

Renewable Electricity Program Update to Stakeholders



May 5, 2016

The AESO thanks all those who submitted a response to its questionnaire. Each response was reviewed in detail and the information received will help to inform the AESO's recommendation regarding the Renewable Electricity Program (REP) to the Government of Alberta. A summary of what we heard is included in the next section of this document.

The AESO's recommendation is anticipated to include a proposal with respect to the design of the overall program, as well as a request for the Government to approve key features of the first procurement.

To assist the AESO with the finalization of its recommendation to Government the AESO intends to conduct targeted, one-on-one follow-up meetings over the coming weeks with various parties who submitted responses which have the potential to impact the AESO's recommendation with respect to the design of the REP and which may inform key features of the first procurement.

While the AESO recognizes that key features of the first procurement must be formally approved by Government, we are also mindful that it is critical for industry to be provided with information about the overall program and the first procurement in a timely manner. Therefore, at this time, the AESO would like to provide the following details that, while not yet approved by the Government, are anticipated to define and form the scope for **the first REP procurement**:

- The definition of "renewable" is anticipated to align with the definition used by Natural Resources Canada (<http://www.nrcan.gc.ca>);
- The procurement is anticipated to be fuel-neutral;
- Facilities may be expected to be in-service in 2019; and
- It is anticipated that the existing transmission system will be leveraged.

It is hoped that by providing the above information, stakeholders will have more insight regarding the points at which they may be engaged during the AESO's staged approach to engagement over the coming months. Beyond the one-on-one meetings described above, the AESO also plans to share information about contractual provisions for the first procurement in the fall. The AESO is committed to ongoing engagement with industry on subsequent REP procurements and further updates regarding the REP will be provided once the AESO receives feedback from the Government on its recommendation.

Summary of Stakeholder Feedback from REP Questionnaire

On March 3, 2016 the AESO announced it had been tasked by the Government of Alberta to make a recommendation with respect to the design of the REP. Along with the announcement, a questionnaire was posted on www.aeso.ca seeking input from developers/investors, associations and other interested parties. The questionnaire was open for comment until March 24, 2016.

Respondents

The questionnaire garnered responses from 138 respondents who self-identified as:

- 102 developers/investors
- 11 associations and environmental groups
- 25 stakeholders who identified as "others"

Developers/Investors

Those who identified themselves as developers/investors were predominantly utility-scale¹ developers; however, responses were also received from a small number of non-utility scale developers.

The utility-scale developers/investors expressed interest in mostly solar and wind projects. A small proportion expressed interest in biomass, hydro and geothermal projects, as well as ancillary services (with respect to storage). A number of utility-scale developers/investors also expressed interest in non-renewable electricity generation, including cogeneration, simple-cycle and combined-cycle gas generation.

Non-utility-scale developers' interest was focused on solar projects for homes and communities, small wind and hydro projects, waste heat and cogeneration for commercial buildings.

Associations and Environmental Public Policy Groups

Submissions were received from a diverse group of associations, including those representing environmental, electricity industry and renewable generation stakeholder views.

Others

Those who identified as "others" included a transmission facility owner, a carbon offset provider, ancillary service providers, manufacturers (wind turbine and other), engineering and construction firms, consultants, and concerned citizens interested in local, community-owned energy projects.

Investment in Renewable Energy

The AESO reviewed and compiled the responses in order to summarize the following key findings. This report primarily focuses on the feedback received from the largest group of respondents, namely developers/investors.

Information Needed for Investment

It is noteworthy that the majority of respondents were generally supportive of the REP and optimistic with respect to the opportunities it may offer. Interest was expressed in a variety of fuel sources, including wind, solar, biomass, geothermal, hydro and storage. A number of respondents are in favour of an ongoing opportunity to communicate their ideas to the AESO, and have a keen interest in receiving additional policy clarity and information with respect to the REP as it becomes available.

In conjunction with the need for additional clarity about the REP, respondents also identified considerations that may affect the market. Further, they stated that they would need more information prior to making a decision to invest in Alberta. Such information included:

- Clearly defined regulatory processes for specific fuel types with which Alberta has less regulatory experience;
- Performance standard details;
- Coal retirement schedule and/or approach;
- Defined procurement and overall renewable development targets;
- Definition of a "renewable" resource, including those resources that will be eligible for the REP;
- Information on existing transmission capacity and areas of constraint;
- Clarity on the curtailment policy with respect to generators moving forward;

¹ For purposes of this summary, utility scale means ≥ 5 MW.

- Cost responsibility for transmission system upgrades;
- Availability of additional federal and provincial support;
- Potential for support for renewable projects currently in existence; and
- Whether distributed generation will be incentivized.

Considerations for Investment

Respondents were asked to cite what they felt were key considerations and general barriers to investment in renewable energy projects, and were also asked to include feedback that would be specific to energizing a project by 2018.

Respondents most common investment considerations included:

- The current power pool prices in combination with the capital-intensive nature of renewable energy projects;
- Conclusion of the work already underway on coal phase-out schedule, changes to the carbon pricing regime and market prices;
- Regulatory and interconnection timelines;
- The availability of transmission capacity;
- Clarity about the level of support being provided;
- Importance of clear market signals and market stability;
- Obtaining financing at attractive rates;
- Whether DFOs have systems and processes in place to deal with a significant increase in variable generation projects.

With respect to the considerations that may be associated with the energization of projects prior to 2018, there are a number of projects currently in development (and currently advancing through the AESO's connection process) that may be capable of achieving energization prior to the end of 2018. However, most developers noted 2018 was a potentially challenging timeline to meet because of concerns with respect to:

- Conducting environmental studies and obtaining environmental permitting;
- Obtaining interconnection and other regulatory approvals;
- Obtaining financing or the potential for financing delays;
- Conducting procurement and construction for larger projects; and
- Visibility of the coal phase-out schedule.

Some respondents raised the importance of closely monitoring the current energy-only market to ensure that it will withstand an influx of renewable electricity generation projects. Further, others were concerned that the REP would heavily favour technologies with the lowest cost rather than incentivizing a diverse mix of fuel types, and take the position that technologies like waste-to-heat power and geothermal should be supported moving forward.

Recommendations to Address Considerations for Investment

To assist with addressing the aforementioned challenges, respondents made various recommendations for further consideration by the AESO as it pertains to the REP including:

- The provision of financial support which could take a variety of forms (i.e., capped/uncapped REC, contract for differences, power purchase agreement, feed-in-tariff agreement, government financing etc.);
- The introduction through the REP of carve-outs (i.e. for specific fuel types, to advancement other socio-economic objectives);
- Greater clarity with respect to the long term plan / schedule for the procurement of renewable electricity generation, in addition to any short and long term targets;

- Greater clarity with respect to the coal phase-out schedule;
- Exploring whether there may be options to build renewable electricity energy projects on public land; and
- Making transmission modelling / transmission capacity information with respect to the AIES available.

Investment in Non-Renewable Energy

While not a primary focus of the questionnaire, respondents were asked to indicate their interest in investing in non-renewable generation in addition to renewable generation. The majority indicated they did not anticipate investing in non-renewable generation, but those who did indicated interest in cogeneration and other natural gas projects, as they expected natural gas generation would be required to replace retiring coal plants and back up intermittent generation.

Resource-Specific Matters

The following additional comments were made with respect to specific resources:

- Wind: size of procurement program and difficulty securing land
- Solar: costs compared to wind
- Hydro: undefined regulatory process
- Geothermal: lack of geothermal policies and information
- Biomass: access to fuel
- Storage: potentially no place in REP
- Non-utility: potentially no place in REP

In terms of the key activities and timelines associated with the development, regulatory approval and construction of their anticipated renewable projects, respondents indicated the following timelines are required for the resources listed below:

- Wind: 4-6 years
- Solar: 1.5-3 years
- Biomass: 2-3 years
- Geothermal: 3-7 years
- Large Hydro: 10-14 years