Decision 25826-D01-2021



University of Calgary

Application for a Duplication Avoidance Tariff – Stage 1

March 12, 2021

Alberta Utilities Commission

Decision 25826-D01-2021 University of Calgary Application for a Duplication Avoidance Tariff – Stage 1 Proceeding 25826

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Telephone:	310-4AUC (310-4282 in Alberta)
	1-833-511-4AUC (1-833-511-4282 outside Alberta)
Email:	info@auc.ab.ca
Website:	www.auc.ab.ca

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1 Decision summary

1. In this decision, the Alberta Utilities Commission considers the first stage of the University of Calgary's application for a duplication avoidance tariff. For the reasons that follow, the Commission denies the application.

2 Procedural summary

2. On August 25, 2020, the University of Calgary (U of C) filed an application¹ to receive a duplication avoidance tariff (DAT), also referred to as a bypass avoidance rate,² from ENMAX Power Corporation. The U of C proposed a staged approach to its application to prevent the need for ENMAX to prepare an application, should the current application (Stage 1) not advance further. The U of C explained that its first stage application would address whether a bypass avoidance rate is required to respond to a credible bypass threat.³

3. After issuing notice of the application on August 26, 2020, the Commission received statements of intent to participate from the Consumers' Coalition of Alberta (CCA) and ENMAX.

4. In its letter of September 16, 2020, the Commission accepted the staged approach proposed by the U of C and ruled that the focus of the first stage application would be to test the credibility of the threat of bypass. However, the Commission deemed the application to be incomplete, and issued preliminary information requests (IRs) to the U of C and ENMAX on issues that needed to be addressed to complete the application. It also requested that the CCA further outline the effects the application would have on the customers it represents.⁴

5. In its response to the Commission's preliminary IRs, the U of C filed a motion for confidential treatment of the requested metering information. After receiving submissions on the confidentiality motion, the Commission granted confidential treatment to the requested metering information. It also approved the CCA's participation in the proceeding.⁵

¹ The University of Calgary was represented throughout the proceeding by Desiderata Energy Consulting Inc.

² The term "bypass avoidance rate" was first used in the four-part test set out by the Alberta Energy and Utilities Board (board), predecessor to the Commission, in Decision U98125 which addressed an electricity wires bypass application through a subsequently approved Rider A1. Decision 2000-70 referred to a "duplication avoidance tariff" application, and the terms were used interchangeably in two additional applications in decisions 2001-68 and 2002-019.

³ Exhibit 25826-X0001, application, PDF pages 2-3.

⁴ Exhibit 25826-X0012, AUC letter - Ruling on scope, preliminary submission, incomplete application and process, September 16, 2020.

⁵ Exhibit 25826-X0028, AUC letter - Rulings on standing of the Consumers' Coalition of Alberta and on the University of Calgary's confidentiality motion, October 26, 2020

6. The Commission subsequently deemed the application to be complete and established a schedule that consisted of one round of IRs followed by written argument and reply argument.⁶ The Commission considers the record of this proceeding to have closed on December 14, 2020, with the receipt of reply argument.

7. In reaching the determinations set out within this decision, the Commission considered all relevant materials comprising the record of this proceeding. Accordingly, references in this decision to specific parts of the record are intended to assist the reader in understanding the Commission's reasoning relating to a particular matter and should not be taken as an indication that the Commission did not consider all relevant portions of the record with respect to a particular matter.

3 Background

8. Duplication avoidance tariffs have previously been approved by the Commission's predecessor, the Alberta Energy and Utilities Board (the board), in a limited number of circumstances, and on a case-by-case basis. In general, they have been granted in response to an end-use customer's ability and threat to construct its own facilities that would allow that customer to bypass the existing system for the purpose of reducing its regulated utility charges. The construction of these facilities could cause harm to the regulated utility, and to its other customers, by resulting in a decrease to the regulated utility's revenues without an equivalent decrease to its costs.

9. A DAT would provide relief to the customer proposing the bypass facilities in that it would avoid the construction of the facilities and lessen the effect that such construction would have on the regulated utility's revenues, and the rates paid by all other customers. Under a DAT, the conceptual basis is that the proposing customer would forego construction of the bypass facilities in exchange for a specific tariff structure that would result in lower charges to that customer. In this way, the customer would be relieved of the burden of constructing and maintaining the facilities, and the expenditures that would have been made by the customer to construct the facilities would instead be paid to the regulated utility, whose revenues would be reduced through approval of the DAT. These payments and the retention of that customer's load would, in turn, reduce the rate increases that construction of the bypass would cause to the rates paid by all other customers of the utility, such that the regulated utility and other customers would benefit from approval of the DAT.

10. In determining whether to approve previous DAT applications, the board typically considered the following four criteria:

- (1) The bypass avoidance rate is required to respond to a credible bypass threat;
- (2) The bypass avoidance rate must exceed the long run incremental cost of service;
- (3) The bypass avoidance rate is no more attractive than is reasonably required to avoid duplicate facilities; and

⁶ Exhibit 25826-X0029, AUC letter - Application complete, process and schedule, October 28, 2020.

(4) The cost of offering the bypass avoidance rate is appropriately shared between other utility customers and the utility shareholders.⁷

11. The development of these criteria was informed by the board's consideration of load retention rates offered to natural gas shippers in order to address competitive pipeline bypass projects. In establishing what would become criterion 1 listed above, the board made the following remarks:⁸

The purpose of this criterion is to establish the need for a load retention rate. The loss of large volumes to a bypass pipeline can result in stranded investment and a reduced revenue base, the cost of which will have to be borne by other customers and/or the utility's shareholders in some manner. The benefit of retaining the load is in avoiding higher unit costs that would result if the load were actually lost. To ensure the load retention rate is only offered when necessary it must first be established that the load has a high probability of leaving the system.

12. Of note, the load retention rates approved for customers of the natural gas utilities were somewhat different in criteria and structure than those used for DATs on the electricity system, but were based on the same economic forces. In the Commission's opinion, the considerations governing the approval of load retention rates for the natural gas utilities, which have been well understood for many years by seasoned market participants, along with the board's previous decisions on DAT applications, provide several key principles that inform how the Commission considers requests for DATs on the electric system.

13. Firstly, obtaining bypass avoidance or load retention rates should not be an easy exercise. As the board stated in Decision 2001-68 regarding the DAT application for the Shell Scotford Industrial Site:⁹

From a broad perspective, the Board shares the concern of FIRM that bypass applications should not be a routine approval process.

The Board would be concerned if the bypass application process **became an easy** exercise to make a "paper investment" to achieve huge savings in tariffs at the expense of other customers.

The Board considers that caution should be exercised in committing other customers to special tariffs for lengthy (30-35 years) periods, when the benefit received by customers is relatively minor and no real investment by the proponent is being made.

... Processing bypass applications consumes resources for EAL, customer groups, and the Board. In exchange for this consideration, the Board considers that substantial benefits to customers must be realized. Approval of bypass applications should be relatively difficult to receive and only when material benefits for customers are achieved

⁷ Decision 2002-019: ESBI Alberta Ltd., Duplication Avoidance Tariff Application – Imperial Oil Cold Lake Industrial Site, Application 2001187, February 14, 2002, page 2.

⁸ Decision U97096: Nova Gas Transmission Limited, Load Retention Service, File 5631-1, November 14, 1997, page 15.

⁹ Decision 2001-68: ESBI Alberta Ltd., Duplication Avoidance Tariff Application, Shell Scotford Industrial Site, Application 2000342, August 9, 2001, PDF page 15.

compared to allowing the bypass proponent to invest in bypass facilities. [emphasis added]

14. Secondly, the ability to construct any proposed infrastructure that would result in reduced tariff charges for electricity service does not give rise to a *prima facie* case for a bypass avoidance rate. Rather, the Commission must be satisfied that the proposal represents a credible bypass threat. As acknowledged by the U of C, any electricity consumer can install equipment or modify operations to reduce its tariff costs without necessarily requiring an evaluation of the impacts on other ratepayers or the environment.¹⁰ This does not, however, mean that bypass has occurred, nor does it entitle such a customer to specialized tariff treatment. Moreover, the ability to avoid tariff charges has become more widespread since previous DATs were approved, in part due to wider availability and improved cost-effectiveness of smaller-scale generation. The Commission therefore considers that any application for a DAT must be examined closely to ascertain whether the customer's proposal results in a bypass of regulated utility facilities.

4 Details of the application

15. The U of C submitted a DAT application on the premise that it could construct additional facilities, hereafter referred to as "cable upgrades,"¹¹ that would result in greater interconnection of its main campus electrical loads. This would allow for an increased portion of the output from the U of C's existing cogeneration unit to be used to supply power to the U of C's loads rather than being exported to the interconnected electric system.

16. The U of C submitted that if these cable upgrades were constructed, all of its connections to the ENMAX distribution system would be totalized under one Rate Code D600 - Large Distributed Generation account. The U of C currently has six connections to ENMAX's distribution system, two of which are billed under a D600 account and are interconnected with the U of C's cogeneration unit, and four that are billed under a Rate Code D410 - Large Commercial Primary account. All six connections serve various parts of the main campus's electrical loads and the connections deliver electricity to the campus from three different ENMAX substations in dispersed locations in northwest Calgary.

17. The U of C submitted that with the cable upgrades in place, four of its current connections to ENMAX's distribution system could become redundant and not be utilized during normal operations. These connections, however, would be retained for use in situations where the two primary connections were unable to fully supply the main campus's electrical load. According to the U of C, this could occur under various scenarios depending on the output from the cogeneration unit, availability of the two main connections, and the total electrical load of the campus.

18. The U of C estimated that had the cable upgrades been in place in 2019, it would have saved approximately \$4.4 million in electric utility costs in that year. When compared to the estimated cost to construct and maintain the cable upgrades (estimated at \$880,735 to construct

¹⁰ Exhibit 25826-X0035, U of C DAT argument 25826 Dec 7 2020, PDF page 5.

¹¹ As described in the application, the contemplated cable upgrades would involve the construction of a new feeder proposed between the heating plant and northeast portion of the main U of C campus, as well as a reconfiguration of existing feeders from the heating plant to the southeast portion of the main U of C campus. In addition, a load shedding scheme and backup for the load shedding scheme were recommended by the engineering report. See Exhibit 25826-X0001, PDF pages 7 and 13-14.

and \$500 per month to maintain), the U of C submitted that the cable upgrades are economic and have an approximate three-month payback period.

19. In its application, the U of C requested the following relief:

- That the U of C pay the equivalent capital cost of the cable upgrades of \$880,735 and the equivalent monthly operating cost of the cable upgrades of \$500 to ENMAX.
- That ENMAX utilize the U of C capital and monthly operating cost payments to reduce tariff costs to ENMAX customers.
- That the Commission approve a U of C main campus DAT (U of C DAT) that would allow ENMAX to totalize the six feeders that connect the main campus to the ENMAX distribution grid and bill under a single D600 account.

20. As stated in its letter of September 16, 2020,¹² the Commission determined that the first stage application would focus on the credibility of the threat of bypass. The U of C's requested relief for amounts to be paid to ENMAX and ENMAX's use of those amounts are matters that would be considered in the context of all the terms of a DAT and are therefore not considered in this decision. The Commission has restricted its determinations in this decision to whether a DAT is required to respond to a credible threat of bypass.

5 Discussion

21. The suitability of a DAT is premised on an applicant's ability to bypass existing regulated utility facilities, to the detriment of a regulated utility or its customers. A bypass occurs when a customer constructs alternate facilities to meet its own electricity requirements in a manner that results in the customer not requiring the use, in any form, of some or all of the existing regulated utility facilities previously utilized to provide that customer with electricity service. An applicant may be eligible to receive specialized tariff treatment in the form of a DAT in limited circumstances, where the threat of the bypass is credible and where preventing it, through a demonstration of benefits, is in the public interest.

22. The Commission's predecessor has historically reviewed several factors, including legal and technical feasibility of the bypass, against which the credibility of a proposed bypass was tested. While the Commission acknowledges that neither it nor the board established an exhaustive list of factors to test bypass credibility, it generally agrees with the purpose underlying the factors set out in these past decisions, which is to assess the applicant's ability and willingness to proceed with the bypass in the absence of a DAT.

23. In applying these factors, the board also examined whether the bypass proposal would result in harm to other customers such that the relief requested (in the form of a DAT) to prevent the bypass would be warranted. For example, in Decision U98125 the board found:¹³

¹² Exhibit 25826-X0012, AUC letter - Ruling on scope, preliminary submission, incomplete application and process, September 16, 2020, paragraph 6.

¹³ Decision U98125: Grid Company of Alberta Inc., Transmission Bypass Avoidance Rate, Dow Transmission Bypass, File 5603-1, July 24, 1998, page 8.

In short, the Board believes Dow is well positioned to meet its own requirements in an effective manner absent a suitable transmission bypass avoidance rate. Should it do so, the costs of TransAlta's underutilised transmission assets would be borne by remaining transmission system users and/or TransAlta's shareholders. Therefore, the Board finds Dow's physical bypass option a credible threat. Accordingly, it believes the development of a suitable bypass avoidance rate is in the public interest.

24. In the Commission's view, the underlying inquiry at this stage of the application should therefore focus on whether a credible bypass proposal exists, and if so, whether it poses a threat in the form of harm to other customers, such that it is in the public interest to mitigate that harm by developing a DAT. This inquiry should also assess whether the construction of facilities that does not result in stranding of existing regulated utility assets consists of a credible bypass, and furthermore, one that poses a threat, triggering the need for specialized tariff treatment to avoid construction of the proposed facilities.

25. Relevant to the Commission's inquiry and addressed below are (i) whether the U of C's proposal to construct the cable upgrades would result in a credible bypass of distribution facilities; (ii) if so, whether the proposal would cause harm (i.e., a threat) to a regulated utility or to its customers; and (iii) whether there would be a material benefit from the development of a DAT.

5.1 Does the U of C's proposal result in a credible bypass of distribution facilities?

26. The U of C submitted that the cable upgrades would constitute a bypass of the distribution system,¹⁴ that with the cable upgrades installed, the four existing connections currently billed under the D410 account would be required to be retained for use as backup supply during abnormal situations,¹⁵ and that it would pay a dedicated facilities charge for these connections.¹⁶ However, additional information supplied in IR responses presented a conflicting view on whether all existing regulated assets would still be retained, and utilized by the U of C, or whether some assets would no longer be required as a result of the cable upgrades and could therefore be salvaged.¹⁷ ¹⁸

27. In its response to the Commission, the U of C stated that with the cable upgrades in place, ENMAX may be able to salvage some of its equipment and that ENMAX would determine what equipment, if any, could be salvaged or if some of the D410 feeders could be repurposed to supply load additions in the area.¹⁹ Further, the U of C submitted that if its load were to grow above the limit that can be supplied by the two D600 feeders, one or more of the existing D410 feeders would have to be used during normal operations, even with the cable upgrades installed.²⁰ The U of C's current maximum load is 22 megawatts and the capacity of the two D600 feeders is 26 megavolt amperes.²¹ ENMAX did not make any submissions to support or refute these claims.

¹⁴ Exhibit 25826-X0001, application, PDF page 3.

¹⁵ Exhibit 25826-X0034, UOFC-CCA-2020NOV12-001(j).

¹⁶ Exhibit 25826-X0001, application, PDF page 18.

¹⁷ Exhibit 25826-X0032, UOFC-AUC-2020NOV12-001, response preamble.

¹⁸ Exhibit 25826-X0032, UOFC-AUC-2020NOV12-001(i).

¹⁹ Exhibit 25826-X0032, UOFC-AUC-2020NOV12-001(a).

²⁰ Exhibit 25826-X0016, UOFC-AUC-2020SEP16-005(c).

²¹ Exhibit 25826-X0016, UOFC-AUC-2020SEP16-005(b).

28. It is not clear to the Commission that the proposed cable upgrades would result in a bypass of existing regulated distribution facilities. As described earlier, a bypass occurs when a customer is able to construct alternate facilities to meet its own electricity requirements and thereby eliminate its need for some or all of the existing regulated utility facilities that previously served the customer. In situations where existing regulated utility facilities were dedicated to serving a single customer, these regulated utility facilities may become stranded. Asset stranding can therefore be a strong indication that regulated utility facilities have been successfully bypassed.

29. In situations where there is no evidence of asset stranding as a result of a proposed bypass, the Commission must scrutinize the proposal more closely to ascertain the extent to which the customer will still require the use of the existing regulated utility facilities, and consequently whether the customer has actually managed to bypass the existing system.

30. The fact that a number of existing feeders may change in function from being the primary feed to a backup feed, or not used during normal operations, does not, in itself, persuade the Commission that these regulated distribution facilities are no longer needed to meet the U of C's electricity requirements. The very nature of a backup connection (e.g., N-1 reliability) often means that redundant facilities exist. Redundant facilities are not duplication *per se*, because they are intended to increase reliability. If substantially all of the existing regulated facilities are still required to provide service to a customer, then a bypass of the interconnected electric system has not occurred. The U of C did not provide suitable evidence on this point to allow the Commission to make a determination that its facilities, as proposed, constitute a bypass of ENMAX's distribution system.

31. In the result, the U of C has not demonstrated that its proposed cable upgrades would allow it to meet its own electricity requirements in an effective manner and without ongoing reliance on substantially all of the existing regulated distribution facilities. The Commission is therefore unable to conclude that the cable upgrades comprise a credible proposal to bypass the distribution system.

32. While this finding is sufficient to find that a DAT is not required to respond to the U of C's proposal, in the following sections, the Commission has nonetheless set out its assessment of the remaining aspects of the inquiry relevant to this stage of a DAT application.

5.2 Does the proposal cause harm to a regulated utility or to its customers?

33. As mentioned earlier, a regulated utility or its customers may be harmed by the construction of bypass facilities if the facilities result in a reduction to the utility's revenues without an equivalent reduction to its costs. In its evidence, the U of C submitted calculations detailing how the cable upgrades would reduce the amounts it pays annually for its electric utility services, as well as how ENMAX's charges from the Alberta Electric System Operator (AESO) could change if the cable upgrades were constructed.

34. The U of C estimated that the cable upgrades would reduce its electric utility costs by \$4.4 million annually.²² At the same time, the U of C estimated that the cable upgrades could

²² Exhibit 25826-X0001, application, PDF page 2.

increase ENMAX's charges from the AESO by up to \$560,000 annually.²³ The Commission is, however, unable to rely on the U of C's calculations as they appear to contain material errors.

35. For example, in calculating its estimated savings, the U of C does not appear to have properly accounted for the addition of the load currently served under the D410 account to the D600 account. In response to a Commission IR to calculate its charges pursuant to an alternative method, the U of C did not provide the calculations using the methodology requested and pointed the Commission to a different submission with calculations undertaken for a different purpose (to demonstrate the charge in total AESO Rate Demand Transmission Service costs to ENMAX and not to determine the charges to the U of C).²⁴

36. Further, in estimating the change in ENMAX's transmission system access service charges from the AESO,²⁵ it appears that the contribution from the two D410 accounts already fed by Substation No. 34 has been double counted when determining the billing capacity of this substation with the cable upgrades in place. In addition, although the U of C's calculations show an increase in total coincident peak demand for the three substations with the cable upgrades installed, it is not clear why the cable upgrades (which effectively shift load from three substations to one) would result in a change in total coincident peak demand, absent any change to the characteristics of the load or to the cogeneration unit's output.

37. Moreover, the U of C submitted that the construction of the cable upgrades would increase the U of C's annual distribution charges. This would result in increased distribution revenue to ENMAX, which may be inconsistent with the purpose of granting a DAT.

38. As a result, the Commission is unable to conclusively determine how ENMAX's revenues and costs would be affected if the U of C were to construct the cable upgrades, or whether and if so, the extent to which ENMAX's distribution customers or all customers of the transmission system in Alberta would be harmed by the construction of the cable upgrades. It is therefore unable to conclude that, even if it were credible, the proposed bypass would constitute a threat to ENMAX or its other customers.

5.3 Is there a material benefit from the development of a DAT?

39. Regardless of whether a proposal is found to be a credible bypass that would cause harm to other customers, for a DAT to be in the public interest there must be a material benefit associated with its approval that warrants the effort that is required by all parties to develop, approve and implement the DAT.

40. The board has previously cautioned against DAT applications that would allow an applicant to make a "paper investment" to achieve significant savings in tariffs at the expense of other customers, and has indicated that DAT applications should be reserved for situations where material benefits to other customers can be realized.

41. These benefits can take various forms, including the minimization of potential revenue loss to a regulated utility (through additional fees paid to the regulated utility by the DAT

²³ Exhibit 25826-X0021, UOFC-AUC-2020SEP16-006 b) Supplemental Attachment, sheet AESO Billing Det 100% CF.

²⁴ Exhibit 25826-X0032, UOFC-AUC-2020NOV12-005(c).

²⁵ Exhibit 25826-X0021, UOFC-AUC-2020SEP16-006 b) Supplemental Attachment.

customer compared to what would be paid if physical assets enabling the bypass were installed), and the prevention of stranded assets.

42. In its application, the U of C requested that its DAT contain a one-time payment to ENMAX of \$880,735 (representing the U of C's estimated capital costs to construct the cable upgrades) and monthly payments of \$500 (representing the U of C's estimated operating and maintenance costs associated with the cable upgrades).

43. While the Commission acknowledges that the specific terms of a DAT fall outside the scope of the Stage 1 application, the Commission does not view the potential benefits from the development of a DAT to be sufficiently material in this case to have warranted the advancement of the application. In particular, the Commission does not consider that approval of a DAT to prevent the construction of the cable upgrades would result in a material benefit to ENMAX or other customers that would be commensurate with the effort required by all parties to develop, approve and implement a U of C DAT.

6 Conclusion

44. In conclusion, the U of C has not demonstrated that its proposed cable upgrades would allow it to meet its own electricity requirements in an effective manner and without ongoing reliance on substantially all of the existing regulated distribution facilities. The Commission is consequently unable to conclude that the cable upgrades consist of a credible proposal to bypass the distribution system.

45. In addition, it cannot be determined how ENMAX's revenues and costs would be affected if the U of C were to construct the cable upgrades, or the extent (if any) to which ENMAX's distribution customers or all customers of the transmission system in Alberta would be harmed by the construction of the cable upgrades.

46. Lastly, in the present circumstances, a DAT would be unlikely to result in material benefits to ENMAX or other customers that would be commensurate with the effort required by all parties to develop, approve and implement a U of C DAT.

7 Order

- 47. It is hereby ordered that:
 - (1) The application by the University of Calgary for a duplication avoidance tariff is denied.

Dated on March 12, 2021.

Alberta Utilities Commission

(original signed by)

Anne Michaud Vice-Chair

(original signed by)

Carolyn Dahl Rees Chair

Appendix 1 – Proceeding participants

Name of organization (abbreviation) Company name of counsel or representative
University of Calgary (U of C)
Consumers' Coalition of Alberta (CCA)
ENMAX Power Corporation (ENMAX)

Alberta Utilities Commission Commission panel A. Michaud, Vice-Chair C. Dahl Rees, Chair Commission staff M. Anderson (Commission counsel) N. Sawkiw (Commission counsel) G. Bourque D. Fedoretz A. Ayri T. Richards A. Jukov