WASHINGTON POLICY CENTER

Improving lives through market solutions

POLICY BRIEF

Promoting Personal Choice, Incentives and Investment to Cut Greenhouse Gases

by Todd Myers
Director, Center for the Environment

April 2008

WASHINGTON POLICY CENTER
for the environment

April 2008

Promoting Personal Choice, Incentives and Investment to Cut Greenhouse Gases

by Todd Myers
Director, Center for the Environment

Contents

Promoting Personal Choice, Incentives and Investment to Cut Greenhouse Gases

by Todd Myers
Director, Center for the Environment
April 2008

1. Introduction

If you hear the words "climate change" in Washington state these days, the words "market-based" are sure to follow soon behind. This is a very positive step. It demonstrates that after a reliance on the heavy hand of government regulation, some in the environmental community are recognizing the power of market incentives in fostering responsible environmental stewardship.

Lurking behind market approaches to climate change, however, lay a large number of solutions based on government subsidies, bureaucracies and some sweeping political decisions about our lifestyles and economy.

Governor Gregoire's Climate Advisory Team (CAT) is quite up front about the scope of government involvement. They even go so far as to say that their report "charts the path to transforming our economy and our lifestyles to reduce Washington's contribution to global warming."[1] The CAT recommendations are built around a "cap-and-trade" system that caps emissions and then allows companies who cannot reach the cap to purchase emissions allowances from those who are under the cap. While a cap-and-trade system is "market-based," the key decisions, where to set the emissions cap and how to account for carbon emissions and savings, are chosen by politicians. These decisions can make all the difference in how effective and efficient a cap-and-trade system is compared with other approaches.

The problem with such an approach is that it relies on the supposed ability of government officials to make wise decisions about a number of industries, keep up with the rapid pace of economic development, understand the complex exchanges that occur in the economy, and anticipate the unintended consequences of the decisions of millions of people in Washington. Some may have faith in the ability of political decisionmakers to keep track of all of those things, but history has not been kind to such faith.

By increasing the price of carbon and cutting taxes to offset the price increase and encourage capital investment, Washington may take a significant step toward reducing CO2 emissions in a way that is effective, efficient and truly creates jobs.

There is a truly market-based system that can reduce greenhouse gases by harnessing the creativity of everyone in Washington, creating incentives for technological innovation and providing the flexibility needed to adapt to changing circumstances in the future. By increasing the price of carbon and

[1] Washington State Climate Advisory Team, "Leading the Way: A Comprehensive Approach to Reducing Greenhouse Gases in Washington State," January 25, 2008, http://www.ecy.wa.gov/climatechange/InterimReport/climate_08-B-CAT.pdf (Accessed February 9, 2008)

cutting taxes to offset the price increase and encourage capital investment, Washington may take a significant step toward reducing CO2 emissions in a way that is effective, efficient and truly creates jobs.

If, however, Washington follows the path it is on, relying primarily on a cap-and-trade system along with inflexible, top-down regulation and government's ability to pick winners and losers in areas not covered by a cap-and-trade system, we will find that we have spent a tremendous amount without meeting the greenhouse gas reduction targets we have set.

2. A Patchwork of Wishful Thinking

The interim report released by the Washington State Climate Advisory Team in January is a patchwork of options covering a number of different areas. The report notes that, "Progress on reducing GHG [greenhouse gas] emissions will be done 'a ton at a time' in many different places and in many different ways throughout the economy."[2] Theoretically, this is a wise approach. Reduce the problem into small pieces that can be overcome. But the CAT recommendations are only a small step in that direction.

The CAT recommendations are limited to the expertise and creativity of a few dozen panel members and staff who identify potential improvements in areas with which they are partially familiar. By failing to truly engage the creativity of every resident of Washington, in big and small ways, such politically-designed regulatory approaches are likely to fail.

Worse, they actually hinder the creativity of those looking for technological solutions by narrowing the range of possibilities. For instance, the strategy calls for incentives with the goal of "maximizing in-state production of sustainable biofuels and biofuel feedstocks."[3] This idea raises a range of problems.

Numerous recent studies demonstrate that biofuels are likely to actually increase the amount of CO2 emitted, because more energy must be used to grow and transport the fuel than is yielded.

Numerous recent studies demonstrate that biofuels are likely to actually increase the amount of CO2 emitted, because more energy must be used to grow and transport the fuel than is yielded.[4] The reason for this is quite simple. Political regulation and subsidies have created economic incentives to plant biofuel feedstocks in marginal lands, increasing the need for energy inputs on the form of fertilizer, plowing, etc.

Adding insult to injury, despite the fact that it is clear that such programs are actually counterproductive, removing such incentives will be extremely difficult politically. Farmers and others who benefit from biofuel subsidies are likely to fight to keep them in place, meaning that the government is actually paying to increase CO2 emissions as part of its climate strategy.

---

[2] Ibid., p. 44

[3] Ibid., p. 14

[4] See for example, The Royal Society, "Sustainable Biofuels: Prospects and Challenges," January 2008, http://royalsociety.org/displaypagedoc.asp?id=28632 (Accessed January 19, 2008) and Searchinger, Timothy, Ralph Heimlich, R. A. Houghton, Fengxia Dong, Amani Elobeid, Jacinto Fabiosa, Simla Tokgoz, Dermot Hayes and Tun-Hsiang Yu, "Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land Use Change," Science Magazine, February 7, 2008, http://www.sciencemag.org/cgi/content/abstract/1151861 (Accessed February 16, 2008)

Finally, those subsidies and regulations make it more difficult for new, effective technologies to enter the market. For example, if a technology can reduce CO2 at the cost of $10 per ton, politicians may decide to speed the entry of that technology to the market by subsidizing it to the tune of $4 per ton. The final cost of the technology to the consumer, therefore, would be only $6 per ton. The cost to society, however, would still be $10 a ton ($6 from the consumer, $4 from taxpayers).

Consider the innovator who creates a technology that can reduce CO2 for only $7 a ton. She finds herself priced out of the market despite having a superior technology that could cut the cost to society of CO2 reduction by 30 percent. Her options are to find additional capital to see if she can get the cost below $6 per ton, or hire a lobbyist to get subsidies for the new technology. Both cost money and both are iffy prospects at best.

Put simply, subsidies and regulations, like those that form the foundation of the CAT's recommendations, fail to engage the creativity of the public, are costly, stifle technological innovation and may actually be counterproductive.

3. Charting a Path to an Unknown Destination

There is another major problem with the approach offered by the CAT. As noted above, despite having incomplete information, the CAT often makes policy recommendations hoping that unintended consequence will not overwhelm the potential benefits.

In some areas they acknowledge that their information is incomplete and the CAT is simply unclear how to achieve the goals they have established. The most dramatic of these examples is in the area of transportation. Transportation emissions represent the single largest type of greenhouse gas emissions in Washington and any serious strategy to reduce CO2 must effectively reduce these emissions.

Voters have recently rejected the very strategies being proposed by the CAT.

The CAT report, however, leaves most of the transportation strategies undone, saying that they need more research. There are two primary reasons.

First, the cap-and-trade system that is part of many of the strategies is less applicable to transportation-related emissions. The CAT report admits that "cap-and-trade market mechanisms being considered throughout the world at this time do not directly reduce transportation-related emissions."[5] As a result, strategies that address transportation rely on central government planning and programs, not markets.

Second, developing such programs is extremely complex and such programs have historically failed to achieve the intended goals. Further, voters have recently rejected the very strategies being proposed by the CAT. Just last fall, voters turned down a transportation package that relied heavily on expansion of transit, similar to what is described by CAT members in their transportation

[5] Washington State Climate Advisory Team, p. 50. A cap-and-trade system can be made to work similarly to a carbon tax in this area, but if that is the case, why not just use a carbon tax that is easier to administer?

recommendation #2 (T-2).

Ironically, despite the fact that CAT members do not know what strategy they will use, they did set targets for reducing vehicle miles traveled (VMT) and counted those in the final report as projected "reductions." In other words, they know where they want to go and believe they are likely to get there, but have no idea which path to take.

The percentage of daily commute trips in the Puget Sound region using transit is smaller today than in 1980. Given that record of failure, it is difficult to see how any government-planned approach is likely to be effective in reducing VMT by the 18 percent target set by the CAT.

It is not surprising that CAT members would have difficulty developing an effective strategy. King County officials have for decades attempted to increase the percentage of commuters using transit and have been continually frustrated. In fact, the percentage of daily commute trips in the Puget Sound region using transit is smaller today than in 1980.[6] Given that record of failure, it is difficult to see how any government-planned approach is likely to be effective in reducing VMT by the 18 percent target set by CAT members by 2020.

4. Cutting Carbon Emissions, Risk and Taxes

The problems outlined above can be overcome with an approach that is more flexible, creates strong incentives to innovate, and aggregates the dispersed information held by millions of Washington residents: a revenue-neutral carbon tax that encourages reductions in emissions while reducing taxes on families and innovators.

This approach contains three elements:

- Place a tax on carbon, including motor and heating fuels, while exempting biofuels.
- Cut sales taxes to offset the increased cost to families of the carbon tax.
- Cut taxes on capital investment to encourage new technologies, the replacement of inefficient equipment, and spur economic growth and job creation.

Such an approach would actually reduce taxes for consumers and technical innovators of Washington state. Rather than relying on government regulations that try to alter our lifestyles, as called for by CAT members and the legislature, a carbon tax cut recognizes that technological innovation must be central to our efforts to effectively reduce greenhouse gas emissions and grow Washington's economy.

Rather than relying on government regulations that try to alter our lifestyles, a carbon tax cut recognizes that technological innovation must be central to our efforts to effectively reduce greenhouse gas emissions and grow Washington's economy.

Before discussing the advantages of a carbon tax cut, we need to address the question of why we should make this change at all. Despite the rhetoric, there is still a great deal of debate about the causes of recent global temperature increases and what the impact of increases in CO2 levels in the

[6] US Department of Transportation

atmosphere will really be. In fact, as research improves, the general trend of projected impacts from climate change has been to revise them downward. We have seen this recently in Washington, with projections indicating that the reduction in snowpack will be more modest than predicted and that sea level rise will be significantly less than was thought just three years ago.[7]

Despite that trend, we do know that the concentration of CO2 in the atmosphere is steadily increasing and has been for several decades. We also know that the rate of increase of CO2 during that time is faster than has been observed in nature in the past, indicating that humans are contributing in part to the increase. When something occurs at a rate that is atypical it makes sense to examine the potential impacts of that rise, and take reasonable steps to mitigate the risks.

The purpose of a carbon tax is to account for the costs associated with CO2 emissions – costs that would otherwise not be felt by the carbon emitter.

An increase in the cost to emit carbon helps reduce those risks.

The purpose of a carbon tax is to account for the costs associated with CO2 emissions – costs that would otherwise not be felt by the carbon emitter. For example, it may be true that 10 sewage outfalls into a river cause no harm. We would be wise, however, to charge fees to the people responsible for the outfalls in an effort to prevent 990 other people from coming along and adding more outfalls. They would then incur their share of the cost from both harming the environment and fishermen whose livelihood depends on clean water. Taking appropriate action before the problem exists is like buying insurance. Even if there is no guarantee that damage will occur, it is wise to take *reasonable* steps to reduce the risk.

If one believes that CO2 emissions are entirely benign, then the only reasons for such a tax would be other ancillary benefits, such as energy independence. Many people, however, who are skeptical of the claims of Al Gore and other environmental activists who have proven to be extreme and alarmist when it comes to climate change, can still be supportive of carbon taxes as a way to reduce environmental risk.

The key is to approach the problem in a way that is efficient and creates appropriate, but not excessive, incentives to reduce the risks from greenhouse gases.

5. Getting the Design and Costs Right

When the word “taxes” is used, people, and politicians, often recoil. The reason is that taxes are generally used to raise revenue to create or expand government programs. This creates perverse incentives. For instance, we charge higher bus fares during peak period than off-peak, despite the fact

[7] See Todd Myers, “A Sea Change in Sea Level Projections: 2005 Puget Sound Estimates Cut by Two Thirds,” Washington Policy Center Environmental Watch, January 2008, http://www.washingtonpolicy.org/EnvironmentalWatch/January2008EnvironmentalWatch.pdf (Accessed February 16, 2008) and Warren Cornwall, “How one number touched off big climate-change fight at UW,” *Seattle Times*, March 15, 2007 http://archives.seattletimes.nwsource.com/cgi-bin/texis.cgi/web/vortex/display?slug=warming15m&date=20070315&query=Warren+Cornwall (Accessed February 16, 2008)

that we want people to use the bus during the peak time. The reason is that the fare policy is primarily a way to raise revenue, not an incentive to get commuters to ride at certain times of the day.

A carbon tax works differently. The policy goal is to raise prices on consumption that creates risk of harm to the environment, instead of simply taxing things people want in order to raise revenue. This approach encourages people to find alternatives to the use of carbon-emitting fuels and for innovators to create technologies that help people reduce their costs. Families and businesses naturally seek to reduce their costs. Increasing the cost of using carbon adds extra incentive by capturing the costs of the risk associated with carbon emissions.

One result of a carbon tax may be that the rate of tax revenue growth slows as families and businesses move away from carbon-emitting energy sources. This, however, is not a problem, it is the goal! We often think of taxes as a tool to generate revenue, so what seems to be a weakness is actually a benefit.

The key is to design a carbon price so that it creates incentives without the negative impacts typical tax increases have on the economy and families. This is even more critical in Washington, where we have the 8th highest tax burden in the country.[8] Given our current high tax burden, adding additional taxes makes little sense.

Policymakers should set the initial carbon tax low, in the range of $10-$15 per ton of carbon.[9] The tax would cover all forms of carbon emitting energy generation, both electricity and home heating oil and natural gas, as well as fuel consumption. There are a number of reasons for this price range. This would amount to a 3-4 cent increase in the price of a gallon of gas. Overall, a $10 per ton tax would generate about $250 million in revenue each year, which would be offset by reductions in other taxes. A $15 per ton tax would generate about $370 million.[10]

Some people will want to set a higher tax on carbon, but the more aggressive policymakers are, the more likely they are to create shocks that cause economic instability and increase the costs to the people of Washington.

There are several reasons to choose this low-tax range.

First, economists estimate this to be the approximate cost of the impacts associated with climate change. Professor William Nordhaus of Yale, who has been modeling impacts of climate change for nearly three decades, says the cost of carbon emissions using the United Nation's projections "lies between $10 and $41 per ton of carbon."[11] In other words, even if human-induced climate change had the highest reasonable impact projected, if we spent more than $41 per ton to reduce emissions, we would be worse off than if we simply allowed climate change to occur and made no changes.

---

[8] The Tax Foundation, "America Celebrates Tax Freedom Day," April 2007, http://www.taxfoundation.org/files/sr152.pdf (Accessed February 16, 2008)

[9] It should be made clear that this is not the CO2 price, but the carbon price. This range would equate to about $2.73 - $4 per ton of CO_2

[10] These numbers are generated using the projected 2010 carbon emissions from energy emissions which account for 87 percent of total CO2 equivalent (CO2e), which includes non CO2 greenhouse gases, emission in Washington. Costs per ton were multiplied by CO2 emissions and then divided by 3.67 to yield a cost per ton of carbon. Emissions data taken from Washington State Climate Advisory Team, p. 25.

[11] William Nordhaus, "The Challenge of Global Warming: Economic Models and Environmental Policy," September 11, 2007, http://nordhaus.econ.yale.edu/dice_mss_091107_public.pdf (Accessed February 16, 2008), p. 26

Second, this level allows an easy transition to energy sources that are less carbon intensive. Starting at the low end of the projection reduces the risk of jolts to the economy that would cause serious dislocation. Some people will want to set a higher tax on carbon, but the more aggressive policymakers are, the more likely they are to create shocks that cause economic instability and increase the costs to the people of Washington. Risking such shocks is irresponsible, especially at a time of economic uncertainty.

Third, a low initial tax rate allows the flexibility to increase the tax if policymakers find that the incentives are too low. Of course, any increase in the carbon tax *must* be accompanied by offsetting cuts in other taxes.

Finally, given the downward trend in projected impacts from climate change, it is wise to err on the side of caution by keeping any carbon tax low. As policymakers learn more, they can adjust, but if they set the initial tax rate too high they will damage the economy unnecessarily.

There will always be uncertainty when it comes to setting the right target. This, however, is actually an argument for a carbon tax approach. Regulations, subsidies and other political approaches suffer from the same uncertainty, but are hard to adjust when policymakers get new information, are inflexible and add the uncertainty of complex government regulation to the uncertainty about climate science.

Further, some government regulations do not provide the incentives or choices offered by a carbon tax. For instance, the proposal made by Seattle Mayor Greg Nickels to add a vehicle surcharge based on the size of a vehicle's engine offers no incentive to reduce consumption. Once the surcharge is paid, owners of large-engine vehicles can simply drive as much as they want. A Prius that drives every day would receive more benefits than a SUV that was only used on the weekend, despite the fact that the Prius would be using more fuel. A carbon tax provides an incentive to reduce emissions while preserving personal choice about how to achieve that goal. An engine surtax does neither.

Setting a carbon tax is straightforward and it can be adjusted as new information emerges. Changing the rules for a myriad of government-imposed regulations as new evidence emerges would be virtually impossible.

6. Why Exempt Biofuels?

As noted above, biofuels are not a silver bullet and with the politically-designed subsidies currently being employed, can actually do more harm than good. Biofuels do hold promise, however, and a carbon tax is more likely to harness that promise.

The key advantage of biofuels is that feedstocks, like corn or wood, remove CO2 from the atmosphere as they grow, releasing that CO2 when the fuel from those stocks is combusted. As new crops are grown, that cycle begins again. Thus, the CO2 is recycled, creating low emissions over the course of the fuel's life-cycle. Some energy is added invariably to grow, transport and refine the fuel, so the total energy use is not zero.

The problem arises when the price of biofuels does not reflect the energy balance. Providing subsidies, as King County announced last year for a farm near Yakima,[12] masks the true energy cost of the feedstock. By taxing carbon-emitting fuels, the energy cost of growing, transporting and refining those feedstocks is built in to the cost of the biofuel. If farmers use marginal lands to grow switchgrass, soy or other feedstocks and are forced to use more fertilizer or other energy, the cost per gallon of the biofuels from those lands will rise, making them less competitive compared to biofuels grown on high quality land and with lower energy demands.

Thus, while biofuels themselves are not taxed, the energy put into those biofuels is, creating an incentive to use productive lands and reducing the incentive to grow biofuels where it is wasteful and requires more energy inputs.

This is a developing area of technology and analysis. Policymakers may find in the near future that biofuels are worse (or, indeed, better) than they now appear. It may make sense, with the benefit of better information, to apply carbon taxes to biofuels. That, however, would certainly be an easier policy to adopt than trying to remove subsidies for farmers or to trim the government bureaucracies that administer biofuel-promotion programs.

Taxing energy inputs, but not biofuel itself has the best chance of harnessing the benefits of biofuels that come from their low-carbon life-cycle.

7. Reducing Sales Taxes and Keeping the Tax Revenue Neutral

Offsetting the carbon tax with reductions in other taxes is critical. Washington already suffers from very high taxes and adding yet more taxes makes little sense. In fact, even Al Gore has suggested a revenue-neutral carbon tax. To raise taxes without offsetting tax cuts elsewhere would, ironically, put legislators to the political left of Al Gore.

If the need to keep overall taxes low does not persuade policymakers, there is another reason to reduce non-carbon taxes. Energy taxes take a larger percentage of the income of low-income families than most other taxes. As a result, simply raising taxes on carbon-emitting energy will financially hurt low-income families more than high-income families, as a proportion of their total income.

Another reason to keep a carbon tax revenue neutral is to prevent the creation of inefficient and ineffective government programs.

For instance, a sales tax cut of 25 percent would reduce the tax burden of families making between $20,000 and $30,000 a year by almost 1 percent of their total income (0.86 percent), but would reduce the tax burden of families making $70,000 to $80,000 by only two-thirds of one percent (0.64 percent).[13] Thus, a cut in sales taxes would help low-income families disproportionately, helping to offset the fact that energy taxes would hit those families more.

[12] King County, "Sims announces next giant step toward energy independence," April 20, 2007 http://www.metrokc.gov/exec/news/2007/0420energy.aspx (Accessed February 17, 2008)

[13] This is only for comparison purposes since 25 percent would more than offset the carbon tax we are discussing. This data is based on the 2003 Washington State Tax Study and was generated using the detailed tax data at Carbonwa, "Tax burden information for existing taxes,"

Another reason to keep a carbon tax revenue neutral is to prevent the creation of inefficient and ineffective government programs like we have already described. Some carbon tax proposals would use the funds generated by the tax on new government programs.

For instance, HB 2420, offered in 2008, proposes that revenue be used, "to promote and fund state and local government activities, projects, and programs that reduce emissions of greenhouse gases and that support the state greenhouse gases emission reduction goals."[14]

The use of the funds generated is limited to a list of options, including, "Efforts to promote the growing of biofuel feedstock and development of biofuel production facilities..."[15] The problem with this approach is that government officials are very poor at choosing the best technologies to reduce CO2 emissions. Ironically, using carbon taxes to subsidize biofuels is likely to actually increase greenhouse gas emissions, as noted above.

Such politically-designed strategies are not likely to be effective and almost certainly would be inefficient. Legislators and agency managers who make decisions about allocating funds have limited information and are rarely, if ever, expert in all of the possible areas where funds can be allocated. As a result, decisions are often made on the basis of political connections and other non-policy factors that have little to do with effectiveness.

If there are no offsetting tax cuts, the carbon tax method would generate revenue for policies that might have little or no effect on reducing CO2 emissions. Such an expenditure of funds would be inefficient and ineffective.

A pro-active environmental policy should include an appropriate carbon tax fully offset by a static dollar-for-dollar across-the-board reduction in marginal income tax rates. If implemented with taxpayer protections, this policy would mitigate many if not all of the adverse economic costs from reducing carbon emissions.

If the state is not making headway in reducing CO2 emissions with a carbon tax at one level, rather than hoping that political leaders can choose the best course of future technology, a better approach would be to increase the tax and reduce other taxes further, increasing incentives to conserve energy and create new, carbon-free technology.

These are among the reasons that one of the founders of supply-side economics, Arthur Laffer, wrote about carbon taxes favorably last year:

> "Of the two primary policies being proposed to address global warming—the capping and trading of emissions and the taxation of emissions—we favor the taxation of emissions. We suggest that a pro-active environmental policy should include an appropriate carbon tax fully offset by a static dollar-for-dollar across-the-board reduction in marginal income tax rates. If implemented with taxpayer protections, this

---

http://carbonwa.wikispaces.com/Tax+burden+%28existing+taxes%29?responseToken=771251ee5afab0d26247ce8d33f43e46 (Accessed February 16, 2008)

[14] Washington State Legislature, HB 2420 Establishing a Carbon Tax, Section 5 (1), December 3, 2007, http://apps.leg.wa.gov/billinfo/summary.aspx?bill=2420&year=2008 (Accessed February 16, 2008)

[15] Ibid., Section 5 (1)b

policy would mitigate many if not all of the adverse economic costs from reducing carbon emissions."[16]

8. A Flexible System that Keeps Costs Low

A carbon tax is also more flexible than the cap-and-trade system currently favored by the Climate Advisory Team and the joint effort of the western states to address climate change known as the Western Climate Initiative. Caps are inherently inflexible because they must be met no matter the circumstance. Many environmental activists prefer cap-and-trade for this very reason – they are certain that the targets will not be exceeded. That, however, leaves little room for the unforeseen and can turn unexpected events into serious risk to the economy.

Washington relies heavily on water and snowpack to generate hydroelectric power. In low-water years, however, we import energy from other states. Much of that energy is carbon-intensive, burning coal or natural gas to generate electricity. Under a cap-and-trade system, those imports could cause utilities to surpass their caps very quickly, forcing utilities to purchase carbon allowances from others who are below their cap. Since demand for those offsets would rise dramatically, so too would their price. This type of uncertainty has been seen in Europe, with costs for a permit fluctuating between $12 and over $40 per ton of CO2.[17]

These sorts of fluctuations are a result of the inflexibility of a cap-and-trade system. A carbon tax approach is much more flexible. In years when it is easy to cut emissions, the tax encourages more reduction and when it is difficult, a tax allows flexibility. Put simply, in years when reducing CO2 is less than the tax, they will reduce CO2 beyond what a cap would require. In years when reducing CO2 is more expensive than the tax, emitters will simply pay the tax. This creates less variability and more certainty, allowing businesses to plan more effectively and reducing the likelihood of economic distortions.

The Congressional Budget Office put it this way in a recent analysis:

"An inflexible cap-and-trade program would provide more certainty about annual emissions than would a tax; however, that certainty would come at a cost: The cap would require too many reductions when the cost of achieving them was high and would mandate too few reductions when the cost was low."[18]

A cap-and-trade system could be made more flexible by providing cost caps and other elements that ensure costs will not skyrocket. These types of changes, however, are routinely opposed by

[16] Arthur B. Laffer and Wayne Winegarden, "GLOBAL WARMING: MINIMIZING THE ECONOMIC IMPACT FROM CARBON TAXES," Laffer Associates Supply-Side Investment Research, July 13, 2007, http://arduinlaffermoore.com/PDF/2007%2007%2013%20Global%20Warming%20Minimizing%20the%20Economic%20Impact%20From%20Carbon%20Taxes.pdf (Accessed February 17, 2008)

[17] Stockholm Environment Institute and Tufts Climate Initiative, "Voluntary Carbon Offset Information Portal," http://www.tufts.edu/tie/tci/carbonoffsets/price.htm#notes (Accessed February 16, 2008) and CO2 Prices.eu, http://www.co2prices.eu/ (Accessed March 23, 2008)

[18] Congressional Budget Office, "Policy Options for Reducing Carbon Emissions," Director's Blog, February 13, 2008, http://cboblog.cbo.gov/?p=65 (Accessed February 17, 2008)

environmental activists who prefer hard caps that they think would provide certainty in the short-term. Indeed they opposed this type of flexibility when the legislature passed the climate change bill in 2008.

That rigidity comes at a significant cost. One reason some people prefer a cap-and-trade system is they believe it would be more politically acceptable. If costs under that system rise rapidly, though, there will certainly be a public backlash. In the long-term, a system that keeps costs for carbon reductions low is more likely to survive the ebb and flow of political and economic tides.

In the long-term, a system that keeps costs for carbon reductions low is more likely to survive the ebb and flow of political and economic tides.

Finally, a rigid cap-and-trade system invites political tinkering. The state would be in the position of making political decisions about emissions levels and accounting – decisions that essentially amount to the state granting a valuable asset to industries based on a political calculus. For instance, favored groups could be provided additional credits or be exempted from caps. These types of accounting tricks would simply shift the burden to other groups who did not have political favor.

This is not to say that a cap-and-trade system does not have its benefits. It is popular in part because it was successful in reducing sulfur dioxide emissions in the Midwest in the early 90s. Washington Policy Center has written favorably about carbon offsets in the past because they encourage technology development, not only to reduce emissions, but to remove carbon from the atmosphere. In Washington, we do have a number of opportunities to take advantage of such reductions, especially in the area of forest stewardship. We need to continue to find ways to encourage such efforts. Exempting biofuels is one way to assist with providing these incentives.

Overall, however, a cap-and-trade system simply does not fit Washington very well. Any benefits from a cap-and-trade approach would be outweighed by its faults.

9. Creating Jobs and Encouraging Innovation with a Capital Investment Tax Cut

The last element of a proposal would be a tax cut on capital investment. Such a cut should not discriminate among businesses and should be offered to all types of capital investment. Certainly some investments will not directly impact the development of carbon-reducing technology. Determining which investments are allowable and which are not, however, would be a difficult process and the state should simply avoid engaging in such speculative efforts. If the credit was targeted, politicians would be further enticed to add in their favorite industries, or cut out those they decide they do not like for one reason or another.

In Washington, this would most likely take the form of an investment tax credit against the state's business and occupation (B&O) tax. Adding this tax cut would have several positive benefits.

First, it would create new jobs. The positive impact on economic growth from investment is widely understood. It is especially evident in the green energy sector. With the failure of Congress to renew the renewable energy production tax credit, some people are already predicting job losses. One study concluded that, "More than 116,000 U.S. jobs and nearly $19 billion in investment could be lost in

a single year if renewable energy tax credits are not extended by Congress."[19] Encouraging investment increases the production capacity of the state rather than just shifting resources from one place to another. The result is an actual increase in jobs in the economy at large.

By contrast, many of the current proposals to "create" jobs simply move jobs from existing business sectors to the emerging green energy sector.[20] Environmental economist John Whitehead explains the tradeoff this way:

> "Imagine [a graph with jobs listed by sector] with a green sector and a brown sector on the two axes. In the long run, an environmental policy moves the economy towards the green sector, we gain green jobs, lose brown jobs but we remain at full employment. Jobs aren't the issue. Although the word is salient to politicians and voters."[21]

The only way to increase the total number of jobs is to increase the size of the economy, not simply steal from one sector to benefit another sector (i.e. green energy) of the economy.

Second, reducing the cost of capital is extremely important to potential investors and critical to taking technology to the marketplace. Jesse Fink, one of the founders of Priceline, is now one of the partners at MissionPoint Capital, an investment group he helped set up to reduce the costs of capital to green innovators.

Their mission highlights this goal, noting that "MissionPoint believes we are in the early stages of a fundamental and long-term transition to a low-carbon economy, requiring multiple trillions of dollars in capital expenditures as well as the deployment of alternative technologies and business models."[22] MissionPoint's goal is to reduce the cost of capital by increasing the supply of funding for green technologies. By reducing taxes on capital investments, Washington would be doing its part to reduce the costs of investment.

When asked what policies would help innovators bring green energy businesses to Washington, Martin Tobias, one of the founders of Washington's largest green-energy producers, listed capital tax credits as one of the top three.

One of the founders of Washington's largest green-energy producer, Martin Tobias at Imperium Renewables, confirms this. When asked what policies would help innovators bring green energy businesses to Washington, he listed capital tax credits as one of the top three.[23] Workforce training, which is the centerpiece of the legislature's "green collar" jobs strategy, was at the bottom of the list.

Additionally, reducing the costs of capital investment with a tax cut would help reduce carbon emissions by encouraging companies to upgrade equipment. With a carbon tax in place, one of the goals

[19] CSBJ Blog, "Loss of renewable energy tax credit would cost jobs, billions in investment," February 8, 2008, http://csbjblog.blogspot.com/2008/02/loss-of-renewable-energy-tax-credit.html (Accessed February 17, 2008)
[20] See Todd Myers, "State needs honest tally of climate-related job plan ," September 7, 2007http://www.bizjournals.com/seattle/stories/2007/09/10/editorial4.html (Accessed March 23, 2008)
[21] John Whitehead, "I have a trusted role at the WSJ," Environmental Economics blog, http://www.env-econ.net/2008/02/i-have-a-truste.html (Accessed February 17, 2008)
[22] MissionPoint Capital, "Our Mission," http://www.missionpointcapital.com/mission.html (Accessed February 17, 2008)
[23] Martin Tobias interview with the author, February 6, 2008

of such investment would be energy efficiency. This is one reason tax incentives for capital investment should be across the board. A narrowly targeted tax cut might encourage direct investments in green energy, but would miss opportunities to encourage this type of carbon-reducing investment in other economic sectors.

Finally, because a cut in capital taxes creates economic growth, the state actually recovers some of the lost revenue through increased tax receipts elsewhere. One study done by Harvard Economist Gregory Mankiw and Matthew Weinzierl found that, "half of a capital tax cut is self-financing"[24] at the federal level. Obviously there are differences between impacts of tax policy at the state and federal level, but it is generally true that reducing the costs of capital investment yields greater economic growth and thus adds to government revenues.

10. Conclusion: A Thousand Blooming Flowers Versus the Magic Bullet

A carbon tax has a wide range of advantages over the currently proposed system of cap-and-trade with government regulation and subsidies in areas not covered by caps. As a tax spreads throughout the economy wherever carbon-emitting energy is used, it creates incentives for every family and business in Washington. Instead of a few dozen politicians and planners deciding where Washington should cut CO2 emissions, carbon tax incentives engage everyone in the effort to reduce costs and carbon emissions. The millions of small, incremental changes made by people in every corner of the state would add up to the most efficient way to reduce CO2.

Because CAT members have committed themselves to a cap-and-trade system based on government regulation, they often find themselves painted into a corner, knowing they must address emissions from transportation and other sectors, but unable to develop a strategy that contains costs and will actually work. By not considering individual incentives to reduce travel or purchase more efficient vehicles, however, CAT members have left themselves with few options. They can only engage in planning, hoping to find a magic bullet that works. The result is likely to be yet more costly expenditures with little effect on actual CO2 emissions.

They are unlikely to find that magic bullet. What is certain is that there will be unintended consequences from a cap-and-trade system and new government programs and they will create political constituencies that make it difficult to dislodge policies that are ineffective.

A carbon tax, with offsetting cuts in other taxes, avoids these problems. While providing broad incentives to reduce carbon emissions, it does not favor one business sector over another. Indeed, it rewards the constant drive of innovation, gradually making today's CO2-emitting technology obsolete and driving carbon emissions ever lower.

A carbon tax with offsets avoids economic shocks, while providing policymakers the flexibility to adjust the carbon tax rate up or down in response to improved climate science.

[24] Gregory Mankiw and Weinzierl, Matthew, "Dynamic scoring: A back-of-the-envelope guide," Journal of Public Economics, Volume 90, Issues 8-9, September 2006, Pages 1415-1433,

It promotes true economic growth, and limits the impact on overall tax burden borne by all families – especially by low-income families.

It creates an incentive not only to innovate but encourages every Washington household to find inexpensive ways to conserve energy and reduce carbon emissions.

A carbon tax, offset by cuts in other taxes, may be the best way to address the risks from greenhouse gas emissions in a responsible manner.

There are still many details that need to be worked out to ensure that a carbon tax policy would have the desired impact. A carbon tax, offset by cuts in other taxes, may be the best way to address the risks from greenhouse gas emissions in a responsible manner.

11. Carbon Tax Questions and Concerns

Question: Global warming isn't occurring, so why should we support this proposal?
Answer: Although we believe it is wise to address the risks associated with rising CO2 in the atmosphere, we agree that the risks cited by many are overblown. Even if the increasing level of CO2 presents no risk, however, this carbon tax proposal will have a positive impact on businesses, the ability of families to control the amount of taxes they pay and can reduce the money going to hostile foreign governments.

First, this idea reduces overall taxes paid by Washington families and businesses. The carbon tax itself starts very low (about 3-4 cents per gallon of gas) and any future increases in the tax would have to be offset by tax cuts elsewhere.

Second, businesses receive an incentive to invest in more efficient technology, increasing productivity and prosperity for Washington. This increased productivity also generates tax revenue for the state.

Third, families can limit their taxes by avoiding carbon-intensive energy. Currently, families cannot functionally avoid taxes because sales taxes are paid on virtually all purchases. This proposal provides the opportunity for families to limit taxes.

Finally, carbon taxes encourage the development of domestic sources of low-carbon energy, reducing the amount of money we send to potentially hostile governments in Venezuela and elsewhere.

Question: If we increase carbon taxes, won't energy intensive companies move to other states?
Answer: Any tax or regulation has the potential to create incentives for companies to move. This proposal takes two key steps to reduce that.

First, the carbon tax level is relatively low, creating a small incentive to move out of Washington.

Second, businesses receive tax breaks for investment, which acts as an incentive to invest in Washington.

Perhaps most importantly, the alternative being implemented in Olympia will have a significant impact on business, ability to transport goods and the cost of energy, providing significant incentives for businesses to move elsewhere.

Question: Should we replace the current climate strategy with this proposal?
Answer: Yes. The current strategy relies on costly and ineffective regulations on transportation, lifestyles and government programs to reduce CO2. A carbon tax put families and businesses in control instead of hoping that government can make wise decisions about how we should live and what technologies are likely to be effective and worthwhile.

Question: Doesn't proposing a carbon tax simply give the legislature the opportunity to increase another tax without reducing other taxes?
Answer: No because such a proposal has already been made and by offering this version, it should be clear that this new idea is distinct. The current cap-and-trade system specifically calls for the state to keep revenues from the system. If the legislature advocates a carbon tax but does not offset the increase it would be clearly different than this concept. There should be a proposal that addresses concerns about CO2 that is good for families and business, not just government.

Question: How much will this cost taxpayers?
Answer: In total, this proposal would reduce the tax burden on Washington families and businesses.

In total, this proposal would reduce the tax burden on Washington families and businesses.

There will be variations from family to family. Families who spend a great deal on energy might see costs increase, while those who have low energy costs will see their taxes decrease. The goal of the carbon tax portion is to encourage families to reduce their use of carbon-intensive energy sources to reduce their tax burden.

Question: How will this affect Washington's economy?
Answer: This proposal uses a capital investment tax cut to spur business expansion that will truly create jobs and expand Washington's economy.

The carbon tax will cause the economy to adjust due to a change in the various costs of energy and products. To prevent economic distortions due to a rapid change in costs, this proposal is at the lowest end of those being discussed around the world. Carbon tax proposals being offered by economists and politicians range from $10 per ton of carbon up to $100 per ton. A $10 per ton tax would amount to a 3 cent per gallon gas tax. For a home averaging 10 therms of natural gas and 40 kWh per day, a $10 per ton carbon tax would add $2.23 per month.

At these levels, the tax may actually be too low to overcome the relative inelasticity of demand for energy. Especially in the short term, people tend to be extremely resistant to changing patterns of energy use, even when costs go up. For this reason, it is likely that some will criticize this proposal for setting the carbon price too low. This proposal focuses not only on changing behavior away from carbon but attempts to do so in such a way that does not create economic shocks or other negative impacts.

About the Author

Todd Myers is director of the Center for the Environment at Washington Policy Center. He is the author of numerous studies on environmental policy issues and is a regular resource for media on market-oriented solutions to our state's environmental challenges. Todd was a featured speaker at the 2008 International Conference on Climate Change in New York. He served as Director of Communications for the Washington State Department of Natural Resources, and was previously Director of Public Relations for the Seattle SuperSonics and Director of Public Affairs for the Seattle Mariners. Mr. Myers has a Masters Degree in Russian and International Studies.

Published by Washington Policy Center

If you have any comments or questions about this study, please contact us at:

Washington Policy Center
PO Box 3643
Seattle, WA 98124-3643

Visit our website at www.washingtonpolicy.org
E-mail: wpc@washingtonpolicy.org

Or call WPC at 206-937-9691