



30 September 2015

Dr. Andrew Leach, Chairman
Climate Change Advisory Panel
Via email only

RE: IPPSA's Submission to the Climate Change Advisory Panel

Dear Dr. Leach,

The Independent Power Producers Society of Alberta (IPPSA) is an association whose members produce a majority of the province's electricity. Our members compete in Alberta's open market with gas, coal, wind, hydro and biomass generation. Members will likely be submitting their own input to the panel.

For the last twenty years, our members have invested, and competed, within the construct of Alberta's unique, competitive electricity market. The market is defined in our industry's governing legislation, the *Electric Utilities Act*. Its Purposes are:

- At S. 5 (c), "...to provide for rules so that an efficient market for electricity can develop in which neither the market nor the structure of the Alberta electric industry is distorted by unfair advantages of government-owned participants or any other participants."
- At S. 5 (d), the EUA states, "...decisions of the electric industry about the need for and investment in generation of electricity are guided by competitive market forces."

9000 MegaWatts of new supply have been added over the past two decades, at an estimated cost of \$16 billion. These investments were committed in good faith under the existing market environment. This supply has enabled Alberta to meet the fastest growing demand for power in Canada. The market shifted investment risk to developers and away from consumers, and it has resulted in downward pressure on price for the benefit of all Albertans. In fact, current power prices are the lowest in the market's history. Furthermore, Alberta's grid has been repowered by efficient and progressively 'greener' supply.

IPPSA is concerned that the government's climate change policy may impact the sustainability of the market. This could occur, for example, if significant amounts of the generation fuel mix were to be directed via policy, and not by market signals. A re-design of Alberta's wholesale market would introduce significant uncertainty for existing investors - and consumers - who have made decisions in this market. IPPSA requests that the Panel have regard for this concern in its assessment of potential options.

In addition to this request, we have appended the following fact sheet, which we hope can inform the committee, and Albertans at large, about the facts to be considered in a new climate change plan. IPPSA has appreciated the opportunity to participate in the process, and looks forward to continued participation in the next phase of development of Alberta's climate change strategy.

Sincerely,

A handwritten signature in blue ink, appearing to read "Evan Bahry".

Evan Bahry
Executive Director

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Facts About Alberta's Power Market

- 1) Alberta's current power supply is 16,237 MegaWatts (MW). Of that, 7204MW is natural gas, 6277MW is coal, 1434MW is wind, 894MW is hydro and 428MW are biomass and other sources.
- 2) Demand averages 9000MW and has peaked at 11,400 MW. As expected, current market prices reflect the oversupplied circumstance.
- 3) Coal generation is retiring, or will be retrofit, in accordance with the federal coal regulation:

Date	Retiring/Retrofitting Coal (MW)	Remaining Coal (MW)
Before 2020	869	5402
2021 - 2030	2893	2509
2031 - 2040	1180	1329
2041 - 2050	400	929
After 2050	929	

- 4) Should policy seek to accelerate the retirement of coal generating units faster than this schedule, that policy needs to contemplate the cost of: compensating existing investors for investments made in good faith, reclaiming the sites, and backfilling that capacity with new supply.
- 5) In a 2013 paper commissioned by IPPSA, "*Trends GHG Emissions in the Alberta Electricity Market*", EDC Associates Ltd. forecasted the impact of the market's ongoing replacement of coal generation with natural gas. The fleet's emissions intensity is set to halve from 2013 to 2050, and tonnage is to increase by only 8% over that period, even as our fleet doubles in capacity. Should demand fall below the study's annual growth forecast of 2%, or generation technology continue to improve, intensity and tonnage would fall further than this forecast. The paper is available at www.ippsa.com.
- 6) Alberta has abundant, accessible coal and gas, but does not have the geography for hydro development on a large scale as other provinces do. As such, GHG emissions will be a reality in the production of Alberta's power for the long-term.
- 7) Natural gas prices strongly influence Alberta's electricity market prices. For the near term, low natural gas prices have rendered non-gas generation uneconomic.
- 8) Alberta has strong potential for large scale wind and solar development. However, and similar to all other fuel types, current market prices and lack of consumer long-term contracting for that supply impedes its development.
- 9) Options exist today for consumers at all levels to lower their emissions via: i) green power contracts, ii) building their own green power, such as wind farms for industrial consumers or roof top solar for residential consumers.
- 10) Adding new generation of any type via policy direction (which the market or consumer interest is not bringing on itself) will impose a new cost to be borne by consumers or ratepayers in light of prevailing low market prices.
- 11) Alberta's power consumption is predominantly industrial. ~65% of our Alberta's power consumption is industrial, ~17% commercial and ~17% residential/farm. Industrial consumers demand power 24/7, requiring a high level of baseload and dispatchable generation. Intermittent renewable supply does not provide baseload power, requiring the system to procure additional flexible resources likely from natural gas generation.
- 12) Alberta has added 9000 MW of new supply over the past two decades, at an estimated cost of \$16 billion. It is assumed that much of this investment has not yet recovered its fixed costs. Should policy bring on supply not normally built by the market, that new supply would dampen prices, impacting the ability for others to recover their costs.
- 13) Alberta's electricity system is unique. Alberta is relatively small, has a high load factor, is not well interconnected and has relatively low retail prices. Policy ideas from other markets will need to consider their applicability to our system.