

SCHEDULE B

Terms of Reference for an inquiry into and report to the Minister of Energy on the Alberta Smart Grid

WHEREAS it is the policy of the Government of Alberta to strengthen and modernize Alberta's interconnected electric system to support its goals of clean energy production, wise energy use and sustained economic prosperity;

WHEREAS the Government of Alberta is interested in implementing policies supporting the development and deployment of smart grid technology in support of achieving these goals;

WHEREAS the smart grid can be characterized as the modernization of Alberta's electricity system, through the application of advanced control and information technology, to meet the future needs of the province, and the characteristics of the smart grid include, but are not limited to:

- 1 Inclusivity: the smart grid applies to the entire electricity system including generation, transmission, distribution, and consumers;
- 2 Reliability: The smart grid provides enhanced ability to warn of and identify potential failures and take remedial action before users are affected, that is, the smart grid self-heals;
- 3 Security: The smart grid withstands cyber attacks;
- 4 Environmentally Friendly: The smart grid reduces the environmental impact of the Alberta electricity system through the application of advanced technology that will provide for the integration of more renewable generation, more effective load management, and better information for consumers;
- 5 Accessibility: Electricity market participants must have access to all necessary information to make informed choices;

WHEREAS in order to permit the Government of Alberta to consider a full range of options on all issues relating to the smart grid, it is desirable that a smart grid review be conducted by the Alberta Utilities Commission (AUC);

THEREFORE the following terms of reference apply in respect of the inquiry into and report to the Minister of Energy on the Alberta Smart Grid:

- (a) the AUC shall inquire into the following matters for the purpose of gathering information with respect to those matters:

- (i) the current status of smart grid development in Alberta;
 - (ii) the status of smart grid deployment in other jurisdictions;
 - (iii) the guiding principles, objectives and goals for developing the smart grid in Alberta;
 - (iv) the enablers and barriers to the deployment and development of the smart grid;
 - (v) the functionality requirements for the smart grid in Alberta, including standards such as those required for the interoperability in the exchange of information;
 - (vi) the method of assessing costs and benefits of smart grid-related expenditures;
 - (vii) the necessary courses of action to develop and implement the smart grid, including defining the roles for all the potential market participants;
 - (viii) the regulatory approach to consider smart grid investments including the extent to which competitive markets can be relied upon to deliver the smart grid;
 - (ix) other associated issues as required;
- (b) in conducting the inquiry the AUC must consult with members of the Alberta electricity industry and other relevant parties;
- (c) the AUC shall report to the Minister of Energy in relation to the matters referred to in clause (a);
- (d) the AUC's report

- (i) must not make recommendations but shall, through its analysis of the evidence on the record of the inquiry and review, provide findings and pros and cons on various issues as it deems appropriate, and
- (ii) is expected to be submitted to the Minister within 8 months of the date on which the Order in Council to which this Schedule is attached was made, and must be submitted no later than January 31, 2011.