benefits.

No wonder, then, that Mankiw has created an informal group he calls the Pigou Club<sup>6</sup> “an elite group of economists and pundits who have publicly advocated higher Pigouvian taxes.” Mankiw, also advocates that a carbon tax should be coupled with lowering other taxes so that there is no net revenue gain to the government. Others see carbon taxes as a new revenue stream that could be used to fund other governmental activities.

#### Pigou against the Pigouvians

Modern Pigouvians’ enthusiasm for Pigouvian taxes ought to be tempered by what Pigou had to say about Pigouvian taxes. Although he established the theoretical groundwork for taxing externalities, when he moved from theory to practice he no longer sounded like a Pigouvian. He warned,

*It is not sufficient to contrast the imperfect adjustments of unfettered private enterprise with the best adjustment that economists in their studies can imagine. For we cannot expect that any public authority will attain, or will even whole-heartedly seek, that ideal. Such authorities are liable alike to ignorance, to sectional pressure and to personal corruption by private interest. A loud-voiced part of their constituents, if organised (sic) for votes, may easily outweigh the whole.<sup>7</sup>*

<sup>5</sup> <http://www.nytimes.com/2012/09/12/business/fuel-efficiency-standards-have-costs-of-their-own.html?smid=pl-share>

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[http://economics.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=economics&cdn=education&tm=19&f=00&su=p284.13.342.ip\\_&tt=2&bt=0&bts=0&zu=http%3A//gregmankiw.blogspot.com/2006/06/pigou-club.html](http://economics.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=economics&cdn=education&tm=19&f=00&su=p284.13.342.ip_&tt=2&bt=0&bts=0&zu=http%3A//gregmankiw.blogspot.com/2006/06/pigou-club.html)

<sup>7</sup> Pigou, Arthur C. *The Economics of Welfare*. 1932. II.XX.4. Library of Economics and Liberty, Retrieved December 6, 2012 from the World Wide Web: <http://www.econlib.org/library/NPDBooks/Pigou/pgEW31.html>

Pigou was reminding economists that the world outside their models acts quite differently than the world contained in their models. Politicians and bureaucrats are as imperfect as those they seek to regulate. In the same paragraph as the citation above he cautions, “A hostile, lax, or ignorant city council, or even a state legislature, may vary the terms of the agreement in such a manner as totally to destroy or seriously impair its value.” He could have added members of Congress and regulators to his list of the lax, hostile or ignorant. He did add, “Every public official is a potential opportunity for some form of self-interest arrayed against the common interest.”

Thus, Pigou simply did not believe that politicians could or would get the calculations of the proper level of taxation correct. He worried that politicians and regulators would end up writing loopholes for their favorite interest groups at the same time they looked for ways to generate more revenue. Clemson economist Bruce Yandle, may have said it best when he said, “It would seem that Pigou was not much of a Pigouvian.”

## *CARBON TAXES WITHOUT THE ROMANCE*

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Modern-day Pigouvian analysts are sincere in their analyses of how a well-designed carbon tax would work. And, they can show how taxes work inside computer models. We might call that view of carbon taxes a “romantic” one, since it assumes government is what is taught in civics courses. But if we strip away the romance, as Pigou did, and examine how politics really works, we are left with a much more sober view. We highlight three aspects of that sober view.

Rent seeking, wealth transfers, and fraud

The first aspect of a non-romantic view of carbon taxes is that they are likely to be ripe for effective rent-seeking, wealth transfers, and outright fraud. Pigou’s non-Pigouvian view of real world Pigouvian taxes was a good predictor of the favor seeking and cronyism that characterize the French carbon tax attempt. The French government proposed a tax of 17 euros (about \$24) per ton of carbon dioxide. The

tax was supposed to be implemented on January 1, 2010. The tax was a unilateral gesture by the French government who hoped that the rest of the European Union would follow suit. Before the tax could be implemented it was declared unconstitutional by the French Constitutional Council because the exemptions contained in the legislation were so extensive that there would be no effect on emission. A second reason for the ruling was that, because of the exemptions, the tax would primarily affect users of gasoline and heating oils, which violated the principle of a fair tax.

In order to get sufficient support to pass the tax, the proponents had to agree to exemptions for industries and companies. More than 1,000 of France's top carbon emitters were exempted, which meant that about 93 percent of all carbon emissions in France were exempted. The court concluded that these extensive exemptions meant that the legislation did little to combat the production of GHGs and violated basic principles of equality.<sup>8</sup>

The leader of the Socialist Party highlighted the fairness issue:

*This tax only makes sense if there is an alternative. In my region for example, I calculated that for people who have to drive their car to work every day this tax would have cost over 200 Euros per year. As long as we haven't developed the electric car or public transport a carbon tax is totally unfair and antisocial and it's a very good thing it has been withdrawn.<sup>9</sup> The French tax was billed as a way to stop oceans from rising and destroying coastal towns, yet it contained so many exemptions that it would have no real effect, except to raise government revenue.*

Maybe that was the purpose. Another, not necessarily competing reason may have been the symbolism of "doing something." It might have created the impression that the French conservative government cared about the planet, without actually having to harm much of their core constituency.

Buying votes by providing special exemptions, favors, and advantages was what allowed the American Clean Energy and Security Act of 2009 to pass the

<sup>8</sup> <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aY9Dhj8qZZZE>

<sup>9</sup> <http://rogerpielkejr.blogspot.com/2010/03/politics-of-carbon-tax-lessons-from.html>

House of Representatives. An earlier attempt was John McCain's and Joe Lieberman's Climate Stewardship Act of 2003. It was a straightforward, clear, and relatively rent-seeking bill of just 58 pages. It died in the Senate. When a discussion draft of the American Clean Energy and Security Act of 2009 was released, it was 648 pages long. By the time it was introduced, it had grown to 932 pages. In committee it grew to 1,092 pages. Then it became 1,201 pages long when it was reported out of the Rules Committee. At 3:00 a.m. on the day of the vote, the sponsor added a 309-page "manager's amendment" in order to get the necessary votes to pass. The final bill was 1437 pages in its final form and passed the House by one vote.

Politicians making promises future politicians will not keep

One carrot offered conservative legislators by carbon tax proponents is that a carbon tax will be revenue-neutral as income taxes will be cut as carbon taxes are implemented. Practical politics will make that unlikely. Since only about half of Americans pay any national income tax, reducing income taxes necessarily means reducing taxes for the "rich," or at least for those rich enough to actually pay taxes. We expect that such a proposal will quickly die in Congress. Other proposals might get more traction, such as using carbon tax revenues to fund federal welfare programs. If that is the case, a carbon tax quickly becomes more about its revenue-generating ability than about GHG reductions.

A study by Bruce Yandle and his colleague Cristina Ciocirlan provides support for the belief that a carbon tax would be more about generating revenue than reducing GHGs. They asked if the purpose of environmental taxes was to protect human health or just to raise government revenue. They compared emissions tax revenues to human health outcomes, examined how tax exemptions were applied to special interests, and evaluated green taxes maximized revenue or emissions reductions. Yandle noted that their findings "did not support the classic Pigouvian goal, but rather supported Pigou's later concern. The end result seemed



to be more about generating money for government than about protecting human health.”<sup>10</sup>

Even if a carbon tax started out being revenue-neutral it would be unlikely to remain so because it one Congress is seldom able to effectively bind a future Congress. If we assume that the current Congress passes a carbon tax tied to an income tax decrease, it is difficult to believe that a future Congress, upon seeing the carbon tax revenue stream, will allow it to be spent to reduce taxes rather than on their favorite projects. A carbon tax is likely to become just one more tax in the federal government’s revenue stream.

What is the correct tax?

What is the correct amount of the tax even assuming that the tax is not based on rent seeking, is implemented fairly, and future Congresses keep their hands off of the revenue so that it is spent as intended originally? Consider the simple case of a paper mill discharging waste into a stream, which is an easier case than carbon taxes. Mandating the correct is confoundingly complex. Politicians or regulators need to estimate demand for paper at various prices; assume demand will not change; and estimate downstream damage, the costs of treating water downstream rather than at the paper mill, and the demand for different levels of clean water among the many different downstream users. What if there are many rivers in a region? To arrive at the correct tax, a government entity must calculate the appropriate rule or tax for each producer by considering all users of the products produced, all downstream water users, and the effects of multiple externalities across the region. The government must also establish a system for monitoring and enforcing compliance (Yandle 1998, 127–129).

Another problem concerns the tax itself. What if the tax is wrongheaded, based on incorrect information, or is in the hands of ideological zealots? Finding a more efficient way to do bad things is not an improvement. Fred Smith, founder of

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<sup>10</sup> Yandle, Bruce. “Much Ado About Pigou.” Retrieved December 6, 2012 from the World Wide Web: <http://perc.org/articles/much-ado-about-pigou>

the Competitive Enterprise Institute and occasional user of rhetorical extravagance, often says, “Having a sharper guillotine is not necessarily a good thing.

Assuming that policy makers believe that a tax must be implemented, despite rent seeking, unkeepable promises, technical difficulties, incorrect analysis and suboptimality, how large a tax are American voters willing to pay? That is, how much economic pain will they be willing to endure for a policy that produces no short-term benefits, just short-term costs?

Calls for economic pain run up against what Roger Pielke Jr. in his 2010 book *The Climate Fix* called “the iron law of climate policy.” The iron law is that economic objectives will have more weight in politics than will environmental objectives. Pielke cited a 2009 US poll to illustrate potential US support for expected increased household costs from a climate bill. The poll found that a majority would accept an annual increase of \$80 but that support dropped by half at \$175 per year. At an increase of \$770 per year, opponents outnumbered supporters nearly 10 to one.

The Australian government estimates that its new carbon tax will cost each household about \$10 AUD per week (the Australian and US dollars are trading for within a few cents of each of each other) or over \$500 per year. If the poll numbers are correct, a US carbon tax as large as Australia’s will face serious political troubles in the United States. Australian politicians have promised that rebates and subsidies will make up for the carbon tax’s effects on family finances. Without such assurances it would have surely failed to be enacted.

Proposals for a US carbon tax suggest rates even higher than Australia’s. A 2012 Congressional Budget Office analysis of the effects of a carbon tax on US households, for example, assumed a tax of \$103 per ton of carbon (\$28 per metric ton of CO<sub>2</sub>). They estimated that the cost to a US household in the lowest income

quintile averaged \$425 per year. The cost to the average US household the highest income quintile would be \$1380.<sup>11</sup> These tax rates clearly violate Pielke's Iron Law.

## CONCLUSION

Most economists prefer a tax to regulation, and for those seeking to decarbonize the US economy a Pigouvian carbon tax is an attractive policy prescription. A non-romantic view of a carbon tax is consistent with Pigou's largely forgotten warning that such a tax is "a potential opportunity" for self interest to trump the general interest. Congress may pass a carbon tax but it will have less to do with carbon reduction and more to do with redistributing income, exempting favorite companies, and making promises that future congresses will not keep.

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<sup>11</sup> Dinan, T. (2012). Offsetting a carbon tax's costs on low-income households. Informally published manuscript, Congressional Budget Office, , Available from Working Paper Series Congressional Budget Office.