

## Carbon Tax

### Introduction

Nearly all scientists, environmentalists and public policy makers agree that the earth is getting warmer, primarily due to carbon dioxide gasses from the exhaust of fossil-fuel burning power plants and automobiles. Indeed, it was reported in Sunday's, New York Times, of September 16, 2007, that the polar ice cap or Arctic ice has shrunk to the lowest level on record, raising the possibility that the Northwest Passage that eluded famous explorers will become an open shipping lane.<sup>1</sup>

A U.N. panel on climate change has predicted that polar regions could be virtually free of ice by the summer of 2070 because of rising temperatures and sea ice decline<sup>2</sup> and on Feb. 2, 2007, the United Nations scientific panel studying climate change declared that the evidence of a warming trend is "unequivocal," and that human activity has "very likely" been the driving force in that change over the last 50 years. The last report by the group, the Intergovernmental Panel on Climate Change, in 2001, had found that humanity had "likely" played a role.<sup>3</sup>

Most economists are equally concerned about the dire consequences to our earth and propose either "carbon-caps" or "carbon-taxes" as a remedy. This module discusses benefits and cons carbon-caps and carbon-taxes to reduce greenhouse gas in the Hudson Valley region.

### GREENHOUSE GAS IN THE HUDSON VALLEY REGION

On December 4, 2006, a conference was held to discuss climate change issues and their potential impacts on the Hudson River and other New York State natural resources. Basically, the Conference suggested and a recent report, the Northeast Climate Impacts Assessment (NECIA), outlined climate model projections with substantial consequences for New York. A team of independent scientists from across the nation, coordinated by the Union of Concerned Scientists, anticipate changes that include increases in average annual temperatures, more extreme heat days in major cities, decreased snow cover, changes in drought patterns and an increase in extreme precipitation events.<sup>4</sup>

Some of the environmental changes anticipated, include:

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1 <http://www.nytimes.com/aponline/world/AP-Northwest-Passage.html>

2 <http://www.nytimes.com/aponline/world/AP-Northwest-Passage.html>

3 <http://topics.nytimes.com/top/news/science/topics/globalwarming/index.html?inline=nyt-classifier>

4 <http://www.dec.ny.gov/environmentdec/18807.html>

- As emissions from fossil fuels remain in the atmosphere for decades, summers in New York could, by century's end, resemble those in Georgia if emissions continue unabated.
- Cities and urban areas would be particularly affected by higher temperatures. In New York City, the number of days per year over 90 degrees Fahrenheit could increase from today's average of 15 to more than 70 days by the end of the century. In Buffalo, the number of days per year over 90 degrees would increase to nearly 50.<sup>5</sup>
- The following changes in our climate have been observed over the past 30 years in the Northeast and are predicted to continue:<sup>6</sup>
  - Increasing average annual temperatures with winters warming faster
  - Increasing number of extreme precipitation events (e.g. heavy rainfall in a short period of time)
  - Decreasing snow cover with snowfall becoming wetter and heavier
  - Later freeze and earlier breakup of winter ice on lakes and rivers
  - Earlier spring snowmelt resulting in earlier high spring river flows
  - Increased chance of short-term drought
  - Sea level rise

Additional data on the potential ecological damage to New York State can be found at [Impacts of Climate Change in the United States](#).<sup>7</sup>

### **Q&A ON A CARBON TAX**

**Question:** A carbon tax is unethical – people and organization should not be rewarded for not polluting the environment, it is as if we reward people for obeying traffic laws.

**Answer:**

- This is an excellent point – “That we should not reward good behavior.” But consider the following:
  - i. In one sense, we do reward people who adhere to traffic laws. Generally, these are people with excellent driving records and hence, have lower automobile insurance premiums. So, in a way, the market does reward good behavior, even when it is expected.
  - ii. The carbon tax rewards “incremental good behavior”. Let’s face it, environmental compliance is not so much a moral issue as it is a legal or regulatory issue. People and organizations will only do the minimal amount required. If regulations require removal of 10 tons of CO<sub>2</sub>, than 10 tons it is – there is no incentive to remove more – this is human /

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5 <http://www.dec.ny.gov/environmentdec/18807.html>

6 <http://sustainhv.org/flyers/ClimateChangeFactSheet4-24-06.doc>

7 <http://www.climatehotmap.org/impacts/midatlantic.html>

capitalistic nature. A carbon tax provides the incentive to remove additional amounts of carbon above the regulated threshold.

Question: This whole issue of global warming and damage to the environment is more alarmist than real.

Answer:

- We respect your beliefs but hope we can convince you as consider the following facts:
  - i. On December 4, 2006, a conference was held to discuss climate change issues and their potential impacts on the Hudson River and other New York State natural resources. Basically, the Conference suggested and a recent report, the Northeast Climate Impacts Assessment (NECIA), outlined climate model projections with substantial consequences for New York. A team of independent scientists from across the nation, coordinated by the Union of Concerned Scientists, anticipate changes that include increases in average annual temperatures, more extreme heat days in major cities, decreased snow cover, changes in drought patterns and an increase in extreme precipitation events.<sup>8</sup>

Question: Where does the greenhouse gas come from?

Answer:

- The Environmental Advocates of NY suggest that 32% of greenhouse gases come from transportation, 24% from electricity generation, 16% from residential homes, 11% from commercial buildings, 7% from industrial complexes, and 10% from other sources.<sup>9</sup> In Westchester County, fairly similar results were found: It is estimated that the county as a whole produced almost 12 millions tons of carbon dioxide in 1999. The transportation sector accounted for about 51 percent of this. Residential household energy use accounted for about 30 percent. The commercial sector accounted for about 19 percent. In 1999, the tons per capita of CO<sub>2</sub> produced was 13.1 tons per person, which is higher than the state average of 11.8 tons.<sup>10</sup>

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8 <http://www.dec.ny.gov/environmentdec/18807.html>

9 <http://www.eany.org/publications/gсны/dec06.pdf>

10 <http://www.westchestergov.com/currentnews/2006pr/globalwarming.htm>

Question: New York and the Hudson Valley region already pay the highest electric utility bills in the country and you expect me to request additional higher taxes?

Answer:

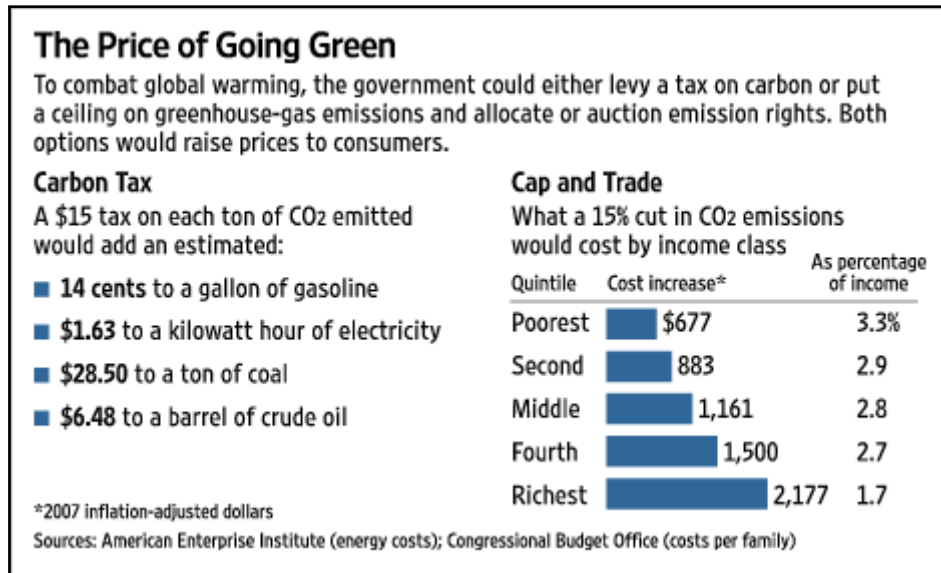
- You are 100% correct. Through August, 2007, New York residential customers paid an average 17.04 cents per kwhr for electricity – indeed, the third highest in the nation, after Hawaii and Connecticut. The U.S. average was 10.61 cents per kwhr.<sup>11</sup>
- We are not necessarily asking you to impose taxes on New York utilities, which primarily rely on natural gas, nuclear and hydro as the vehicles to create electricity. Rather, we ask that through Congress, higher carbon taxes are imposed on utilities which burn coal as their primary fuel.
  - Hmmm, this seems fair – “Can you let me know ‘Who’s Who’ in this debate?”
    - The tax-increase crowd includes prominent Democratic economists -- such as former Treasury Secretary Lawrence Summers and Nobel laureate Joseph Stiglitz -- and Republican economists such as N. Gregory Mankiw, a former Bush adviser and defender of President Bush's 2001 and 2003 income-tax cuts.
    - Business and environmental groups as well as organized labor generally back cap and trade. They are joined by Democratic presidential candidates Hillary Clinton, Barack Obama and John Edwards, as well as Republican John McCain. At least five carbon-emission bills have been introduced on Capitol Hill, and the issue is expected to be taken up later this year.
  - OK – so, “How much will this cost?”

The conservative American Enterprise Institute and Congressional Budget office estimates the following:

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<sup>11</sup> [http://www.eia.doe.gov/cneaf/electricity/epm/table5\\_6\\_b.html](http://www.eia.doe.gov/cneaf/electricity/epm/table5_6_b.html)

**Figure 1: The price of Going Green.**



Question: One other issue, “Won’t a carbon tax negatively impact the poor in developing countries?”

Answer:

- That is a very good question. The poorer European countries, such as Spain, Ireland, Portugal and Greece have maintained that the carbon tax would be a larger burden for them than for the other countries that are already more industrialized. In addition, the lesser-developed European Community states argue they have contributed less to the overall CO<sub>2</sub> levels that presently exist. Higher energy prices would make further economic development more expensive, making it more difficult for the poorer states to close the economic gap that still exists within the European Community.
- The even poorer countries in Asia and Africa are even more vocal in their argument that economic development being hamstrung by a carbon tax, as sometimes the phrase, “economic imperialism” is introduced into the discussion. A typical (and very fair) response is, “Isn’t this great! The west pollutes the air for

more than 150 years and we have to pay tax to combat the effect? Apparently we are told we get impacted the most - so pay up or else. Very nice.”<sup>12</sup>

- However, there are several opportunities to introducing a carbon-tax in lesser developed countries (LDCs).
- The carbon tax can possibly be used to finance to entirely new industries, with a focus on renewable energy, which is beginning to occur in India Thus, a “win-win” will occur – carbon emissions will be reduced and new industries for employment opportunities will develop – just as in the United States and developed countries<sup>13</sup>
- Some LDCs have already adopted a carbon-tax with impressive results. In order to limit CO<sub>2</sub> emissions, the Government of Zimbabwe introduced a “carbon tax” payable by every motorist to the Revenue Authority. The tax began January 1, 2001. The carbon tax is calculated according to the engine capacity of the motor vehicle. In 2004, the average tax on a light passenger family car is US\$5 per year. It is paid when the vehicle owner seeks the annual license renewal. It is currently estimated that the country has over 400,000 light vehicles, thus an estimated US\$2 million are collected from light passenger vehicles a year. If all categories of vehicles are included, the State could collect at least US\$4 million a year from the carbon tax.<sup>14</sup>
- Another country which adopted a carbon tax is Slovenia in 1997 and none of the perceived detrimental effects on competitiveness appeared in Slovenia that unilaterally opted for a greening of taxation.<sup>15</sup>

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12 <http://indianeconomy.org/2007/03/30/the-case-for-a-carbon-tax/>

13 <http://indianeconomy.org/2007/03/30/the-case-for-a-carbon-tax/>

14 <http://www.unep.org/dec/onlinemanual/Enforcement/InstitutionalFrameworks/EconomicInstruments/Resource/tabid/1025/Default.aspx>

15 <http://www.unep.org/OurPlanet/imgversn/96/ott.html>