An Act Combating Climate Change – SD285

Legislation creating a pollution charge & rebate system for Massachusetts
Proposed by State Sen. Mike Barrett, 3rd Middlesex District

THE BIG PICTURE:

- Carbon dioxide and other "greenhouse gases" collect in the atmosphere as byproducts of the use of "fossil fuels" -- coal, oil and natural gas. These greenhouse gases cause climate change -- big trouble for our kids, our grandkids and us. It's official: 2014 was the hottest year in recorded history.
- Pollution and health costs -- huge expenses -- aren't factored into U.S. prices for gasoline and other fossil fuel products. But taxpayers get saddled with the costs later, as expenditures for illnesses and environmental regulation. Underpricing tempts all of us to consume more than we should, a very bad deal for the planet. Now comes legislation to prompt us to use less and pollute less. It asks Massachusetts to go where British Columbia has already gone -- to "full pricing" for fossil fuels.

HOW POLLUTION PRICING -- "CARBON PRICING" -- WORKS:

- Other jurisdictions have gone the "carbon tax" route. *An Act Combating Climate Change* takes an approach that doesn't fit the legal definition of a tax at all, because it's "revenue neutral" (see below).
- In the system proposed here, a "carbon charge" is added to the price of each coal, petroleum and natural gas fuel, but only in proportion to the carbon dioxide thrown off as a byproduct. Resorting to such a sliding scale motivates us to change behavior. We can finesse the charge by switching from coal (dirtiest!) to oil (dirty but less so). Or from oil to natural gas (even less dirty). Or from natural gas to an alternative like solar (least dirty!).
- Here's a twist: Changing behavior to pay less doesn't upset the carbon pricing applecart at all. In fact, changing behavior and avoiding charges -- rather than generating revenue -- is the whole point. Paying less means we're polluting less. It also means we're shelling out less money to out-of-state energy producers. Which means we keep more of it for ourselves. Which means, economists find, we end up spending more of it on food, clothing and the like, spurring local employment.[1]
- Full pricing, on its own, can be tough on the poor and on working people with long commutes. So *An Act Combating Climate Change* takes a step that's been tried successfully elsewhere: All the money generated by pollution -- or carbon charges -- is sent back to residents and employers in annual or quarterly checks. *Oh for sure that's going to happen,* you say, rolling your eyes. But this isn't pie in the sky. Economists have a name for such a revenue setup: "revenue-neutral." Despite their mistrust of politicians -- and initial suspicion of anything "revenue neutral" -- voters in the Canadian province of British Columbia gave revenue-neutral carbon pricing a try in 2008. The money has gone back to the public, repeal efforts have failed and today the system is more popular than it's ever been.

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[1] Nystrom, Scott and Zaidi, Ali. "Modeling the Economic, Demographic, and Climate Impact of a Carbon Tax in Massachusetts." *Regional Economic Models, Inc. (REMI)*. July 11, 2013.

OUR HEALTH:

- GHGs make breathing harder; they contribute to asthma, lung cancer, emphysema and chronic bronchitis. If we reduce these gases, people will live longer, healthier lives.[2]
- GHGs aggravate seasonal allergies[3] and increase the incidence of insect-borne illnesses such as malaria, West Nile virus and Lyme disease.[4]
- Though we're not quite sure why, asthma plagues children and adults in Massachusetts more than it does people elsewhere in the country. Among the 50 states, we have the fourth highest incidence of adults with asthma.[5]
- When the American Lung Association grades the various states on air quality, it gives communities in Massachusetts Cs, Ds and Fs.[6]

OUR LAND AND PROPERTY:

- As all the crazy weather suggests, climate change means rising sea levels and more frequent storms, which in turn bring flooding and shoreline erosion. By mid-century, in Greater Boston alone, 1.4 million people will be at high risk of damage to their land and property.[7]
- By mid-century, beaches on the Cape and on the North and South Shores of Massachusetts will see serious – and probably irreversible -- erosion.[8]
- Purdue and Stanford researchers warn that, by century's end, the annual number of days with property-damaging thunderstorms on the eastern seaboard will increase as much as 42%.[9]

OUR WALLETS:

- As we know from Sandy's impact on New Jersey and New York, hurricanes in the Northeast can be hugely destructive. Over the next 100 years, in Greater Boston alone, property damage from rising sea levels and more frequent storms are projected to cost as much as $94 billion.[10]
- As the oceans warm and become more acidic, lobster, clam and oyster activity is shifting north to stay in cool water, heavily penalizing the Massachusetts fishing industry.[11] Between the late 1990s and last year, lobster landings in Buzzards Bay, just off Cape Cod, collapsed, declining from 400,000 pounds a year to 72,000.[12]

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[2] http://www.epa.gov/region1/airquality/piechart.html; http://www.stateoftheair.org/2013/health-risks/health-risks-ozone.html; Krewski, Daniel. "Evaluating the Effects of Ambient Air Pollution on Life Expectancy." *New England Journal of Medicine* 360;4 (2009); Pope, C. Arden et al. "Fine-Particulate Air Pollution and Life Expectancy in the United States." *New England Journal of Medicine* 360;4 (2009); ACE/Clean Water Action fact sheet on "Reducing Health Impacts from Diesels".

[3] Bernard, S. M., Samet, J. M., Grambsch, A., Ebi, K. L., & Romieu, I. (2001). The Potential Impacts of Climate Variability and Change on Air Pollution-Related Health Effects in the United States. *Environmental Health Perspectives Supplements, 109,* 199. **ISSN:** 1078-0475; http://vectorblog.org/2011/05/climate-change-a-threat-to-our-kids%e2%80%99-health/#more-2882

[4] http://www.neaq.org/conservation_and_research/climate_change/climate_change_in_new_england.php

[5] Statistics from Centers for Disease Control's (CDC) National Asthma Control Program

[6] http://www.stateoftheair.org/2013/states/massachusetts/

[7] http://www.neaq.org/conservation_and_research/climate_change/climate_change_in_new_england.php

[8] http://www.neaq.org/conservation_and_research/climate_change/climate_change_in_new_england.php

[9] *The New York Times.* "Study Sees Higher Risk of Storms on the Horizon" by Michael Wines, September 23, 2013

[10] http://climate-talks.net/2006-ENVRE130/PDF/CLIMB_Final_Report-print-summary.pdf

[11] http://www.whoi.edu/OCB-OA/FAQs; http://www.bostonglobe.com/opinion/columns/2013/10/11/lobster-now-pot-climate-change/Swxs8MtVUSoh84YgKwSC5O/story.html

[12] *The Boston Globe.* "New England's Threatened Lobsters" by Derrick Z. Jackson. October 12, 2013