

Motion for Disclosure, access to confidential information and response to Information Request

Relief Sought

1. By this Motion, IGU, an authorized intervener, seeks the following relief:
 - (a) That Centra Gas provide responses to Information request IGU/CGM-I-1;
 - (b) That Centra Gas provide to IGU any responses ordered by the PUB to be provided to CAC as a result of the CAC Motion for disclosure;
 - (c) That the PUB Order Centra Gas provide to IGU such information as is deemed relevant and similar to the information in 1 (a) and (b) above which will allow its consultants to provide opinions on the issues in scope;
 - (d) That the PUB order that Antoine F. Hacault of Thompson Dorfman Sweatman LLP and Patrick Bowman and Dale Friesen be provided copies to all (or such parts as the PUB may decide) of unredacted evidence upon signing Confidentiality Agreements as per Order 77/19 and on the condition that no individual members of IGU be granted access to any confidential information;
 - (e) That IGU be granted an extension of time to file its evidence. The requested extension is one week after receipt by all interveners of responses and information.

Overview

2. Industrials, in their interventions, have consistently been mindful of cost and cost effective hearings. It is the opinion of the consultants for IGU that obtaining the information which is sought in IR IGU/CGM-I-1 will allow them to express their opinions on the in-scope issues in an efficient cost-effective manner.

3. The type of information sought in IR IGU/CGM-I-1 is standard information provided in other Canadian Jurisdictions in conducting reviews of COSS methodology.

4. Given the elimination of the post-filing workshop and the elimination of a second round of IRs it is essential to have a significantly broad prehearing discovery to allow IGU experts to provide opinions on in-scope issues with a view of assisting the PUB in its determinations.

5. Without the requested information, a robust review of COSS will not be possible. The approved methodologies will likely guide ratemaking in Manitoba for several years so it is very important that the PUB receives and considers informed perspectives from experts to guide it in its decision.

6. In keeping with the purpose of IR discovery as hereafter described, IGU and its consultants should be given a measure of latitude in the discovery stage of the COSS review process to receive information which they view as important in providing their opinions on "...the appropriateness of Atrium's and Centra's COSS recommendations or provide alternative methodologies appropriate for Centra's specific circumstances in Manitoba,..." (p. 15 of 20 of PUB Order 36/22) .

7. The PUB retains discretion to not award costs to IGU should it find that IGU experts did not participate in the discovery process in a responsible manner.

Procedural History

8. By PUB letter dated March 7, 2022 IGU was granted intervener status in this COSS hearing.

9. In Order 135/20, the Board required a post-filing workshop, to be held after Centra's filing of its COSS Methodology Review Application, to review Centra's

Application and its consultant's report. By Order 36/22 it cancelled the post-filing workshop. Instead of 2 rounds of IRs it decided to only allow one round of IRs.

10. At p. 15 of Order 36/22, the PUB encouraged the parties to work together informally to resolve issues arising from Information Requests. There have been fairly extensive efforts between Centra Gas and IGU to resolve the issue. Unfortunately, it was confirmed on May 12, 2002 by Centra Gas that no solution could be arrived at.

In scope issues

11. At page 13 of Order 36/22 the Board found that the following topics would be in-scope:

1. Allocation of Transmission and Distribution Plant;
2. Determination of Downstream Demand Allocation Factors;
3. Direct Assignment of High-Pressure Transmission Plant to Customers Classes including Postage Stamp Ratemaking;
4. Classification and Allocation of Distribution Plant including the indexing of the service line study to current costs;
5. Allocation of Upstream Capacity Resources;
6. Allocation of demand-side management costs;
7. Amendments to the COSS methodology for Rate Re-bundling impacts;
8. Elimination of the Co-op class;
9. Allocation of operation & maintenance, customer service, and administrative expenses; and
10. Near-term rate impact measure for the Special Contract Class and Power Station Class.

12. The Board held that Customer Class Rate Impacts was not in-scope.

13. In addition the Board provided the following directions with respect to the focus of Intervener evidence:

Based on the Parties' submissions, the Board finds that there is no need for Interveners' additional comprehensive reviews of the existing COSS methodology (or model) and for evaluating Atrium's report for completeness. Instead, Interveners are to focus their submissions on the appropriateness of Atrium's and Centra's COSS recommendations or provide alternative methodologies appropriate for Centra's

specific circumstances in Manitoba, without the need to duplicate the extensive review already conducted by Atrium. (Emphasis added.)

The participation of Interveners in evidentiary steps in the public hearing process will also assist the Board, as this participation contributes to a robust, transparent, and evidence-based decision-making process. (Emphasis added.)

14. The purpose of IR IGU/CGM-I-1 **is not** to conduct a comprehensive reviews of the existing COSS methodology (or model).
15. Rather, IGU intends to focus on the appropriateness of Atrium's and Centra's COSS recommendations and if alternative methodologies appropriate for Centra's specific circumstances in Manitoba should be recommended.
16. Atrium was not asked to focus on the Centra's evidence in this Application and was not asked to focus on the appropriateness of Centra's COSS recommendations.
17. Mr. Bowman, who has appeared a number of times as an expert before this Board, has conducted several COSS reviews. He knows what information is useful in order to carry out his scope of work.
18. Three examples of publicly available electronic information provided and used in other Canadian jurisdictions are included with Mr. Bowman's evidence.
19. If Centra's refusal to respond is upheld, Manitoba will, to IGU's knowledge, be the only jurisdiction in which COSS models are not shared in a COSS review.
20. It is the view of IGU that without the requested information, it will be limited in its ability assist the Board in achieving its stated objective of "... a robust, transparent, and evidence based decision-making process."

Guiding principles

21. The PUB is not bound by the strict rules of evidence. However, in administrative procedures, as in Court cases, fundamental principles of fairness guide the process. In *Choate on Discovery*, 2nd edition at paragraph 1:3 the authors summarize one of the main purposes of discoveries by quoting the following from a leading case:

It must not be forgotten that the whole machinery of pleading, particulars, **and examination** is for the **purpose of enabling the case to be fairly and properly tried** when the action ultimately comes for hearing before the Court. (emphasis added)

22. The question of relevancy at the discovery stage of information requests is understood in this context and at paragraph 3:35 of *Choate on Discovery*, the authors summarize the approach as follows:

The Court accepted the following legal principles as applying the question of relevance at the discovery stage:

- Discovery has a wide scope. While relevance imposes some broad limits, issues of admissibility and weight have little if anything to do with the matter.
- Questions on discovery are relevant so long as they touch "the matters in question" and fall within bounds that are reasonable.
- On applications respecting the propriety of questions on discovery, the court will not conduct a minute examination of each question to determine its relevancy. In ruling on such applications, the court should not unduly restrict an examination by excluding questions broadly related to the issues when it appears that their relevance may well be resolved by other evidence not before the court on the application.
- A party is entitled to discovery of a document if it directly or indirectly enables him to advance his own case or destroy that of his adversary, or may fairly lead to a train of inquiry which may have either of these consequences.(emphasis added)

23. It is our respectful submission that the evidence sought in IR IGU/CGM-I-1 meets the above quoted criteria.

24. Mr. Bowman has also provided evidence, in his capacity as an expert in the area, that providing the requested information is not onerous and has provided estimates of time it would take for Centra to produce the information.

25. Given that the requested information is routinely provided, it should not come as a surprise that providing the information should not a problem.

26. It is the evidence of Mr. Bowman that having and reviewing the requested information leads to efficiencies that are lost if the information is not provided. It is cost effective to have the information.

27. IGU has no interest in wasting time on immaterial matters and immaterial allocations. Mr. Bowman's evidence explains how having the requested information allows him to provide useful advice and an evidence based opinion for consideration by the Board.

Applicable PUB Rules

28. In the PUB rules of procedure, the following portions are applicable to this Motion:

Definition

2. In these Rules:

j) "INFORMATION REQUEST" means any request made in writing by a party for information or particulars directed to a party in a proceeding;

k) "INTERVENER" means a party other than the applicant who has formally filed for registration in respect of a proceeding and who intends to participate in the production and testing of evidence and whose registration has been approved by the Board pursuant to Rule 27;

l) "MOTION" means a request for a ruling or order in a proceeding or a pending proceeding;

Application of Rules

3. (1) These Rules apply to all proceedings of the Board.

(2) In any proceeding, the Board may dispense with, vary or supplement any of the provisions of these Rules.

(3) The Board has all the powers of a Court of Queen's Bench or a Judge thereof in respect of the attendance and examination of witnesses, the amendment of proceedings, the production and inspection of documents, the enforcements of its Orders and all other matters necessary or proper for the due exercise of its powers, except as otherwise provided in The Public Utilities Board Act [Section 24(4), The Public Utilities Board Act]

Production of Documents

12. (2) The Board, on its own initiative or upon motion by any party may order any person or party in a proceeding to produce any document relating to the proceeding.

Information Requests

14. (1) Where, in any proceeding, the Board permits information requests to be directed to a party for the purpose of a satisfactory understanding of the matters to be considered, such information requests shall be identified by the inquiring party's designated prefix and be:

- a) addressed to the party from whom the response is sought;
- b) numbered consecutively in respect of each item of information requested;
- c) **relevant to the proceeding**; and (Emphasis added.)

Response to Information Requests

15. (2) Where there is a dispute with respect to the adequacy of a response to an information request, the Board may orally or in writing direct all parties:

- a) to appear before the Board or a member of the Board at a specified time and place for a conference; or
- b) to submit in writing their position and views on the matter for the purpose of assisting the Board.

16. A party who is unable or unwilling to provide a full and adequate response to an interrogatory shall file and serve a response:

- a) where the party contends that the interrogatory is not relevant, setting out specific reasons in support of that contention;

Issuance of an Order

35. (1) On any application, the Board may make an order granting the whole or part only of the application or may grant such further or other relief in addition to or in substitution for that applied for, as fully and in all respects as if the application had been for such partial, further or other relief. [Section 44(1) of the Act]

29. We submit that the criteria of “relevant” in Rule 14(1)(c) should be interpreted in a way which is consistent with the discovery purpose of IRs which is summarized in the extract from *Coates on Discovery* at paragraph 3:35.

30. Methodology requires consideration of the cause of expenses and a corresponding allocation. Allocation is mathematical and more easily understood and analyzed by looking at the mathematics of the model.

31. IR IGU/CGM-I-1 recognizes that the focus is to be on methodology. It specifically states: “Recognizing the focus on methodology rather than results, IGU seeks information that is illustrative rather than precise.”

32. We submit that this focus on methodology is consistent with the Board’s desire that results should not drive methodology. IGU’s IR does not seek actual current data. The IR specifically indicates “For all such confidential data inputs, please replace the confidential figures with a “dummy” value that is fictional, but within the general order of magnitude of the variable in question (e.g., use any selected fictional value that is within +/- 50% of the actual value).”

33. We submit there is a significant inherent danger in not having the requested information. The next step is ratemaking and a COSS is an important component of that exercise. It is in the interests of all that the proposed COSS is subject to robust testing.

34. If the proposed COSS methods are not adequately tested because of a lack of information, a significant building block of ratemaking will be of questionable value.

35. The question arises as to whether the information will ever be received and tested.

36. Will the position of Centra at the next GRA also be that a similar request for information is irrelevant? Unless Centra commits to this Board that it will not object to providing an active model in the GRA which can be scrutinized, then the time to provide the model is at the COSS stage.

37. We have explored with Centra alternatives so the requested information could be shared without the need of confidential information.

Providing CSI upon signing CSI agreements

38. Mr. Bowman's view is that providing a public version of the models does not take an unreasonable effort. Centra asserts otherwise. If the concern is that taking out confidential information from a live model of Schedule 4 takes too much time, there is an easy solution, we, as counsel and Mr. Bowman and Mr. Friesen can sign the CSI agreements in the form previously determined by this Board. Although IGU's preference is to work with a public model for reasons of transparency, providing the live model used by Centra is a solution which does not take any effort.

Attempting to choose a method by description without the specifics of the model is not a best practice and is inconsistent with the practice of other Boards in Canada

39. As explained in Mr. Bowman's evidence filed in support of this motion, other Boards analyze COSS methodology with models. This is a best practice and leads to a more robust review of methodology.

40. Mr. Bowman explains in his evidence how and why this is a best practice and how it assists him in being able to provide his expert evidence on the issues before this Board.

41. Limiting the tools and information available to an expert in his bag of tools impacts the quality of the advice he or she can give.

42. As is the case in the practice of law, experts who provide opinions and recommendations must do so based on the information available to them. If the information is incomplete or changes, it can impact the opinions and recommendations provided. Therefore having complete information is critical.

43. For example, why would one intentionally, restrict a lawyer from having the information he believes he requires in order to provide an opinion?? Why would one say to the lawyer: "I don't care if you believe the information assists you. I don't care if you believe the information is relevant to performing your task. I think all you need is ... and that is all you get."

44. The same approach would be unfair to an expert such as an accredited appraiser (AAIC) and Boards which regularly need to choose methodology such as the Municipal Board and the Land Value Appraisal Commission. They apply a market value test but have at least three methods to choose from in determining the correct value. A decision on which method is selected is not done in the absence of underlying facts and mathematical data.

45. It is not usual for two appraisers to interpret and apply a method in different ways. This is because choosing the method does not complete the task, the expert still needs to make subjective choices of data and allocation to arrive at a conclusion.

46. The task before the PUB is similar. Based on the fundamental principle of cost causation, the PUB will need to decide which method or methods of cost allocation should be chosen. It is relatively easy to have a high level theoretical discussion of possible methods. The challenge, we submit, will be to ensure that based on the facts and how the model is developed that the chosen method really does reflect the PUB's choice on what it hoped to achieve from a cost causation perspective.

Centra's approach to answering IRs is inconsistent and unfair

47. In Koch IR I-1b a request was made for "the derivation of all allocation factors used in each COS with all source documents".

48. In response Centra refused to provide a response on various grounds including that the IR was inconsistent with the PUB's direction, would not contribute to the matters at issue, would represent an audit of the existing COSS and an audit of the proposed methodology and that the response could not be provided with reasonable effort.

49. In PUB IR I-8a), c) and e) the following requests were made:

a) Please file Centra's calculation for the Peak and Average allocator from IGU/Centra I-13c from the 2019/20 Centra GRA.

c) Please provide the calculation for the proposed Coincident Peak Demand allocator used to generate the illustrative COSS results of Appendix 4.

e) Please provide the calculation for the proposed "winter season demand in excess of summer season demand" allocator for storage and related pipeline capacity allocator used to generate the illustrative COSS results of Appendix 4

50. The first IR – I-8a) required Centra to refile a response to IGU/Centra I-13c filed in the 2019/20 GRA. The response contained redacted CSI. Part of our

undertaking of confidentiality in the 2019/20 GRA was to return and destroy all CSI. IGU would have done so with respect to IGU/Centra I-13c from the 2019/20 Centra GRA and no longer have the information. IGU is therefore in the situation that unless the PUB orders that we are able to see CSI again, the PUB will have requested and received this CSI but we won't be able to see it.

51. Responses were provided on the mathematical formulas for both the old Peak & Average methodology, for the proposed Coincident Peak methodology, and for the Winter Excess methodology.

52. First, this demonstrates that mathematical formulas can be extracted and provided if there is a willingness to do so.

53. Second, the PUB requests for information on calculations in addition to a non-confidential narrative description was thought to be relevant for the PUB advisors to better understand each methodology. Centra did not object to the relevancy of these requests.

54. Lastly, the refusal by Centra to allow us, Koch advisors and IGU advisors to have access, as per PUB Order 77/19 upon signing the required confidentiality, means we are unable to fully and fairly represent our clients' perspective and that we are unable to assess whether Centra's view of the calculations is consistent with our view of the facts and description of the two proposed methodologies.

55. We submit that previous hearings have demonstrated that Interveners and their advisors can provide a different perspective and that these perspectives assist the PUB in weighing the evidence and options. Intervener expert evidence adds to the PUB deliberations on the issues before it.

Issue 10. Near-term rate impact measure for the Special Contract Class and Power Station Class.

56. Centra has proposed an approach to Issue 10 which is to roll back the rate to the rate previously in effect. We act for Koch so providing confidential Koch information to Koch, its advisors or us should not be an issue.

57. By failing to provide us with Koch data, especially in instances where data is provided for all classes except Koch and Power Stations prevents us from calculating, developing and advocating potentially more fair and reasonable approaches.

58. We have yet to receive from Centra any suggestions on how we are to address the 10th issue without receiving the requested information on the impact to the Special Contract class. Surely if the 10th issue is to be addressed, it needs to be addressed based on the best available information as opposed to in a vacuum (redacted Koch information) and on non-factually based data or fictional data.

Conclusion

59. For these reasons, we request the relief sought in paragraph 1 of this Motion.

All of which is respectfully submitted this 19th day of May, 2022.

My name is Patrick Bowman. I am the Principal Consultant and Owner of Bowman Economic Consulting Inc., and an Associate Consultant with InterGroup Consultants, Ltd., out of Winnipeg, Manitoba. I hold a Masters degree in Natural Resources Management from the University of Manitoba (1998), where my course work primarily focused on areas of resource allocation, economics, and natural resources law.

I have worked in the field of regulatory economics since 1998 and appeared as expert witness before various regulatory tribunals on matters of rate regulation and cost-of-service since 2001. In that time, I have worked in many different jurisdictions in Canada, with a small number of additional assignments in the United States and Jamaica. The list of hearings I have participated in is attached in Appendix A.

In the areas of utility cost-of-service, I have worked on modelling and analysis, as well as expert testimony for Cost-of-Service Studies for both utilities and consumer groups. This includes both:

- 1) **Rate Setting Reviews:** Proceedings where Cost-of-Service studies and models were being evaluated for both methodology as well as for their impact on rates
- 2) **Methodology Reviews:** Proceedings where Cost-of-Service studies and models were being evaluated only for methodology

Prior to the present proceeding, I have not worked on a Centra Gas Manitoba (Centra) rate proceeding.

In this filing, I use the terms “active”, “live” and “fully-linked” to refer to models in the following manner:

- An **Active** model is used to refer to spreadsheets where the values are inputted or available in a numerical format. An active model is in contrast to a copy of a model output provided in Adobe pdf format, for example. An active model is only slightly more useful than a quantitative table in a filing.
- A **Live** model refers to spreadsheets that are active, and any value that is derived as a downstream value to other values in the spreadsheet file is provided via formula not hard-entered value. In this manner, if $A + B = C$, then the cell that contains value “C” is included as a formula “A + B”, not a hard entered value for “C”.
- A **Fully-Linked** refers to live models where in order to run the Cost-of-Service model, multiple Excel files are required, and each has live links between the files. Fully-linked files are useful, but can be problematic for file referencing, so sometimes are provided as a series of live files that are not linked.

Summary

Centra’s proposal to provide no live model of its Cost-of-Service Study is a significant limitation to a review of the proposed methodology and to provide input on whether the methodology as proposed can generate just and reasonable rates.

I have seen no compelling rationale why the review of Centra’s Cost-of-Service methodology would be different than every other utility Cost-of-Service methodology review I have participated in over more than two decades, by failing to provide a live copy of the methodology in model form.

The Centra proposal will lead (and is already leading) to a less efficient, more expensive, longer and ultimately less effective methodology review.

I am aware that parties to the proceeding have requested access to confidential Centra data. The issues identified in this submission would not be resolved merely by the provision of confidential data. Indeed, the need for live models is not linked to any specific input data, and could easily be achieved without needing any confidential data.

Experience

Focused specifically on Cost-of-Service methodology reviews, I have most recently participated in the following:

- In 2019, InterGroup was selected as the lead consultant for the Utilities Consumers Advocate (UCA) of Alberta in the area of Cost-of-Service. The UCA is a group representing residential and small commercial customers before the Alberta Utilities Commission (AUC). I was the Consulting Principal in charge of the file, then later moved to Associate Consultant upon the end of my appointment as a Principal of InterGroup. In that capacity I had overall responsibility for the regulatory review of five separate Cost-of-Service methodology reviews for the electricity and natural gas distribution utilities in Alberta. I served as prime consultant and provided expert testimony in two of those reviews (ATCO Gas, proceeding 25428¹, and EPCOR Distribution and Transmission Inc., proceeding 27018²). In one additional review, I acted as advisor in a number of technical areas, but did not provide expert testimony (FortisAlberta, proceeding 25916). In the remaining two I provided only overall strategic advice (ATCO Electric proceeding 24747, and ENMAX proceeding 24820).
- In 2018, I was the Principal Consultant for the Island Industrial Customers of Newfoundland and Labrador Hydro in the review of Cost-of-Service Methodology. I acted as senior advisor on the file and provided technical review and advice. I did not provide expert testimony in that proceeding³.
- In 2016, I was the Principal Consultant for InterGroup to the Association of Major Power Consumers of British Columbia on the review of the BC Hydro Cost-of-Service methodology. The process included an extensive consultation phase and a negotiation, but did not include an oral hearing, so I did not prepare expert evidence in that proceeding.
- In 2016, I was the Principal Consultant for the Manitoba Industrial Power Users Group (MIPUG) in respect of the methodology review of Manitoba Hydro's Cost-of-Service study. In that proceeding I provided expert testimony on all generation and transmission aspects of Manitoba Hydro's study and proposed methodology.

In each instance noted above, I have had access to electronic files and live (and in some cases fully-linked) modelling of Cost-of-Service analysis for the utility applicant. This is typically provided in Excel format.

¹ The full electronic version of the Cost of Service model is provided at auc.ab.ca by logging into the eFiling System and selecting proceeding 25428, exhibit 25428-X0002, 25428-X00003, 25428-X00004 and 25428-X0005.

² The full electronic version of the Cost-of-Service model is provided at auc.ab.ca by logging into the eFiling System and selecting proceeding 27018, exhibit 27018-X0003, and 27018-X0004.

³ As an example, the full electronic version of the Cost-of-Service model in that proceeding for one of the possible methodology variants is provided at: <http://www.pub.nf.ca/applications/NLH2018CostofService/rfis/PUB-NLH-001%20-%20Attachment%201.XLSM>

In addition to the above proceedings, I have direct experience with review and analysis of the calculations and methodological flow of Excel-based Cost-of-Service models for the following utilities:

- Northwest Territories Power Corporation (which I have helped prepare and defend, provided in live form as part of every General Rate Application I have participated in since 2001).
- ATCO Electric Yukon/Yukon Energy (provided in electronic form as part of the 2009 Cost-of-Service review, where I appeared as expert on behalf of Yukon Energy).
- Jamaica Power (provided to me as expert advisor to the utility)
- Nelson Hydro (developed under my direction)
- Calgary Water and Wastewater Utility (provided to me as expert advisor to the Municipal Wholesale customers of Calgary's Water and Wastewater system).
- FortisBC (provided to me as advisor to the Municipal Electric Utilities who purchase wholesale electrical service from FortisBC, as part of a methodology review of FortisBC's Cost-of-Service study before the British Columbia Utilities Commission).
- Northland Utilities (NWT) Limited (provided as part of the General Rate Applications for the utility, reviewed in detail as part of the process to transfer the Hay River NWT electrical franchise)

This list is not comprehensive. Note that the list includes many utilities which are much larger and more complicated than Centra, as well as those which are much smaller and who have less resources available to support regulatory activities.

In many of the above cases, I would have had access to not only the new or proposed methodology, but also to the previous examples of the model (in fully-linked or at least live format) for the purposes of fully comprehending the methodology proposed.

2021 Centra Gas Manitoba Review

In the 2021 Centra Gas Manitoba Cost-of-Service review, the scope of the proceeding is intended to be on the methodology, not the results. Despite this, it is my understanding that limited rate changes are proposed for some customers (Special Contract and Power Station).

It is my understanding that no electronic version or Excel model of the Cost-of-Service analysis is intended to be provided, whether Active, Live, or Fully-Linked, despite being a part of the IRs asked by intervenors.

I understand that options have been provided to Centra to provide a fully functioning model using any of the following sets of data:

- 1) Up-to-date data on utility costs and loads.
- 2) The data on costs and loads provided at the previous GRA.
- 3) Data on costs and loads provided at stale-dated GRAs.
- 4) Data on costs and loads that is largely hypothetical but reasonably representative of the Centra figures in question.

It is my understanding that Centra's opposition to options #1 and #2 above are that the data in question is commercially sensitive. It is my understanding that the data underlying #3 was provided without redaction in that GRA, so the commercial sensitivity should not be a concern. Options #3 and #4, I

understand have been rejected based on the time and work it will take Centra staff to develop the model (either to input stale data, or to input hypothetical data).

Issues with the Centra Review

In my experience, it is not standard utility regulatory practice to conduct a Cost-of-Service methodology review, much less a review that leads to potential rate changes, without the opportunity for participants to review a live Cost-of-Service model, often fully-linked.

I cannot recall any rate setting proceeding in my career, outside of Manitoba Hydro⁴, where at least active Cost-of-Service models were not provided despite being requested by customers, though typically live models are the norm. Active but not live models were occasionally provided in the 1990s when Excel was not universally the data analysis tool of choice.

I cannot recall any Cost-of-Service Methodology reviews where live and fully-linked Cost-of-Service models were not provided.

The main reason for requiring live models is two-fold: transparency and efficiency. The language of Cost-of-Service analysis is mathematics. The typical meaningful debates for a Cost-of-Service methodology review relate to the “why” questions – why is a given allocation, such as Coincident Peak, appropriate given the system design or operation, etc., or why is a cost assigned to one type of customer rather than another. It is acknowledged that the why questions can largely be debated in words, supported by appropriate focused data. But this identification of “why” questions can only proceed with an effective understanding of the “what/how/where” questions. That is, what cost is being included in this category, how is it being broken out to the various classes and locations, and where do the material cost elements arise, which are fundamentally questions that are best conveyed with mathematics. The understanding of the basic what/how/where questions, and the flow of the analysis, is the core entry point for any expert being able to assess what is being proposed (both in those areas where the utility is recommending changes, and in those where they are not recommending changes), to intelligently identify issues for review, and to ultimately generate the why questions.

Cost-of-Service methods are, under the hood, inherently mathematical calculations. Written information and description are not sufficient to communicate the method efficiently nor effectively, and cannot indicate how it fits in with the remainder of the cost allocation process. This is the reason live models are needed for transparency.

Efficiency and Focus

Cost-of-Service methodology hinges on conceptual and logical justification as values and weightings flow through multiple calculations. There is no way to efficiently talk through the detailed application of a method, when a brief mathematical formula can do so with precision and brevity. It is also not possible to screen the various methods for materiality without at least indicative data. Methodology reviews that are efficient are necessarily focused only on those methods that are material to the final rates.

In my experience, Cost-of-Service models likely contain multiple thousands of formulas, but not all are of equal importance or concern. It takes typically a few minutes to query and to comprehend the purpose

⁴ In the case of Manitoba Hydro, Live models were provided for the 2016 Cost of Service review, but in a normal GRA only paper printouts of data, without backup calculations, are normally provided.

and approach to any given set or group of formulas, and only seconds to confirm exceptions or values that seem to be outside the expected parameters. This screening also rules out further investigation of values or calculations that are not material to the end result. In previous Cost-of-Service reviews, I would likely query a few hundred formulas and notable outliers, and in most cases, concerns can be dismissed with minimal work. The issues that remain as one digs through the model can become the substance of further investigations and discoveries (the “why” questions) which are normally dealt with by IRs. The total time spent in the model itself during this stage is normally 10-15 hours⁵.

By the end of the review and IR stage, in my experience, I would produce summary reports (some of which ultimately end up as expert testimony) highlighting between zero and ten issues of varying importance, but all of which would be material to the end result of achieving just and reasonable rates. This type of process is far less time-consuming than reviewing written word descriptions of the mathematical formulae, and is far more comprehensive and accurate. It is also better able to focus in on the methods that matter most to end results. Hence, efficiency is improved.

In addition, the use of written descriptors gives rise to significant issues around miscommunication. Mathematics is an efficient and accurate way of communicating steps and processes. I have multiple examples where I reviewed the words describing a calculation, but the actual review of the calculation did not fit the written description, either because the written description was limited for brevity, or because written language just cannot be as precise as formulae in many instances. In some cases, these clear examples of miscommunication ended up being important matters for methodology changes, and were part of the expert report. In one recent case, the written descriptions gave no indication of issues, but the review of mathematics gave rise to a number of concerns, and the utility and its independent expert accepted all recommendations contained in my expert report in their rebuttal evidence.

In short, provision of live or fully-linked models is not a detraction from an efficient process, it is an enhancement.

Workload

In respect of the workload involved in preparing any of the above options for data inputs, I acknowledge I have not personally worked with any live model of Centra’s Cost-of-Service analysis. I can only make inferences about workload from the experiences I have had with Centra’s peers.

It is my understanding that Centra has a working version of the model with the proposed new methodology, subject to some limited constraints (e.g., the Coincident Peak input data, which it appears Centra cannot at present generate in the form recommended by Atrium – in this area it appears Centra uses a proxy input meant to approximate the relevant data). This would be necessary to generate the estimated results Centra uses to justify the proposed rate changes to Special Contract and Power Stations.

⁵ It has already been necessary to take more time than this in the Centra proceeding to conduct a partial screening, and the result has been inferior to what could have been achieved with more precision by reviewing a live model. We remain uncertain of the details of what methodology Centra is even proposing in many cases (including past methods that were already of concern but were not part of Atrium’s report). It has not helped the process that even Centra’s written description of the methodology in Appendix 3 describes only the previous methodology, not what has been proposed.

In my experience, options #1 and #2 above (up-to-date data, or previous GRA data) would require use of confidential inputs. While I routinely work with confidential data in other proceedings after signing appropriate NDAs, in a methodology review, it is my preference that confidential data not be used to improve transparency and avoid in-camera documents or hearing days.

Option #3 may or may not be difficult depending on the manner in which Centra loads data into its Cost-of-Service analysis. Typically, key inputs reside in one or two external files or tabs of the model, so once a working model is running using the new methodology it is a relatively brief exercise to load in any given set of input data. If the input data from the 2013 Centra Cost-of-Service analysis remains available in the same form, it can likely be loaded into the model with relatively little work, in much the same way Centra would be able to run any given scenario through the model.

Options #4 should be very little work, and well within the range of tasks considered routine in any regulatory review. If the model is presently up and running with data that is current to at least the 2019 GRA, it is likely that there are no more than about 10-20 initial inputs (and certainly less than 100) that are confidential. For example, the overall cost of gas, or the annual usage by certain large customers. Centra would be well aware which values are of concern. It would take only a few minutes to identify these cells, and manually replace these input values with dummy variables (for example, choosing any random number between -50% and +100% of the true value). After each replacement it would take some time to cross-check that the model integrity was not undermined by this change, though a well working model should give little concerns in this area. In my experience, the total work required to prepare such a variant would be no more than a few hours to a day, at most, by a skilled analyst.

In short, I can see no reason Centra cannot produce a working model with limited effort under options #3 or #4. In the absence of these options, I cannot see why a simple NDA, much like is routinely used for almost all confidential material in other jurisdictions⁶, cannot be used to simply have access to the live model now available (as per Options #1 and #2).

Atrium

Centra appears to indicate that the above process for querying the Cost-of-Service model is not necessary because this work has already been completed by the independent expert, Atrium. Centra indicates Atrium is qualified to perform this work.

I have no reason to dispute Atrium's independence or qualifications to complete the review leading to their report. The use of an independent external Cost-of-Service consultant is not uncommon in Cost-of-Service methodology review. In the recent EDTI review, the utility filed reports from their independent consultant Black and Veatch. Newfoundland Hydro has filed Cost-of-Service reports and models prepared or reviewed by Shaw, by Stone & Webster, and by Christensen Associates. FortisBC provided reports by EES Consulting. And I have personally been involved as expert independent consultant for Cost-of-Service reviews of Yukon Energy, Northwest Territories Power Corporation, and Nelson Hydro.

⁶ In recent cases, it has become common for certain information to be unavailable to intervening participants even under NDAs. However, this is typically limited to matters of utility security, such as IT vulnerability reports in support of capital spending, or transmission station vulnerability analyses. Outside of these areas, the use of NDAs is routine.

None of these internal reviews or reports by independent expert consultants obviated the need for transparent and detailed regulatory review, including by intervenors.

Status

My review of the Centra filing to date indicates that it is unlikely or impossible to yield sufficient confidence that Centra's Cost-of-Service methodology will yield just and reasonable rates. The IRs filed to date, if fully answered (including live models) should provide the entry point for proper issue identification, which can then be queried with Centra staff (in further IRs, or potentially cross-examination though this process is not likely to proceed in time to assist intervenor expert reports).

However, this presumes full response to the pending IRs requesting live models. Absent full and proper responses to those IRs, it seems highly unlikely that an efficient and comprehensive methodology review can occur.

Without live models, it is not apparent to me that any comprehensive methodology review can occur, and that any fully-informed opinion can be developed by intervenors to the process, or by their experts. This model need not include confidential data so long as the focus of the proceeding is primarily on methodology.