

March 29, 2019

To: Parties currently registered on Proceeding 24116 and other interested parties

Distribution System Inquiry Proceeding 24116

Scope and process for the Distribution System Inquiry

Background

1. In Bulletin 2018-17, the Alberta Utilities Commission initiated an inquiry into Alberta's electric distribution system and stated that "the purpose of the inquiry is to map out the key issues related to the future of the electric distribution grid, to aid in developing the necessary regulatory framework to accommodate the evolution of the electric system."¹ The Commission also informed parties that the inquiry is intended to assist it in answering three questions:

- How will technology affect the grid and incumbent electric distribution utilities; and how quickly?
- Where alternative approaches to providing electrical service develop, how will the incumbent electric distribution utilities be expected to respond and what services should be subject to regulation?
- How should the rate structures of the distribution utilities be modified to ensure that price signals encourage electric distribution utilities, consumers, producers, prosumers and alternative technology providers to use the grid and related resources in an efficient and cost-effective way?

2. Parties interested in the inquiry were asked to file their statements of intent to participate by January 4, 2019, with submissions on the scope and process of the inquiry due by January 18, 2019.

3. The Commission has reviewed and considered these submissions, and this letter provides an update on the scope and process of the inquiry.

Broadening the scope of the inquiry to include natural gas

4. Several parties suggested that the Commission should expand the scope to include the natural gas distribution system because new technologies and recent innovations may transform both the electric and natural gas distribution networks. For example, ATCO Electric Ltd., on behalf of the ATCO Group of Companies, submitted that emerging technologies related to district heating systems are an example of grid defection from the gas network and requires the attention of the Commission in this inquiry.² The Commission understands that electric and gas

¹ Bulletin 2018-17, Electric Distribution System Inquiry, December 6, 2018, PDF page 1.

² Exhibit 24116-X0079, ATCO comments on scope and process, January 18, 2019.

utilities may be in a position to displace each other, given emerging technologies. The Commission also expects that the implications for both types of utilities will be similar and agrees that the inquiry should be expanded to include natural gas utilities. Broadening the scope of the inquiry to include natural gas utilities will allow the Commission to consider the potential economic and regulatory implications of electricity and natural gas being used as interchangeable energy sources.

5. Given this expansion in scope, the Commission has renamed the inquiry the **Distribution System Inquiry** and has registered AltaGas Utilities Inc. to participate. The other natural gas distribution utility regulated by the Commission, ATCO Gas Ltd., has previously registered in the inquiry.

6. Concurrent with issuing this letter, the Commission has issued a Notice of Amendment³ requesting all parties that are interested in participating in this expanded inquiry to file a statement of intent to participate by **4 p.m. on April 12, 2019**. Parties that have already registered in Proceeding 24116 do not need to re-register. All parties will participate in the process schedule outlined in this letter.

Objective of the inquiry

7. In their submissions on scope and process, a number of parties requested that the Commission clarify the purpose and intended outcome of the inquiry.

8. In Bulletin 2018-17, which initiated the inquiry, the Commission provided examples of technologies and innovations that have the potential to affect Alberta's distribution utilities. The Commission expects that the effect of the technologies and innovations on Alberta's distribution systems identified in the bulletin⁴ (and perhaps others not identified in the bulletin), combined with the economic forces rendering monopoly franchises increasingly exposed to direct and indirect competition, will require a proactive approach to regulation.

9. The objective of the inquiry is not to set rates, nor to make policy recommendations to government, as suggested by certain parties. Rather, it is to conduct a fact-finding process. Its fundamental objective is to establish the regulatory agenda for subsequent proceedings of the Commission that will consider, and then implement, the regulatory framework necessary to accommodate the economic and technological forces that are transforming the market structure governing energy distribution by public utilities.

10. The Commission expects that following the conclusion of the inquiry, it will initiate a series of proceedings to consider necessary changes to the distribution utilities' rate structures, rate designs and terms of service.

³ Exhibit 24116-X0107, Notice of Amendment, March 29, 2019.

⁴ The Commission uses the term "distribution systems" to refer to the electric and natural gas distributions systems that are operated by the AUC-regulated distribution utilities.

Overview of the process for the inquiry

11. Several parties suggested that the Commission conduct the inquiry using “distinct process streams,” “different workstreams, in parallel and sequentially,” and a “staged” or “phased” approach. Given the breadth and depth of issues under consideration, and a generally busy regulatory schedule for many parties, the Commission sees merit in this approach, and the inquiry will proceed by way of three separate modules.

12. Module One will focus on emerging trends in technology and innovation potentially affecting distribution systems, including distribution system design, operation, capital requirements and the cost of providing service. This module will also consider how innovation and technological change create the opportunity for new market entry within a monopoly franchise, including self-supply. Additional detail on the scope of Module One is provided in [Appendix A](#) to this letter. The process steps for Module One are set out in the next section of this letter.

13. Module Two will examine the interplay between the innovation and technological changes identified in Module One and the social, economic and legislative forces affecting the current business models of, and the regulatory frameworks governing, existing distribution utilities. These forces include, among others, changes in consumer preferences, service prices, taxes, subsidies and related government incentives intended to influence consumer behaviour. Given the above, Module Two will also consider which distribution utility services should be regulated, related implications for the monopoly franchise and the obligation to serve, and to what extent, if any, new entrants should also be regulated by the Commission.

14. Module Three will examine the ability of the current rate designs to send price signals that ensure cost effective investment in distribution systems and to avoid, or at least minimize, uneconomic bypass of regulated facilities. This module will consider these issues in the context of the regulated utilities’ obligation to serve, the potential for stranded assets, and related risks and concerns that can arise when regulated industries transition from a monopolistic to a more open or competitive market structure. This module will consider what, if any, functionality of (functions, services or network elements) and information from the regulated utilities should be made available to new entrants for purposes of interconnection, physical co-location of facilities, and unbundling of or equal access to facilities; whether by way of tariffs or other means. Correspondingly, this module will also consider whether certain functionality of and information from the new entrants should be made available to other market participants, and if so, on what terms. Module Three will then consider the process the Commission should follow to consider applications for the design and implementation of any changes to the regulatory regime required to deal with the issues identified by this inquiry. Additional detail on the scope of modules two and three is outlined in [Appendix B](#) to this letter.

15. Although several parties asked the Commission to consider delaying this inquiry given the many other significant proceedings currently underway, including the capacity market and the Alberta Electric System Operator tariff proceedings, the Commission has decided to continue with the inquiry because of the growing economic and technological pressures for change to the distribution system in the near term. The modular approach to the inquiry may somewhat

alleviate parties' concerns with having to deal with several major regulatory proceedings simultaneously.

16. Many parties also suggested that in order to streamline the inquiry and avoid duplication of effort, some preliminary research or a jurisdictional review be undertaken on the matters raised by the Commission in its three questions. The Commission agrees that this approach may streamline the inquiry. Accordingly, the Commission will initiate modules two and three by way of a research paper, to be prepared by an independent consultant. The purpose of the research paper is to identify issues within the scope of the two modules and explore proposals for resolution, including regulatory alternatives adopted in other jurisdictions. To that end, the Commission will issue a Request for Proposal seeking to retain an independent consultant to produce a research report and submit it on the record of the inquiry, and to testify at the inquiry on the contents of the report.

17. For each module, the Commission will invite interested parties to make submissions and file evidence relevant to the scope of that module. The Commission encourages parties to file submissions jointly to avoid duplication and strengthen individual parties' positions. Following receipt of submissions, the Commission will provide for a round of information requests from all parties. The Commission will then initiate an informal roundtable, technical conference or formal hearing, as deemed appropriate to each module. Further details on the process for modules two and three will be established in due course.

Module One: Process steps

18. The Commission will not sponsor a research paper for Module One. Should a party or a group of parties wish to sponsor or produce a research paper addressing matters to be discussed in Module One, or any of the other modules, they should inform the Commission as soon as practicable to allow modifications to the process schedule, if necessary.

19. The Commission has set the following process schedule for Module One:

Process step	Deadline*
Statements of intent to participate in response to the expanded scope to include natural gas	April 12, 2019
Applications for pre-determination of costs eligibility	April 24, 2019
Written submissions from parties on Module One	July 17, 2019
Information requests to parties	August 7, 2019
Parties' responses to information requests	August 21, 2019
Technical conference at Red Deer College	September 9 to 12, 2019

*All submissions are due by 4 p.m.

20. Parties to Module One will be permitted to submit information requests to other parties.

21. The technical conference at Red Deer College will focus on brief presentations by parties, followed by questions from the Commission. Although the technical conference is scheduled for four days, it may be shortened depending on the number of parties proposing to make presentations.

Cost awards

22. Costs will be considered and awarded for each of the three modules independently.

23. In Bulletin 2018-17, the Commission indicated that parties that have been directed to participate in the inquiry may apply for recovery of costs, which will be assessed in accordance with Rule 022: *Rules on Costs in Utility Rate Proceedings*. The Commission has pre-registered the following parties, all of whom are eligible for cost recovery:

- AltaGas Utilities Inc.
- ATCO Electric Ltd. (distribution)
- ATCO Gas
- ENMAX Power Corporation (distribution)
- EPCOR Distribution & Transmission Inc. (distribution)
- FortisAlberta Inc.
- Alberta Electric System Operator

24. The pre-registered distribution facility owners are reminded that the only costs they are eligible to recover in each module are those related to their own participation in the inquiry and not those related to their affiliates or associated companies. The costs of participation of the pre-registered distribution entity must be tracked separately from the participation of any related entities.

25. The eligibility for costs awards of other registered parties, including entities related to the pre-registered distribution facility owners, will be assessed on a case-by-case basis guided by the eligibility criteria, cost recovery principles and the scale of costs set out in Rule 022.

26. The Commission encourages all parties with similar interests to work together in preparing submissions where possible in order to minimize duplication and regulatory costs. Where parties appear to have similar interests but choose to file separate submissions, the Commission may award partial budgets to promote collaboration.

27. A party may seek an advance ruling on its eligibility for costs by submitting an application to the Commission by **April 24, 2019**. The contents of the application should:

- Explain why the party does not have the means to raise sufficient financial resources to enable its participation in the proceeding.
- Describe the issues it plans to address and how its participation will significantly contribute to the Commission's understanding of the issues.
- Outline the degree to which the party intends to participate; for example, preparing and filing evidence and appearing before the Commission.
- Include a budget, in accordance with Section 6 of Rule 022, indicating the use of the funding.
- Indicate whether the party has a need for advanced funding.

28. The Commission will consider an advance of costs up to 50 per cent of a participant's budget. Parties that require advanced funding should indicate this in their application. The Commission reminds parties that a determination of costs claim eligibility is not a full indemnity for incurred costs. The Commission will make its final assessment of costs at the conclusion of each module, upon its review of the claimants' costs claims prepared in accordance with Section 9 of Rule 022. The Commission may disallow all or part of submitted costs if a claimant fails to meet the criteria under Section 11 of Rule 022, which could result in the Commission ordering a party to return a portion of its advanced funding.

29. The pre-registered distribution facility owners shall pay the approved costs of the participants, including any advance of costs award. The payment shall be considered as a Y factor, and the basis of each distribution facility owner's pro rata share will be calculated at the time of the costs decision according to the billable site count taken from the most recent February 28 site cycle catalogue file posted on each utility's website on that date.

Issues raised outside the scope of the inquiry

30. The Office of the Utilities Consumer Advocate requested that the Commission include a review of distribution facility owners' terms and conditions of service.⁵ In a similar vein, the Rural Municipalities of Alberta asked the Commission to consider a separate rate class for municipal buildings and recreational facilities.⁶ The Commission considers these concerns to be specific to Phase II tariff applications.

31. As noted in its letter dated January 31, 2019, the Commission has determined that it will not delay the filing of the distribution facility owners' Phase II applications.⁷ The issues raised by the Office of the Utilities Consumer Advocate and the Rural Municipalities of Alberta will be addressed in the proceedings to consider the Phase II applications currently expected later in 2019. Consequently, the Commission will not examine these matters in the inquiry.

32. If you have any questions concerning the cost awards, please contact Doug Larder at 403-592-4520 or at doug.larder@auc.ab.ca. Questions regarding all other matters with respect to this inquiry can be directed to me at 780-422-2072 or at randy.lucas@auc.ab.ca.

Sincerely,

Randy Lucas
Application Officer

Attachments: Appendix A – Scope for Module One
Appendix B – General outline for modules two and three

⁵ Exhibit 24116-X0088, UCA submission on scope and process, January 18, 2019.

⁶ Exhibit 24116-X0060, Rural Municipalities of Alberta submission on scope and process, January 18, 2019.

⁷ Exhibit 24116-X0099, Timing of the distribution utilities' Phase II applications, January 31, 2019.

Appendix A – Scope for Module One

[\(return to text\)](#)

1. Module One of the Distribution System Inquiry will focus on emerging trends in innovation and technology that have the potential to affect distribution systems. In particular, the Commission will explore the potential effect of the adoption and proliferation of certain technologies and innovations on distribution system design, operation, capital requirements and the cost of providing service. This module will also consider how emerging technologies and innovations create the opportunity for market entry, including self-supply.
2. The Commission requests that parties provide submissions on the questions listed below where they have interest, experience or expertise. However, parties are not required to limit their submissions to the questions set out below, and may include other matters they consider to be within the scope of Module One.
3. Questions for consideration in Module One:
 - (1) What are the technologies and innovations that have the potential to affect distribution systems, including distribution system design, operation, capital requirements and the cost of providing service? Please comment on any of the following technologies and innovations, as well as any other relevant technologies or innovations not listed:
 - (a) Electric vehicles
 - (b) Energy storage
 - (c) Advanced metering infrastructure
 - (d) Distributed energy resources and distribution-connected generation
 - (e) Technology that enables community generation initiatives
 - (f) Technology that enables demand-side elements such as energy efficiency, net-zero buildings, consumer choice aggregators, responsive load, demand responses and peak reduction
 - (g) Information technology advancements (for example: fifth-generation (5G) cellular technology, cloud computing, blockchain technology, the internet of things, artificial intelligence and machine learning)
 - (h) Advanced distribution management systems and/or distributed energy resource management systems
 - (i) District heating
 - (j) Geothermal/geo-exchange

- (2) For each of the technologies or innovations that a party chooses to comment on, please include a consideration of the following questions:
 - (a) How stable are the trends associated with a certain technology or innovation and when is it expected that [a certain technology or innovation] will be economically viable?
 - (b) How might distribution facility owners need to respond at a technical level to the adoption of a certain technology or innovation? What modifications to their existing distribution systems may be required, and what are the expected costs?
 - (c) Are there any expected effects on other entities that operate on the Alberta Interconnected Electric System, including the transmission system, the Independent System Operator, transmission-connected generators and/or retailers, as a result of the adoption of a certain technology or innovation? If so, how might these entities need to respond?
 - (d) How might a certain technology or innovation aid distribution utilities in managing and/or reducing future capital costs, including creating opportunities for non-wire alternatives and traditional utility planning approaches?
 - (e) How does a certain technology or innovation create the opportunity for market entry within a monopoly franchise? How might a certain technology or innovation introduce and/or increase competition within the distribution system?
4. Issues related to access to capital under the current 2018-2022 performance-based regulation framework that affects all six incumbent regulated distribution utilities will not be considered in Module One, but will be discussed in Module Two or Module Three.
5. The process schedule for Module One is set out in the body of this letter.

Appendix B – General outline for modules two and three

[\(return to text\)](#)

1. The scope of Module Two and Module Three of the Distribution System Inquiry will be refined throughout the course of the preceding module. However, this appendix provides an overview of the scope of the two modules to give parties an understanding of what these modules will generally entail.
2. Building on Module One, Module Two will examine the interplay between the innovation and technological changes identified in Module One and the social, economic and legislative forces affecting the current business models of, and the regulatory frameworks governing, existing distribution utilities. These forces include among others, changes in consumer preferences, service prices, taxes, subsidies and related government incentives intended to influence consumer behaviour. Given the above, Module Two will also consider which distribution utility services should be regulated, related implications for the monopoly franchise and the obligation to serve, and to what extent, if any, new entrants should also be regulated by the Commission.
3. The Commission will request that parties provide submissions on the questions listed below where they have interest, experience or expertise. However, parties are not required to limit their submissions to the questions set out below, and may include other matters they consider to be within the scope of Module Two.
4. Questions for consideration in Module Two include:
 - (a) Given current information and trends, what is the anticipated adoption rate of a certain technology or innovation?
 - (b) How is a certain technology or innovation expected to affect distribution utility service, distribution load and/or generation customers; and how quickly? What are the expected effects on customers, and upon what circumstances do they depend?
 - (c) What economic forces (e.g., declining cost of solar panels, lower barriers to entry by way of self-supply, changing consumer preferences for green technologies) are driving market structure change?
 - (d) How might a certain technology or innovation affect market price signals for transmission and distribution-connected load and generation customers?
 - (e) What distribution utility services should be subject to regulation and what are the implications for the monopoly franchise and the obligation to serve?
 - (f) What are the opportunities and challenges for distribution facility owners to evolve their business models and/or value propositions as customer choice evolves and expands in response to new technologies or innovations? Where alternative approaches to providing distribution service develop, how are the incumbent distribution utilities likely to respond in the market for these services?

- (g) What are the implications for distribution facility owners' non-regulated affiliates? What services and/or transactions of an affiliate should be subject to regulation, if any?
- (h) To what extent should distribution facility owners be provided the opportunity to provide additional services in response to the proliferation of a certain technology or innovation? In what instances should they be *required* to provide additional services?
- (i) What regulatory and non-regulatory barriers exist that might prevent or impede the adoption of a certain technology or innovation?
- (j) To what extent should all forms of distribution-connected generation be subject to the same regulation? Depending on the approach, how might this affect any of the entities or customers that currently operate in, or benefit from, the Alberta Interconnected Electric System?
- (k) How might a distribution facility owner's access to capital funding be affected by the broad adoption of a certain technology or innovation?
- (l) How should issues surrounding data ownership, privacy and cyber security be regulated, if at all?

5. Module Three will examine the ability of the current rate designs to send price signals that ensure cost effective investment in distribution systems and to avoid, or at least minimize, uneconomic bypass of regulated facilities.

6. The Commission will request that parties provide submissions on the questions listed below where they have interest, experience or expertise. However, parties are not required to limit their submissions to the questions set out below, and may include other matters they consider to be within the scope of Module Three.

7. Questions for consideration in Module Three include:

- (a) How should the rate structures of the distribution utilities be modified, if at all, to ensure that relevant price signals encourage electric and natural gas distribution facility owners, consumers, generators, prosumers and alternative technology providers to invest in and use the distribution system and related resources in a cost-effective manner?
- (b) How might rate structures enhance or erode distribution facility owners' business model(s) and/or value proposition(s) in the face of broad adoption of certain technologies or innovations?
- (c) What functionality of and information from the regulated utilities should be made available to new entrants for purposes of interconnection, physical co-location of facilities, unbundling and/or equal access, whether by tariffs or other means? On what terms should such information be made available?

- (d) Whether certain functionality of and information from new entrants should be made available to other market participants, including the regulated utilities, and if so, on what terms?
 - (e) How should assets that are stranded as a result of competition or technological change be treated in the case of utilities bound by an obligation to serve? For example, how should investments in existing distribution utility facilities that may be subject to changes in use over time be treated as a result of the adoption of a certain technology or innovation, or new market entry?
 - (f) What new approaches to regulation should be considered, including the adoption of regulatory models employed in other jurisdictions, to accommodate evolving economic circumstances, technological innovation and social change?
 - (g) What follow-up proceedings are required, and how should they be prioritized, to consider and implement the findings arising from the inquiry?
8. The process schedule for Module Two and Module Three will be provided in due course.