

Stakeholder Comments
AESO 2006 Cost Causation Study: Terms of Reference
February 22, 2006

Written comments were received from:

ATCO Electric

CNRL

EnCana

EPCOR

FIRM

IPCAA (added February 21, 2006)

Kinder Morgan

AESO 2006 Cost Causation Study
January 27, 2006 Terms of Reference — Stakeholder Comment Form

Comments From: ATCO Electric
Date: February 8, 2006
Contact: Satar Parhar
Phone: 780-420-5501
E-mail: satar.parhar@atcoelectric.com

1. Bulk System

Study all of the major bulk paths (between 20 and 30 paths) to determine the relationship between the time of maximum stress and the time of peak system load. This study component would primarily use technical data from the 500 kV N-S Need Application as the basis.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

2. Interties

Review the treatment of intertie facilities (the Alberta-BC and Alberta-Saskatchewan interconnections) in the *2006 Cost Causation Study*, including the context of this treatment under current legislation and regulation. If appropriate, study and recommend a means to separate the costs of intertie facilities from domestic facilities within Alberta. This study component would utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

3. Local System and POD

Study and recommend a means to better differentiate between the Local System and POD functions. Ensure definitions align with usage elsewhere in the AESO tariff (specifically, within the terms and conditions of service). This study component would utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

4. POD

Study POD costs in more detail, including more detailed analysis of POD cost components, how POD costs vary with load size, and whether such variation is linear or follows some other pattern. This study component would utilize the 2003 cost data used in the original study. As well, this study component would be coordinated with, and potentially use additional detailed data from, the investment level study being conducted as part of the AESO's 2007 terms and conditions consultation.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

5. Contributions

Enhance the *2006 Cost Causation Study* by more precisely including the effect of contributions in aid of construction. Study the alignment of contributions with bulk system, local system, and POD functions, and develop a methodology to align and correlate contributions with facilities. This study component would primarily utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

6. Dual-Use Substations

Review costs associated with transmission service at dual-use substations in the context of the AESO's 2006 rate structure (including the use of substation fractions). For each of the 18 dual-use substations (excluding Fort Nelson) identified in section 4.10 of the AESO's 2006 GTA, assess the costs, revenues, ownership, contributions, contract levels (DTS and STS), and any other relevant factors affecting the incurring and recovery of costs by the AESO. Propose a mechanism to fairly recover costs at dual-use substations.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

7. Operations, Maintenance, and Administration

Enhance the 2006 Cost Causation Study by studying operations, maintenance, and administration costs and causation relationships. If appropriate, use the results of the study for classification of such TFO costs rather than the current method of using the transmission property classification. This study component would primarily use additional information from TFO tariff applications.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

8. Recommended Additional Activities

Include recommendations for future enhancements of the *2006 Cost Causation Study*, based on review of the comments made by stakeholders in the AESO's 2005-2006 GTA proceeding, on input from stakeholders during the 2007 rate consultation, and on results of the activities listed above. Future enhancements may include:

Support
 Oppose
 Indifferent

- assessing whether customers were responding to the price signals given by the DTS rate, and, if so, how and in what manner those responses were affecting transmission system planning, and
- differentiating depreciation and return by vintage of assets (also referred to as "normalizing" data for vintage).

Propose a schedule for addressing these recommendations for future enhancements.

Reasons for Stakeholder Position:

Schedule

The *2006 Cost Causation Study* activities will be conducted from February to April of 2006. A status report included preliminary results (where available) will be provided at the end of March, and final results at the end of April. Stakeholders will be invited to comment on the preliminary and final results, and responses to stakeholder comments will be incorporated into the final report for the study, where appropriate.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

Additional Comments

ATCO Electric supports the AESO's proposal to delay the filing of 2007 AESO GTA to May-June time frame to perform a new transmission cost causation study. ATCO Electric expects that the results of this study would alleviate some of the concerns raised in regards to the 2005-2006 GTA Decisions.

Please return this form with your comments by February 8, 2006, to:

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Fax: (403) 539-2524

AESO 2006 Cost Causation Study
January 27, 2006 Terms of Reference — Stakeholder Comment Form

Comments From: Canadian Natural Resources Limited
Date: February 6th, 2006
Contact: Dean Chesterman
Phone: (403) 669 - 6051
E-mail: chesterman.consulting@shaw.ca

1. Bulk System

Study all of the major bulk paths (between 20 and 30 paths) to determine the relationship between the time of maximum stress and the time of peak system load. This study component would primarily use technical data from the 500 kV N-S Need Application as the basis.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

As was shown in the AESO Transmission Planning Presentations January 31st, 2006, the time of maximum stress and the time of peak system load are not well correlated. Considering the high load factors and the flat duration curves, the highest stress on the transmission paths in the North West and North East are driven by the outages of generators and transmission lines. The path can go from a low stress to a maximum stress period on one generator outage at any time. There can be high stress on any of the paths when there is little stress on the North South Path. This disconnect between high system stress, and peak system load will negatively influence the Tariff design as there is reduced cost causation and cost justification between the tariff cost drivers, system peak load and maximum stress on the transmission paths.

The study may show this; more likely it will show that the North South path is more stressed by exports and by maintenance outages than by system peak load. It may also show that the other paths, North East, North West, South East and South West are stressed by other factors than system peak load. This appears in the AESO planning work and should be reflected in the AESO Tariff work.

2. Interties

Review the treatment of intertie facilities (the Alberta-BC and Alberta-Saskatchewan interconnections) in the *2006 Cost Causation Study*, including the context of this treatment under current legislation and regulation. If appropriate, study and recommend a means to separate the costs of intertie facilities from domestic facilities within Alberta. This study component would utilize the 2003 cost data used in the original study.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

3. Local System and POD

Study and recommend a means to better differentiate between the Local System and POD functions. Ensure definitions align with usage elsewhere in the AESO tariff (specifically, within the terms and conditions of service). This study component would utilize the 2003 cost data used in the original study.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

The definitions and the cost split between Local System and Point of Delivery are unclear, an alignment and review are appropriate to consider the cost drivers and cost splits in the tariff.

4. POD

Study POD costs in more detail, including more detailed analysis of POD cost components, how POD costs vary with load size, and whether such variation is linear or follows some other pattern. This study component would utilize the 2003 cost data used in the original study. As well, this study component would be coordinated with, and potentially use additional detailed data from, the investment level study being conducted as part of the AESO's 2007 terms and conditions consultation.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

Point of Delivery costs are not linear with load size. There are set and standard (lumpy) transformer sizes plus many common elements such as control buildings, telecommunications, station services and circuit breakers that are required for even a minimal substation with minimal load. The challenge will be to separate out and identify the many common elements, as opposed to the load specific elements. The load serving distribution circuit breakers are also lumpy cost additions that are not linear with load additions. The other challenge will be to separate out the elements that are load specific versus legacy system decisions, voltage levels differences, historical practice, future equipment provisions and the reliability difference between historical TFO practices and the present AESO practices.

5. Contributions

Enhance the *2006 Cost Causation Study* by more precisely including the effect of contributions in aid of construction. Study the alignment of contributions with bulk system, local system, and POD functions, and develop a methodology to align and correlate contributions with facilities. This study component would primarily utilize the 2003 cost data used in the original study.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

If, as the AESO has contended, the second transformer and second line have historically been optional facilities paid for by the customer, then the effect of customer contributions to the development of the transmission system definitely needs to be studied. The effect though, is not likely clear; more than 20% of the facilities have two transformers, and historically only 20% of the projects have paid contributions. Again the challenge will be to separate the effect out of the averaging of the TFO Cost Accounts.

6. Dual-Use Substations

Review costs associated with transmission service at dual-use substations in the context of the AESO's 2006 rate structure (including the use of substation fractions). For each of the 18 dual-use substations (excluding Fort Nelson) identified in section 4.10 of the AESO's 2006 GTA, assess the costs, revenues, ownership, contributions, contract levels (DTS and STS), and any other relevant factors affecting the incurring and recovery of costs by the AESO. Propose a mechanism to fairly recover costs at dual-use substations.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

There was much evidence filed, disputed, and arguments argued over several AESO Test Years on the DTS Ratio and the COS Credit. There is little reason to reopen a concluded discussion.

7. Operations, Maintenance, and Administration

Enhance the 2006 Cost Causation Study by studying operations, maintenance, and administration costs and causation relationships. If appropriate, use the results of the study for classification of such TFO costs rather than the current method of using the transmission property classification. This study component would primarily use additional information from TFO tariff applications.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

The TFO O&M costs are driven by past decisions on location, equipment choices, and driven by what it takes today to operate and maintain equipment and facilities that are virtually new to more than 50 years old. The only options are to carry on maintaining it to manufacturer's recommendations, maintaining it with a condition based maintenance system or cut maintenance and hope nothing bad happens. As experience has shown the latter leads to blackouts. The TFOs have reasonable O&M programs so there is little value in studying the O&M programs impact of the AESO Tariff...

8. Recommended Additional Activities

Include recommendations for future enhancements of the *2006 Cost Causation Study*, based on review of the comments made by stakeholders in the AESO's 2005-2006 GTA proceeding, on input from stakeholders during the 2007 rate consultation, and on results of the activities listed above. Future enhancements may include:

- Support
 Oppose
 Indifferent

- assessing whether customers were responding to the price signals given by the DTS rate, and, if so, how and in what manner those responses were affecting transmission system planning, and
- differentiating depreciation and return by vintage of assets (also referred to as "normalizing" data for vintage).

Propose a schedule for addressing these recommendations for future enhancements.

Reasons for Stakeholder Position:

As has been argued many a time prior, DTS customers generally do not have a choice, can not relocate to avoid costs and according to the AESO have been paying for all of the optional facilities to provide for their own reliability. Even the transmission regulations recognize that a

doubling of DTS Charges is not likely to lead to the loss of, or a change in, DTS customer load demand. There is no value in assessing whether customers were responding to the price signals given the DTS Rate.

The challenge is that transmission assets are not all that comparable. The transmission assets have seen multiple modifications, expansions and removals over the years, and often with relocated older assets so determining the vintage is almost impossible. With the TFO record keeping, the capital value of the facilities is known but what makes up the cost account is not likely traceable.

Schedule

The *2006 Cost Causation Study* activities will be conducted from February to April of 2006. A status report included preliminary results (where available) will be provided at the end of March, and final results at the end of April. Stakeholders will be invited to comment on the preliminary and final results, and responses to stakeholder comments will be incorporated into the final report for the study, where appropriate.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

Additional Comments

One recommendation is for the AESO Tariff people to discuss the relationship between the time of maximum stress and the time of peak system load with the AESO Planning people, particularly with respect to the North West, the North East and the South West.

Please return this form with your comments by February 8, 2006, to:

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Phone: (403) 539-2465
Fax: (403) 539-2524

AESO 2006 Cost Causation Study
January 27, 2006 Terms of Reference — Stakeholder Comment Form

Comments From: EnCana Corporation
Date: February 8, 2006
Contact: Rod Crockford, Rinde Powell, Roger Belland
Phone: 645-7871, 645-6688, 780-486-4309
E-mail:

1. Bulk System

Study all of the major bulk paths (between 20 and 30 paths) to determine the relationship between the time of maximum stress and the time of peak system load. This study component would primarily use technical data from the 500 kV N-S Need Application as the basis.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

EnCana agrees that the Cost Causation Study should examine all bulk paths. This work should begin by identifying the 20 or 30 “major” bulk paths used by the AESO transmission planners. (Minor bulk paths should also be defined and identified, if such exist.) The study should then seek to determine the load levels and patterns that are determinative to the expansion or upgrade of the bulk system.

The AESO is currently in the process of completing regional transmission plans for the NE, NW, Edmonton, Calgary, and SE regions. These studies provide an up-to-date reflection of the factors that cause bulk system upgrades and expansions. Any examination of the bulk system should include a review of the critical drivers that are determinative to these need applications. In contrast, it is unclear how a review of the 500kV Need Application will be of any assistance as none of the other bulk paths were subject to an upgrade or expansion.

The bulk path load study should not focus strictly on a concept of “maximum stress” as a driver of system upgrades or expansions. For instance, some of the expansions proposed by the AESO in its regional studies are driven by cost avoidance (displacement of TMR, loss savings), reliability concerns associated with random stress conditions, and reliability concerns driven by generation development. These drivers should be recognised and classified.

2. Interties

Review the treatment of intertie facilities (the Alberta-BC and Alberta-Saskatchewan interconnections) in the *2006 Cost Causation Study*, including the context of this treatment under current legislation and regulation. If appropriate, study and recommend a means to separate the costs of intertie facilities from domestic facilities within Alberta. This study component would utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

Not a priority issue. Should be postponed given short timeframe and other priorities.

3. Local System and POD

Study and recommend a means to better differentiate between the Local System and POD functions. Ensure definitions align with usage elsewhere in the AESO tariff (specifically, within the terms and conditions

Support
 Oppose

of service). This study component would utilize the 2003 cost data used in the original study. Indifferent

Reasons for Stakeholder Position:

EnCana agrees that the study should include a clear definition for “POD” and “Local” functions so they can be used consistently throughout the tariff. Given a clear distinction, the study should re-examine the functionalization of costs using, as a minimum, the 2003 data and should include more recent data.

The definition of the “Local” function should also include a clear distinction between “Local” and “Bulk” functions. The concern is not so much with the definition (as established in the TCCS) but with the inconsistency between the definition and the functionalization of costs. For instance, the methods used in the TCCS (voltage, economics, volume-distance) segregated 138kV facilities into the classification of “Local” function. This may be appropriate on a go-forward basis, but contradicts the historical usage of such facilities to transfer bulk power of large geographic distances (e.g. NW, East-Central, SE). A review of the functionalization of wires costs into the “local” function should follow logically from the definition of bulk paths as determine in activity #1.

4. POD

Study POD costs in more detail, including more detailed analysis of POD cost components, how POD costs vary with load size, and whether such variation is linear or follows some other pattern. This study component would utilize the 2003 cost data used in the original study. As well, this study component would be coordinated with, and potentially use additional detailed data from, the investment level study being conducted as part of the AESO’s 2007 terms and conditions consultation.

X Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

EnCana agrees that there is a need to study POD costs and the drivers to such costs. To do so, the AESO needs to examine a “representative sample” of PODs and for each of these develop a clear understanding of factors that create costs. Such an approach should account for POD design and charges at the time of commissioning as compared to the current day standards and practices. The 2003 data set will not provide adequate information to delineate the cost drivers, the additional data from the 2007 terms and conditions study should be included.

5. Contributions

Enhance the *2006 Cost Causation Study* by more precisely including the effect of contributions in aid of construction. Study the alignment of contributions with bulk system, local system, and POD functions, and develop a methodology to align and correlate contributions with facilities. This study component would primarily utilize the 2003 cost data used in the original study.

X Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

EnCana agrees that any assessment of transmission wire costs should be adjusted to remove the effects of contributions. EnCana is concerned that the 2003 data set will be inadequate for this purpose.

6. Dual-Use Substations

Review costs associated with transmission service at dual-use substations in the context of the AESO's 2006 rate structure (including the use of substation fractions). For each of the 18 dual-use substations (excluding Fort Nelson) identified in section 4.10 of the AESO's 2006 GTA, assess the costs, revenues, ownership, contributions, contract levels (DTS and STS), and any other relevant factors affecting the incurring and recovery of costs by the AESO. Propose a mechanism to fairly recover costs at dual-use substations.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

EnCana opposes re-opening the dual-use cost allocation debate. The 2007 GTA work should focus on the analysis of POD costs and their relationship to customer size and characteristics.

7. Operations, Maintenance, and Administration

Enhance the 2006 Cost Causation Study by studying operations, maintenance, and administration costs and causation relationships. If appropriate, use the results of the study for classification of such TFO costs rather than the current method of using the transmission property classification. This study component would primarily use additional information from TFO tariff applications.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

EnCana supports the study of O&M, G&A and other costs not directly proportional to rate-base. The purpose of such work should focus the classification (i.e. demand-, energy-, customer-related) of the TFO costs as directed by the Board.

A direct review of TFO applications is likely insufficient to provide a full understanding of the drivers to O&M and non-rate base costs. EnCana suggests that direct review and communication with each TFOs should be a part of the cost determination analysis.

8. Recommended Additional Activities

Include recommendations for future enhancements of the *2006 Cost Causation Study*, based on review of the comments made by stakeholders in the AESO's 2005-2006 GTA proceeding, on input from stakeholders during the 2007 rate consultation, and on results of the activities listed above. Future enhancements may include:

Support
 Oppose
 Indifferent

- assessing whether customers were responding to the price signals given by the DTS rate, and, if so, how and in what manner those responses were affecting transmission system planning, and
- differentiating depreciation and return by vintage of assets (also referred to as "normalizing" data for vintage).

Propose a schedule for addressing these recommendations for future enhancements.

Reasons for Stakeholder Position:

Schedule

The *2006 Cost Causation Study* activities will be conducted from February to April of 2006. A status report including preliminary results (where available) will be provided at the end of March, and final results at the end of April. Stakeholders will be invited to comment on the preliminary and final results, and responses to stakeholder comments will be incorporated into the final report for the study, where appropriate.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

Additional Comments

Following the posting of the AESO's response matrix (Feb 15), the AESO should set a meeting to discuss the AESO's final approach including more discussion of the specifics on the scope of work to be done. This will ensure there is a better understanding by all participants of the work being undertaken. This discussion should occur no later than the end of February. A workshop to discuss the preliminary results should be held at the end of March. This would provide stakeholders the opportunity to provide additional input and feedback prior to the conclusion of the study.

Please return this form with your comments by February 8, 2006, to:

John Martin
Manager, Regulatory
E-mail: john.martin@aeso.ca
Phone: (403) 539-2465
Fax: (403) 539-2524



February 8, 2006

Alberta Electric System Operator
2500, 330 – 5th Avenue SW
Calgary, Alberta
T2P 0L4

Attention: Heidi Kirrmaier
Vice President, Regulatory

Dear Ms. Kirrmaier,

**Re: Alberta Electric System Operator (AESO)
2007 Tariff Consultation Study Terms of Reference**

EPCOR Utilities Inc. (EPCOR) has reviewed the AESO's terms of reference for both the *Transmission Cost Causation Study* and *Investment Level Study*. At this time EPCOR will not be providing any detailed feedback on either study but will continue to monitor the progress of each study and may comment at a later time.

With respect to the AESO's responses to stakeholders on both the Rates and Terms and Conditions discussion papers issued on January 12, 2006, EPCOR provides the following comments. EPCOR remains unconvinced of the merits of the single coincident peak as a measure of transmission cost causation, and does not believe that "the practical and administrative concerns of billing on coincident demand have been addressed for 2006". EPCOR continues to hold the views expressed in its December 20, 2005 letter to the AESO regarding single coincident peak billing for bulk system demand. Further, EPCOR requests that the AESO take the time to consider more appropriate and practical billing determinants for its 2007 application.

With respect to the revised schedule for filing the AESO 2007 General Tariff Application, EPCOR agrees with the AESO's proposal for additional time and views the suggested timelines as more realistic given the impact of the matters being addressed.

EPCOR appreciates the opportunity to provide comments. Please contact me at (780) 412-3017 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Stout". The signature is stylized and includes a horizontal line extending to the right.

Richard Stout
Vice President, Regulatory Affairs
EPCOR Utilities Inc.

cc. John Martin, john.martin@aes0.ca
Ed Hucman, ed.hucman@aes0.ca

AESO 2006 Cost Causation Study
January 27, 2006 Terms of Reference — Stakeholder Comment Form

Comments From: FIRM Customers
Date: 8 February 2006
Contact: Henry Unryn
Phone: (403) 294-1351
E-mail: unrynhen@telus.net

1. Bulk System

Study all of the major bulk paths (between 20 and 30 paths) to determine the relationship between the time of maximum stress and the time of peak system load. This study component would primarily use technical data from the 500 kV N-S Need Application as the basis.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

FIRM supports this study in order to understand the relationship between cost drivers for the bulk system and peak system load, if any. If there are different cost drivers for different paths the AESO should consider rational cost recovery mechanisms that are reflective of bulk system cost causation overall and provide the right price signals.

2. Interties

Review the treatment of intertie facilities (the Alberta-BC and Alberta-Saskatchewan interconnections) in the *2006 Cost Causation Study*, including the context of this treatment under current legislation and regulation. If appropriate, study and recommend a means to separate the costs of intertie facilities from domestic facilities within Alberta. This study component would utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

FIRM supports the study with the expectation it would shed light on costs associated with imports and exports

3. Local System and POD

Study and recommend a means to better differentiate between the Local System and POD functions. Ensure definitions align with usage elsewhere in the AESO tariff (specifically, within the terms and conditions of service). This study component would utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

FIRM supports this analysis especially to align with usage of these terms in the T&Cs. This would also provide a more homogeneous data set for use in analysing fixed and variable components of POD costs.

If there are significant differences between local systems and PODs serving Discos and those serving industrial and other customers, these differences should be identified and an assessment made as to whether separate rate classes are required or a different tariff structure is required. Example, if the local systems for industrial customers are systematically longer than those of Discos there may be justification for a MW-mile based tariff for local systems

4. POD

Study POD costs in more detail, including more detailed analysis of POD cost components, how POD costs vary with load size, and whether such variation is linear or follows some other pattern. This study component would utilize the 2003 cost data used in the original study. As well, this study component would be coordinated with, and potentially use additional detailed data from, the investment level study being conducted as part of the AESO's 2007 terms and conditions consultation.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

This analysis is necessary to reassess the structure and level of tariffs for recovery of POD costs. It is also necessary to align tariffs with investment policy.

5. Contributions

Enhance the *2006 Cost Causation Study* by more precisely including the effect of contributions in aid of construction. Study the alignment of contributions with bulk system, local system, and POD functions, and develop a methodology to align and correlate contributions with facilities. This study component would primarily utilize the 2003 cost data used in the original study.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

Linking contributions with the assets would enhance the accuracy of the COSS

6. Dual-Use Substations

Review costs associated with transmission service at dual-use substations in the context of the AESO's 2006 rate structure (including the use of substation fractions). For each of the 18 dual-use substations (excluding Fort Nelson) identified in section 4.10 of the AESO's 2006 GTA, assess the costs, revenues, ownership, contributions, contract levels (DTS and STS), and any other relevant factors affecting the incurring and recovery of costs by the AESO. Propose a mechanism to fairly recover costs at dual-use substations.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

This has been a contentious issue in the past. Alternative approaches to determination of cost causation and costs at dual use sites (load first, supply first) should be considered

7. Operations, Maintenance, and Administration

Enhance the 2006 Cost Causation Study by studying operations, maintenance, and administration costs and causation relationships. If appropriate, use the results of the study for classification of such TFO costs rather than the current method of using the transmission property classification. This study component would primarily use additional information from TFO tariff applications.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

This will improve the accuracy of the COSS. Consideration should be given to reflecting the impact of vintage on O&M costs

8. Recommended Additional Activities

Include recommendations for future enhancements of the *2006 Cost Causation Study*, based on review of the comments made by stakeholders in the AESO's 2005-2006 GTA proceeding, on input from stakeholders during the 2007 rate consultation, and on results of the activities listed above. Future enhancements may include:

- assessing whether customers were responding to the price signals given by the DTS rate, and, if so, how and in what manner those responses were affecting transmission system planning, and
- differentiating depreciation and return by vintage of assets (also referred to as "normalizing" data for vintage).

Propose a schedule for addressing these recommendations for future enhancements.

Reasons for Stakeholder Position:

- This activity should complement the bulk system cost causation and cost recovery referred to in 1 above.
- This would enhance the accuracy of the COSS given that POD assets tend to be of more recent vintage compared with bulk system assets. It is also consistent with the Board's view that vintages should be reflected in cost of service studies.

- Support
 Oppose
 Indifferent

Schedule

The *2006 Cost Causation Study* activities will be conducted from February to April of 2006. A status report including preliminary results (where available) will be provided at the end of March, and final results at the end of April. Stakeholders will be invited to comment on the preliminary and final results, and responses to stakeholder comments will be incorporated into the final report for the study, where appropriate.

Reasons for Stakeholder Position:

- Support
 Oppose
 Indifferent

Additional Comments

Please return this form with your comments by February 8, 2006, to:

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Fax: (403) 539-2524

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January 27, 2006 Terms of Reference — Stakeholder Comment Form

Comments From: IPCAA
Date: February 6, 2006
Contact: Dan Macnamara / Ron Mikkelsen
Phone: 266-3180 / 263-3326
E-mail: dmacnamarra@shaw.ca / consult@drazen.com

1. Bulk System

Study all of the major bulk paths (between 20 and 30 paths) to determine the relationship between the time of maximum stress and the time of peak system load. This study component would primarily use technical data from the 500 kV N-S Need Application as the basis.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

Given the AESO acceptance of the 2006 tariff principles IPCAA understands that the conclusion of a review of all bulk paths could only result is a change in the demand/energy classification of bulk transmission costs. As there is no agreed basis for averaging the results over 20 to 30 paths it would not be unexpected that various weighting alternatives may produce a broad range of results. In the end, it is unlikely that greater precision will be achieved.

In addition, there does not appear to be consensus as to whether (a) flows should be based on contingency conditions (conditions that may be viewed as more appropriate when contemplating causation rather than usage) and (b) whether opportunity transactions should be excluded from the flows analyzed.

2. Interties

Review the treatment of intertie facilities (the Alberta-BC and Alberta-Saskatchewan interconnections) in the *2006 Cost Causation Study*, including the context of this treatment under current legislation and regulation. If appropriate, study and recommend a means to separate the costs of intertie facilities from domestic facilities within Alberta. This study component would utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

It is not clear what the benefit of separately identifying the cost of intertie facilities would be. As there are no firm imports or exports the cost of such facilities could not be recovered from such transactions in any event.

If the question is whether it is appropriate to recover the costs of intertie facilities on a CP basis, as bulk transmission is, then this work will only answer a portion of the question.

3. Local System and POD

Study and recommend a means to better differentiate between the Local System and POD functions. Ensure definitions align with usage elsewhere in the AESO tariff (specifically, within the terms and conditions of service). This study component would utilize the 2003 cost data used in the original study.

Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

The approved tariff recovers local and POD demand charges on the same basis so it is not

clear to IPCAA what the outcome of this review would practically be. A shift in demand costs from local to POD would have no impact on the tariff.

4. POD

Study POD costs in more detail, including more detailed analysis of POD cost components, how POD costs vary with load size, and whether such variation is linear or follows some other pattern. This study component would utilize the 2003 cost data used in the original study. As well, this study component would be coordinated with, and potentially use additional detailed data from, the investment level study being conducted as part of the AESO's 2007 terms and conditions consultation.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

If this study merely reviews the embedded cost of existing substations then the variation in inflation effects will likely render the results meaningless. This will be especially true if depreciated costs are reviewed.

5. Contributions

Enhance the *2006 Cost Causation Study* by more precisely including the effect of contributions in aid of construction. Study the alignment of contributions with bulk system, local system, and POD functions, and develop a methodology to align and correlate contributions with facilities. This study component would primarily utilize the 2003 cost data used in the original study.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

Given the apparent state of TFO records (as commented on in the last TCCS), the load related contributions are not likely to be available on a facility by facility basis. At the genco level this analysis would appear to mimic the proposed tasks to break out intertie costs and assess whether they should be recovered in the same manner as other bulk system costs (based on IPCAA's understanding that genco interconnection costs were considered bulk costs in the last TCCS).

6. Dual-Use Substations

Review costs associated with transmission service at dual-use substations in the context of the AESO's 2006 rate structure (including the use of substation fractions). For each of the 18 dual-use substations (excluding Fort Nelson) identified in section 4.10 of the AESO's 2006 GTA, assess the costs, revenues, ownership, contributions, contract levels (DTS and STS), and any other relevant factors affecting the incurring and recovery of costs by the AESO. Propose a mechanism to fairly recover costs at dual-use substations.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

IPCAA supports this initiative because it directly aligns with the position we took in 2006: revenues, costs and investment should all be aligned.

IPCAA assumes that "other relevant factors" includes credit for customer-owned facilities.

7. Operations, Maintenance, and Administration

Enhance the 2006 Cost Causation Study by studying operations, maintenance, and administration costs and causation relationships. If appropriate, use the results of the study for classification of such TFO costs rather than the current method of using the transmission property classification. This study component would primarily use additional information from TFO tariff applications.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

It is IPCAA's experience that the TFO applications will be of no assistance in this task. Unless the AESO proposes acquiring information directly from the TFOs it is unlikely anything meaningful will come from this task.

8. Recommended Additional Activities

Include recommendations for future enhancements of the 2006 Cost Causation Study, based on review of the comments made by stakeholders in the AESO's 2005-2006 GTA proceeding, on input from stakeholders during the 2007 rate consultation, and on results of the activities listed above. Future enhancements may include:

- Support
- Oppose
- Indifferent

- assessing whether customers were responding to the price signals given by the DTS rate, and, if so, how and in what manner those responses were affecting transmission system planning, and
- differentiating depreciation and return by vintage of assets (also referred to as "normalizing" data for vintage).

Propose a schedule for addressing these recommendations for future enhancements.

Reasons for Stakeholder Position:

Schedule

The 2006 Cost Causation Study activities will be conducted from February to April of 2006. A status report including preliminary results (where available) will be provided at the end of March, and final results at the end of April. Stakeholders will be invited to comment on the preliminary and final results, and responses to stakeholder comments will be incorporated into the final report for the study, where appropriate.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

Additional Comments

Please return this form with your comments by February 8, 2006, to:

John Martin
Manager, Regulatory
E-mail: john.martin@aeso.ca
Phone: (403) 539-2465
Fax: (403) 539-2524

AESO 2006 Cost Causation Study
January 27, 2006 Terms of Reference — Stakeholder Comment Form

Comments From: Kinder Morgan Canada Inc. and Enbridge Inc.
Date: February 8, 2006
Contact: Lisa van Hemert (KMCI) and Kaare Svidal (EI)
Phone: 403.514.6482 / 780.420.5393
E-mail: lisa_vanhemert@kindermorgan.com / kaare.svidal@enbridge.com

1. Bulk System

Study all of the major bulk paths (between 20 and 30 paths) to determine the relationship between the time of maximum stress and the time of peak system load. This study component would primarily use technical data from the 500 kV N-S Need Application as the basis.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

2. Interties

Review the treatment of intertie facilities (the Alberta-BC and Alberta-Saskatchewan interconnections) in the *2006 Cost Causation Study*, including the context of this treatment under current legislation and regulation. If appropriate, study and recommend a means to separate the costs of intertie facilities from domestic facilities within Alberta. This study component would utilize the 2003 cost data used in the original study.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

3. Local System and POD

Study and recommend a means to better differentiate between the Local System and POD functions. Ensure definitions align with usage elsewhere in the AESO tariff (specifically, within the terms and conditions of service). This study component would utilize the 2003 cost data used in the original study.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

4. POD

Study POD costs in more detail, including more detailed analysis of POD cost components, how POD costs vary with load size, and whether such variation is linear or follows some other pattern. This study component would utilize the 2003 cost data used in the original study. As well, this study component would be coordinated with, and potentially use additional detailed data from, the investment level study being conducted as part of the AESO's 2007 terms and conditions consultation.

- Support
 Oppose
 Indifferent

Reasons for Stakeholder Position:

5. Contributions

Enhance the *2006 Cost Causation Study* by more precisely including the effect of contributions in aid of construction. Study the alignment of contributions with bulk system, local system, and POD functions, and develop a methodology to align and correlate contributions with facilities. This study component would primarily utilize the 2003 cost data used in the original study.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

6. Dual-Use Substations

Review costs associated with transmission service at dual-use substations in the context of the AESO's 2006 rate structure (including the use of substation fractions). For each of the 18 dual-use substations (excluding Fort Nelson) identified in section 4.10 of the AESO's 2006 GTA, assess the costs, revenues, ownership, contributions, contract levels (DTS and STS), and any other relevant factors affecting the incurring and recovery of costs by the AESO. Propose a mechanism to fairly recover costs at dual-use substations.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

7. Operations, Maintenance, and Administration

Enhance the 2006 Cost Causation Study by studying operations, maintenance, and administration costs and causation relationships. If appropriate, use the results of the study for classification of such TFO costs rather than the current method of using the transmission property classification. This study component would primarily use additional information from TFO tariff applications.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

8. Recommended Additional Activities

Include recommendations for future enhancements of the *2006 Cost Causation Study*, based on review of the comments made by stakeholders in the AESO's 2005-2006 GTA proceeding, on input from stakeholders during the 2007 rate consultation, and on results of the activities listed above. Future enhancements may include:

- Support
- Oppose
- Indifferent

- assessing whether customers were responding to the price signals given by the DTS rate, and, if so, how and in what manner those responses were affecting transmission system planning, and
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Propose a schedule for addressing these recommendations for future enhancements.

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Schedule

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- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

Additional Comments

Kinder Morgan Canada Inc. and Enbridge Inc. endorse the detailed cost study proposed by the AESO and encourage a high level of detail to allow for a more complete analysis. This will result in less analysis work being required of intervening parties. We anticipate and that the new data will provide a clear description of methodology and meaningful statistical analysis. Our primary concern is that the supporting data to the POD charge be statistically relevant.

Please return this form with your comments by February 8, 2006, to:

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