POLITICAL PRESSSURE MOUNTING TO REDUCE EMISSIONS

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Cannon to right of them,
Cannon to left of them,
Cannon in front of them
Volley'd and thunder'd;

This famous quote from Alfred Lord Tennyson's "The Charge of the Light Brigade" might become the clarion call for the utility industry on both sides of the border.

In Washington, Democratic leaders in Congress are placing high priority on climate change legislation – legislation that would require decades of investment and innovation to realize reductions in emissions causing greenhouse gases.

In Canada, the ruling minority Conservatives have been presented with a de facto legislative bill requiring them to set a definitive timetable, emission targets and potential penalties for illegal polluters to meet the Kyoto Protocol – a protocol signed by the previous ruling Liberal party and viewed by many in the industry as the greatest threat to maintaining the grid while remaining economically viable.

The potential pitfalls are easy to identify.

North American electric power companies create about one-third of global warming gases. A recent industry study revealed that to reduce emissions below 1990 levels would take about two decades – regardless of how much money was spent.

In fact, the study is viewed by many as being overly optimistic, drawing the conclusion that there is no shortage of money to spend and that every piece of research and new technology applied to reduce emissions is 100 per cent successful.

Ironically, the lifestyles being encouraged among consumers (more household appliances that draw more power and plug-in hybrid electric cars that will dramatically increase electricity demand) only applies more pressure on utilities to keep "dirty" coal generation plants operating.

The Electric Power Research Institute (EPRI) points to a massive nuclear power construction push to meet emission reduction requirements. The study says that 64 gigawatts of nuclear power will be needed by 2030 (roughly two-thirds the current level of nuclear power).

Early indications suggest it would take a decade to build a reactor, and current orders would provide only six or eight within that timeframe (according to the U.S. Energy Department). The EPRI study predicates its findings on 50 reactors being built by 2030.

Where the study really takes a break from reality are the remaining projects leading up to 2030:

that renewables (not including hydroelectricity) which are currently a little more than 2 per cent of total generation would be 6.7 per cent by 2030;

that demand would slow to 1.1 per cent increase per year; whereas the Department of Energy pegs current growth at 1.5 per cent with demand expected to increase annually (based on kilowatt-hours generated);

and finally, that coal plants would ALL be fitted with a technology that would capture carbon dioxide, compress it and pipe it underground for sequestration. The technology is – at this point – only just being demonstrated under laboratory conditions. These refitted coal plants would be expected to generate 14.6 per cent of electricity supplies.

Further, this isn't even entertaining the notion that coal generation plants (currently operating at 33 per cent efficiency) would somehow be able to ratchet those percentages up to almost 50 by 2030.

This is not even taking into account the hundreds of thousands of miles of aging transmission infrastructure that is reaching retirement age, requiring a massive amount of capital to replace towers, poles and substations which are now entering their third, fourth and fifth decade of service.

In Ontario, the pressure to meet Canada's obligations to the Kyoto Protocol at the federal level places that province in the position of where it would force Ontario Power Generation to break the law just to keep the lights on at the legislature in Queen's Park.

Ontario has already postponed the closure date for its coal generation plants due to a lack of immediate new generation and high peak demand during the summer months.

If Ottawa approves such legislation penalizing utilities for using greenhouse gas emitting plants, Ontario might be placed in the position of balancing whether it would be cheaper to pay the fines or purchase power from Quebec, New York or Michigan.

More ridiculous, if that purchased power came from coal generation plants from across the border, it would indeed make Canada's pledge to the Kyoto Protocol both laughable and ludicrous.

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