



Media Backgrounder

Alberta Power Market Current Supply and Coal Retirement Schedule

Calgary - June 10, 2015 - The Independent Power Producers Society of Alberta (IPPSA) provides the following power market facts as the industry is being discussed in the context of emissions reduction policy. This backgrounder includes:

- 1) A description of Alberta's electricity market
- 2) a description of current power generation capacity by fuel source and the percentage of energy produced by each in 2014
- 3) the current schedule of coal unit retirements pursuant to the federal coal regulation
- 4) a commentary on current market prices and why some sources of power – combined cycle natural gas, wind and solar - are challenged at present.

Alberta's Electricity Market

- Like any market, Alberta's power supply investors choose what type of power plants they want to build, take the investment risk that it will be economic over its lifetime, and compete against each other to serve consumers.
- Efficient investments are rewarded and consumers benefit in the form of the downward pressure on energy prices that competition brings. (Of note, 2015 wholesale power prices are the lowest in the market's history and are well below the replacement cost of new supply.)
- Consumers also benefit by not facing the risk of stranded costs should those investments sour as a result of changing market fundamentals. In regulated industries, consumers do bear that risk.
- Consumers also benefit by the choices provided to them to contract for power costs over multiple years, to secure wholesale flow-through pricing, to buy dual-fuel contracts (gas and power) and to choose green power products. (Of note, in the Calgary residential market, 60% of former RRO customers now have power contracts, for example.)
- Alberta's market has attracted \$16 billion in at-risk generation since its inception, meeting the fastest growing demand for power in North America over that time.
- Alberta's competitive wholesale market has over 200 buyers and sellers.
- The wholesale power market is facilitated through the Alberta Electric System Operator (AESO), a non-profit government agency, which also plans the transmission grid. Market oversight is provided by the Market Surveillance Administrator and the Alberta Utilities Commission is the adjudicator of market matters and of transmission project expansions and costs.

Alberta Electricity Generation Capacity by Fuel Type and Energy Produced

The following data are from the AESO and compare fuel-type capacity today in MegaWatts (MW), meaning how much power each source can produce in an instant, what percentage each has of the fleet

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today, and how much power was produced from various fuel types over the course of 2014. For context, Alberta’s average demand is 9000 MW and demand peaked in January 2015 at 11,640 MW.

Fuel Type	Capacity Today (MW)	Percent of Fleet Today	Share of Energy Produced in 2014
Natural Gas	7204	44%	20%
Coal	6271	39%	67%
Wind	1434	9%	5%
Hydro	894	5.5%	3%
Other	428	2.5%	1%
Total	16,231		

(Note that the “Share of Energy Produced in 2014” column does not reflect all the volumes of new supply built or operating for part of 2014 or into 2015, such as the 800 MW natural gas Shepard Energy Centre or the 300 MW Blackspring Ridge wind farm, among others. Also, the column does not include the 4% of Alberta’s energy derived from imports from Saskatchewan, BC or Montana. The 4% import percentage brings the total to 100%.)

Alberta’s Coal Fleet Retirement Schedule

Alberta’s coal fleet is subject to the Federal Coal regulation which requires coal units to retire by their 50th year. The following is from the AESO and tracks retirement dates and residual coal supply:

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

Commentary on Market Pricing and Its Impact of Fuel Type

Evan Bahry, IPPSA’s Executive Director, notes “Natural gas prices have a direct impact on Alberta’s power prices. With low gas prices and our currently oversupplied market, power prices are at historic lows. Year to date pricing for 2015 of ~ \$30/MWh or €3/kWh is the lowest in the market’s history.”

Furthermore, “The current price environment is signaling that new supply is not needed at this time, as market prices are below the replacement cost of new natural gas combined cycle, wind, solar and biomass generation. Natural gas cogeneration will continue to be built in order to serve onsite steam and power needs for industrial facilities.”

Finally, “As market signals improve and coal plants retire, we expect an orderly replacement of our province’s coal fleet by natural gas supply as it represents the most cost effective base-load supply that can be built to a significant scale in a timely manner. Renewable sources, mainly wind and solar, are becoming increasingly cost competitive against gas, but, at present, require long-term contracts to proceed.”

IPPSA was founded in 1993 and is a forum for generator dialogue and an advocate for competition in Alberta’s power market. IPPSA’s membership includes a majority of Alberta’s power suppliers and their supporting industries. For more information see www.ippsa.com or contact Evan Bahry at 403-282-8811.