



Ontario Energy Board

Commission de l'énergie de l'Ontario

The Canadian Carbon Pricing Forum

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Pricing Forum

- Alberta Utilities Commission, CAMPUT, Canadian Gas Association, Canadian Electricity Association, Ontario Energy Board
- Ottawa, Calgary, Toronto
- Utilities, Regulators, Consumers
- The Carbon Pricing Report
<http://www.camput.org.ws3.korax.net/documents/2000-05-10CarbonDialogueReport.pdf>



The Effort Required

- Government objectives for 2020 entail changing the GHG emissions trajectory from **upward** over 1% per year (from 1990 to 2007) to **downward** 2% per year starting in 2010
- According to the NRTEE this scale of change entails an average carbon price across the economy of \$100/tonne by 2020
- \$100/tonne in 2020 equals revenues of \$18 Billion (discounted to 2006), roughly equal to revenues from all corporate taxes in 2020
- Or, another way, \$5.00/gj on the price of natural gas or \$100/MWh on coal fired power



Tax or Cap?

- Cap and trade systems carry high administrative and transaction costs –to set up the system, assess offsets, manage and supervise the carbon market
- As well as very high risk of gaming and rent seeking and risk that entitlements will become locked in
- A tax approach not costless but costs and risks are lower, administrative systems are already in place and it is inherently more transparent
- Tax provides better price signal, costs less, but cannot be sold



Managing the Revenue

- Any system (cap and trade with auction or a tax) will generate very large revenues).
- This will create many winners and losers aside from those created through credit allocation and creation of offsets
- The sooner we starting talking about what to do with the revenues the sooner we may reach a conclusion
- The Carbon Dividend?



The Political Issues

Regional Disparity – hydro provinces gain, coal provinces lose, regional wealth transfers are a bad idea

Federal Jurisdiction? - need a national system but the federal criminal power is suited to a penalized model not a price model

US Alignment – North American system essential, must avoid trade sanctions, will it be negotiable?



Challenges for Regulators

- **Rate Shock** - \$100/MWH or \$5/gj on gas is undeniably rate shock. This will be a huge challenge for regulators.
- **Regional dislocations:** In Nova Scotia 70% of the electricity is generated from coal. In B.C. over 70% is from hydro - The challenge will be enormous.
- **The poor** - \$100/MWH or \$5/gj will submerge any current efforts on lifeline rates or other mechanisms to assist the poor.



Challenges for Regulators

- **Who will regulate** - The absence of a national regulator makes regulation of the cap and trade system enormously complicated. Not only is there a North America challenge, there is an inter-provincial challenge.
- **Recovery of taxes or penalties** -Regulators are used to allowing the recovery of taxes by utilities – a more difficult issue is whether purchasing credits or worse still incurring a carbon penalty for non- compliance is an allowable expense
- **Valuation** - Utilities will purchase offsets– how will regulators determine if the value reflects the cost, or who is the true owner? Is this the new financial derivative mess?



The Big Picture: Concluding Observations

- Canada emits more GHGs per person than almost any other country. A cold climate, resource intensive industries, long distances and a growing population base are some of the influencing factors.
- This is a huge problem—the goals are ambitious, the current gap is enormous and without action, emissions will continue to rise
- Pricing is necessary but will not be sufficient to meet the reductions that are targeted; additional regulation will be needed to ensure the economy responds to the objective.
- The bottom line: carbon pricing alone will not achieve the objective, massive investment in renewable energy, conservation and electric car technology will be required.



The Other Shoe – Renewable Investment

Feed-in-Tariff (FiT) – A standard price according to technology to promote the development of community-based and large commercial renewable energy projects. This mechanism provides proponents with a market-viable price for their projects.

‘As of right’ grid access – Establish right to connect for renewable energy projects on the transmission and distribution systems based on economic test.

Proposed Feed-In Tariff Prices for Renewable Energy Projects in Ontario May 12, 2009		
Technology	Ontario proposed size tranches	Ontario proposed ¢/kWh
Biomass		
	≤ 10 MW	13.8
	> 10 MW	13.0
Biogas		
	≤ 500kW	16.0
	> 500kW ≤ 10MW	14.7
	> 10 MW	10.4
Waterpower		
	≤ 10 MW	13.1
	> 10MW ≤ 50 MW	12.2
Landfill gas		
	≤ 10 MW	11.1
	>10 MW	10.3
Solar PV		
Rooftop or Ground-Mounted	≤10 kW	80.2
Rooftop	> 10kW ≤ 250 kW	71.3
Rooftop	> 250 kW ≤ 500kW	63.5
Rooftop	> 500 kW	53.9
Ground Mounted	> 10 kW ≤ 10 MW	44.3
Wind*		
Onshore	Any size	13.5
Offshore	Any size	19.0



Feed-in Tariffs

- Pioneered in Germany and Spain, now in Ontario.
- Standard contracts are offered to all generators wishing to connect, with standard prices and terms.
- Normally no cap or limit on the capacity to be purchased.
- Prices vary by technology, and may vary by size.
- Requirements for local content in the equipment, hence creating “green jobs” and a potential export industry.
- Renewable generators have a “right to connect”.



Will FITs become a regulatory responsibility?

- FITs are politically determined in most jurisdictions.
- Vermont is a recent exception, regulator will set FITs for larger facilities.
- In long term, if FITs are depoliticized, it may be appropriate to have regulators determine these.
- Unless regulators determine FITs, there is limited ability for the regulator to protect ratepayers.



Regulatory Challenges

- New connection cost rules for renewables, enablers
- Costs in LDC rates or pooled province wide
- Incentives for LDC investment



Create a better investment climate for utilities

- Incentives to invest earlier:
 - Pre-approval of projects to connect generators.
 - Higher ROE where justified.
 - Recovery of construction work in progress.
 - Accelerated depreciation.
- These incentives would increase regulatory predictability and reduce regulatory risk.



The Silver Lining – Green Jobs

- New Energy for America plan will create 5 million green collar jobs
US President Barack Obama, January 2009
- Ontario's Green Energy Act will create 50,000 direct and indirect green collar jobs
Ontario Premier Dalton McGuinty, February 2009
- More than 57,000 person-years of employment in Ontario from energy-efficiency
Conservation Bureau-commissioned study, December 2008

