Government of Alberta Power Sector Announcements and Agreements to Retire Coal-Fired Generation

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To: Power Advisory Clients and Colleagues
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Overview

The Government of Alberta (GOA) has announced many significant developments in the power sector over the last week, and there have also been a number of important news releases by generation companies associated with these announcements. These developments are part of fundamentally defining a different path going forward for Alberta's electricity sector than the one it has been following for almost the past 20 years.

As part of the GOA's Climate Leadership Plan (CLP), Alberta committed to eliminate emissions from coal-fired generation by 2030. Six coal-fired generation facilities (i.e., Genesee 1 to 3, Sheerness 1 and 2, Keephills 3) would have been allowed to operate beyond 2030 under existing federal coal-fired generation regulations. The GOA promised not to 'unnecessarily strand' capital, implying that units prematurely retired would be entitled to compensation. The province retained Mr. Terry Boston, formerly the CEO of the Pennsylvania-New Jersey-Maryland Interconnection (PJM) wholesale electricity market (i.e., North America's largest power market), to facilitate the development of appropriate compensation for the coal-fired generation facilities.

On November 24, the GOA announced it had concluded agreements with the coal-fired generation facility owners[1], and released Mr. Boston's recommendations to the province.[2] In

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[1] http://www.alberta.ca/release.cfm?xID=44889F421601C-0FF7-A694-74BB243C058EE588

[2] http://www.alberta.ca/documents/Electricity-Terry-Boston-Letter-to-Premier.pdf

addition to the compensation framework, the Mr. Boston's letter recommended that Alberta develop a capacity market, that the province work with the federal government on policy for gas-fired generation, that demand-side initiatives be taken, and hydroelectric generation projects be considered for development as part of de-carbonizing Alberta's grid.

On November 23, the GOA announced the creation of a capacity market (the subject of Power Advisory's earlier memo Alberta Market Re-Design – Capacity Market Design and Implementation). The decision to develop a capacity market fits within the larger context of supporting the CLP by helping to ensure that capacity becomes and remains available to replace the coal-fired generators. Capacity market support for coal-fired generation units converted to gas-fired operations also appears to have been part of the compensation for retirement of coal-fired generation.

Months ago, the CLP also impacted the industry through triggering terminations of all coal-fired generation Power Purchase Arrangements (PPAs) (i.e., PPAs were 'turned back' to the Alberta Balancing Pool for their management) due to the loss of profitability from the forthcoming carbon tax. The province reacted by initiating litigation against the termination of these PPAs. On November 24, the province announced that it had reached an agreement with Capital Power, and tentative agreements with TransCanada and AltaGas, to avoid proceeding with litigation. A deal with Enmax had not been announced but is reportedly in active negotiation. Capital Power announced that its agreement allows the Sundance C PPA to be returned to the Balancing Pool in return for a $39M payment to the Balancing Pool. The other companies have not announced further details regarding their settlements, but it appears that all PPAs will be returned to the control of the Balancing Pool.

Several announcements have also been made on the electricity consumer side, mostly focused on protections for residential consumers, some of which will also have implications for industrial consumers and certainly energy marketers in the residential space. On November 22, the GOA announced a price cap to be but in place for residential consumers on the Regulated Rate Option (RRO) of 6.8 cents/kWh between June 2017 and June 2021. On November 25, the GOA announced they will ban door-to-door sales by energy retailers. As a result, these developments will limit the business opportunities for marketing contracts to residential consumers in Alberta, a practice that had previously been encouraged by the initial electricity market structure.

Finally, on November 29, the GOA announced that they are increasing the Balancing Pool's ability to borrow money from the province. (This is necessary as the Balancing Pool will essentially run out of funds as it inherits the unprofitable PPAs, and the GOA seemingly does not want it to stop subsidizing consumers.) This announcement was positioned in terms of being supportive for households, but if no changes are made to how the Balancing Pool distributes funds, more funds will actually flow to larger electrical consumers as a result of this decision.

Additional details around coal-fired generation compensation and PPA terminations are contained in the sections below. Power Advisory is available for follow up conversations and can offer further insights into these areas or the other topics mentioned above.

Early Coal-Fired Generation Retirement Compensation Details

The GOA has agreed to $1.34B in total compensation to be paid over a 14-year period (2017 through 2030). TransAlta will receive $37.4M annually, Capital Power $52.4M annually, and ATCO $4.7M annually, for total annual compensation of $97M. The money will be paid from funds collected under the province's forthcoming carbon tax. The compensation amounts were based on the remaining net book value of the impacted coal-fired generation facilities in 2030, with an adjustment for the fact that the facilities could still hold value as gas-fired generation conversion projects.

As part of the compensation, the companies agreed to keep their head offices in Alberta, continue investing in the province, and support their employees through the conversion process. The specific details of these agreements were not released.

Mr. Boston's recommendations letter also recommended that the province work with the three impacted companies, as well as the federal government, to facilitate the conversion of coal-fired generation units into peaking capacity resources. The key federal issue to be solved is the treatment of gas-fired generation in any federal carbon policy. Proposed standards for gas-fired generation have suggested a carbon intensity limit of 0.42 tonnes/MWh for gas-fired generation units unless they run at an annual capacity factor of less than 9%. The letter suggests large potential capital cost savings for converting coal-fired generation units rather than building all new gas-fired generation capacity. Conversion projects are reported to cost up to 90% less than new capacity, and offer the further advantage of shorter 'life' that reduces the risk of future stranded costs from new gas-fired generation capacity. They also offer much shorter development time and help manage the risk of transitioning the overall coal-fired generation fleet.

The letter also suggests Alberta should develop a hydroelectric generation policy to facilitate further conversion towards a greener Alberta electrical grid. The flexibility and low carbon content of hydroelectric generation is an advantage for the province, but the letter indicates that future hydroelectric generation development will likely require provincial and/or federal support in some manner.

Power Advisory Commentary

The compensation agreement should be viewed as positive regarding investor confidence within Alberta's power market, although new investors will want further details on any advantages being conferred on the incumbent generators. The GOA has demonstrated a level of good faith in having agreed to compensation for the early closure of the coal-fired generation fleet, as well as support for pushing back against proposed federal rules, which should lower the perceived carbon risk of investing in new gas-fired generation. The recommendation to move to development and implementation of a capacity market to further support investment also provides a positive investment signal.

The plans for conversion of some of the coal-fired generators to gas-fired 'peaking' generation capacity raises many issues to be resolved. As noted above, conflicts arise with the possible federal regulations around the efficiency of gas-fired generators, however this is not the only issue with conversions of coal-fired generation. The treatment of conversions within the capacity market will need to be determined (e.g., if new units receive different treatment in the capacity market, will conversions be considered as new, etc.). The inflexible nature of these units will raise questions around relative value of capacity (i.e., how does the capacity value of a new simple cycle gas-fired generator compare to the value of a converted coal-fired generator, etc.). Finally, some market participants and stakeholders are likely to raise questions around level playing field considerations (i.e., if coal-fired generators are largely compensated for early retirement, is there an advantage is utilizing capital that has already been paid for by the GOA, etc.). There is also a question of whether capacity sited in communities impacted by early retirements will receive differential treatment within the forthcoming capacity market (i.e., will there be side deals for converted coal-fired generators or will they compete on a level playing field against other generators, etc.).

Notably, two of the three incumbent generators (ATCO and TransAlta) announced that they will consider options to convert coal-fired generation units to be gas-fired. TransAlta suggested it will convert six units by 2023, while ATCO suggested it will examine the opportunities for conversion. In Power Advisory's view there is certainly room for some conversions of coal-fired generation, and in particular given the move to a capacity market. These units could be relatively inefficient and inflexible due to salvaging some old equipment, but the low cost of conversion may likely provide a competitive advantage within the capacity market. The specific design of the capacity market, and in particular any design or rules that reward operational flexibility, will determine how many of the units can compete within the market. The presence of these high heat rate to be converted coal-fired generation units may also leave the energy market value relatively high for efficient units such as combined cycle gas-fired generators, therefore leading to an interesting dynamic that could lower capacity values as new units may not require relatively large capacity payments.

The discussion of hydroelectric generation raises important questions for both the capacity market and contracting for renewable generation projects under the Renewable Electricity Procurement (REP). As Mr. Boston indicated, hydroelectric generation is not generally considered to be cost competitive with other forms of renewable energy (e.g., wind generation), but it does offer flexibility and capacity advantages that other renewable generators typically do not provide. The call for provincial and/or federal support will bring an external factor into the capacity market that must be considered in order to avoid artificially depressing capacity prices as hydroelectric generation is developed and brought into service. As with coal-to-gas conversions, TransAlta and ATCO are also actively considering hydroelectric generation development opportunities, and TransAlta announced that it is hoping to develop its pumped storage hydroelectric project at Brazeau starting in 2021, pending execution of a long-term contract.

PPA TERMINATION AGREEMENTS

As noted above, the GOA indicated that it reached an agreement with Capital Power, and has tentative agreements with TransCanada and AltaGas. There is not yet an agreement with Enmax, but it is still in active negotiation. Capital Power and its partners agreed to pay the Balancing Pool $39M and in return the province dropped Capital Power from its ongoing PPA litigation.

Power Advisory Commentary

The apparent resolution of at least some of the PPA disputes is a very large positive for the near to intermediate term for Alberta's power market. This should close the door to the possibility of retroactive legislation that has been discussed and supports investor confidence in the integrity of the Alberta's power market. It also creates the potential that the Balancing Pool may terminate several PPAs and return them to the Owners of the generation facilities.

Power Advisory believes termination will be an attractive option for the Balancing Pool relative to simply holding and managing the PPAs towards expiry at the end of 2020. The Balancing Pool can terminate the PPAs via a defined payment of the net book value of the generation units. Termination would return the generation units to the Owners' control, and could result in the mothballing or retirement of several units in advance of mandatory retirement dates. If units are returned to the Owners after Balancing Pool termination, Power Advisory believes that it will be economically rational for the Owners to remove some of the generation units from the market given current wholesale power prices and limited expectations for load growth.

Given that the economics for some of the other PPAs are quite different than those for Sundance C, the value of the settlement may not be a good guide for estimating the value of other potential settlements. Nonetheless, the potential for material cash payments to the Balancing Pool combined with some likelihood that PPAs will be terminated and returned to Owners reduces the size of the Balancing Pool's liability. Electricity consumers could see higher power prices if coal-fired generation is retired, but it is clear that the GOA is committed to continue Balancing Pool subsidies, and near term emissions will be reduced and wholesale power prices will return to levels more representative of a healthy market.

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Further, with the GOA announcement of a 6.8 cents/kWh price cap on the RRO customers, this upside risk is limited for residential consumers.