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Jim Prentice, Canada's Minister of the Environment, recently filed Canada's emission targets with the U.N. The target, a reduction of emissions by 17 % from 2005 to be accomplished by 2020, matches the USA target. It is imperative that the targets are the same for any chance of success for Canada. Canada is a highly trade-dependent economy with exports making up about 40 % of GDP and 80 % of exports go to the USA.

In an ideal world (for Canada) we would integrate a North American solution – a bi-national policy if you will. From Canada's perspective that would work towards spreading the risk. One (country) might be able to argue that end-users should accept the cost of GHG reduction required to meet emission targets. Failing achievement of such a bi-national approach (which seems somewhat unlikely until there is greater need by the USA to accept the added burden), Canada can at best align itself with USA National Policies.

In the interim Provinces (and States) move more quickly. California certainly leads the West in its environmental policies yet it fails to pass budgets and continues to require the USA Federal Government to bail them out. In fact Obama's latest budget comes in a record \$1.56 trillion dollar deficit. Considering the 2000's have been called the decade of debt (consumer) what do we have to look forward for the 2010's? Everyone likes the idea of Green Technology but the initial infrastructure comes at a cost and the replacement of cheaper carbon intensive energies comes at a greater relative cost.

Out of the National Post on January 15, 2010

The government of Quebec has given environmentalists something they've long dreamed of: a climate-change strategy that throws caution to the wind and goes ahead with tough new environmental standards despite predictions of dire economic consequences.

Starting this week, Quebec is imposing strict, go-it-alone greenhouse gas emission standards on vehicles sold in the province. The new rules, abruptly announced over the year-end holidays, caught auto manufacturers by surprise. They must now meet one standard for Quebec and another for the rest of Canada. Monitoring begins immediately; manufacturers that fail to comply face fines of \$5,000 per vehicle beginning in 2016.

Automakers say the program was poorly thought out and imposed without warning or consultation. It puts the province out of step not only with the rest of the country, but with the United States as well.

Automakers argue, convincingly, that Quebec's new rules will have a drastic impact on their business while doing little to curtail emissions. Dealers will simply factor the potential for fines into the price of the vehicles, making cars in Quebec more expensive than elsewhere, and driving purchasers to seek cheaper alternatives. Many will hold onto their old cars -- which produce more emissions than new ones -- while others will buy used cars or go cross-border shopping in Ontario or New Brunswick.

In any case, the potential return is limited: Quebec represents just 2% of the North American market for new vehicles, meaning the law will have a negligible effect on overall emissions. And many Quebecers already buy the smallest (and least polluting) cars available anyway.

Former federal Liberal leader Stephane Dion tried to do something similar on a larger scale when he invited Canadians to back his Green Shift plan and its ambitious reordering of economic priorities, based largely on faith that things would turn out well in the end. He was overwhelmingly rejected, including in Quebec.

Perhaps Quebec Premier Jean Charest sniffs a shift in public sentiment. He may be privy to poll figures indicating Quebecers are willing to shoulder a large burden of higher prices in return for ambitious environmental plans. (They would be among the first voters to do so.) But since Mr. Charest does not face re-election until 2012, it will be some time before we know if he is right.

In the meantime, the losers will be the people of Quebec.

Read this anyway you like however it does highlight the regional differences. One of the biggest challenges within the Canadian context will be the handling of regionalism. The largest emitters in Canada are Alberta and Ontario. (basically double or triple other Provinces). Do you build a cap and trade system that would in essence transfer money from the emitters to less intensive regions? In Alberta's case do you rely on Carbon Capture and Storage (CCS)? Current technologies suggest that carbon tax on a per tonne basis would need to be somewhere north of \$100 / tonne of CO₂. This is a similar figure to the expected cost for Canada to meet its targets recently announced (approx \$125 / tonne of CO₂). The Government's own numbers (<http://ec.europa.eu/environment/climat/pdf/bonn09/canada.pdf>) suggest about \$50 / tonne of CO₂ is required even now to stop CO₂ growth in Canada. Effect on GDP is approximately a 1.25 % reduction at \$50 / tonne and a 3.25 % reduction at \$125 / tonne. These are Canadian numbers not reflective of specific differences in regions.

Reducing emissions comes basically from three areas: Consumer, Transportation and Electricity. Consumer reductions are achieved by changing people's habits (i.e. legislation). This is difficult as per the Quebec example – do you drive business elsewhere? BC had continued to engage its consumer with the increasing carbon tax on fuel at the pump. This looks to take a tax charged at the pump that started at the equivalent of \$10 / tonne in 2008 up to the equivalent of \$30 / tonne in 2012. Unfortunately it is unlikely that driving habits have or will change. As in my June 2008 Recorder column, prices at the pump likely to have double (i.e. \$2.00 a litre) to see some societal change of any statistical relevance.

On the basis of Transportation some feel there are possibilities here by way of having industries switch fleets to natural gas. Natural gas in vehicles has largely been a failure in

Canada so far. We lack the public filling infrastructure. Vehicle conversion costs about \$6,000 so a vehicle driving 40,000 km per year based on a 20-30 % savings in fuel will take about five years to breakeven. The company that made small portable filling stations (for residential use) went bankrupt. The car manufactures in North America quite making the vehicles except for niche markets in California and New York. So once again Governments must be prepared to make huge investments in infrastructure and regulations to make such a path work.

Canada's short term reduction plan will likely rely on changing coal fired electricity plants into natural gas fueled generators. Ontario has and is moving along this vein. Alberta remains the biggest hold-out these days. Beyond that we likely will have to move to nuclear. At some point the need for energy versus what we can afford will most definitely make nuclear a palatable reality for the public.

A recent presentation used the "Tower of Babel" analysis for how the discussion on emission pricing is presently handled in the world. Different parties use the same word(s) to mean different things.

"When I use a word," Humpty Dumpty said in rather a scornful tone, "it means what I choose it to mean, neither more nor less."

"The question is," said Alice, "whether you CAN make words mean so many different things."

"The question is", said Humpty Dumpty, "which is to be master - that's all."

In the meantime humankind waits on the next "magic bullet" technological innovation to solve our energy dilemma.

From the Thursday Files

We can't solve problems by using the same kind of thinking we used when we created them.

- Albert Einstein