hydro one

Stakeholder Consultation
2011/2012 Transmission Rate Application

November 16, 2009 Stakeholder Session
Meeting Notes

Toronto Marriott Hotel – Downtown Eaton Centre
525 Bay Street, Toronto
Salon 1, Lower Level

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1. BACKGROUND

Hydro One Networks Inc. is in the process of preparing its 2011/12 Transmission Rate Application for submission to the Ontario Energy Board (OEB) near the end of the first quarter of 2010 for rates effective January 1, 2011 and January 1, 2012. Before engaging in a discussion of the rate application, Hydro One wished to seek stakeholder input on its response to an Ontario Energy Board (OEB) directive in its Decision with Reasons on Proceeding EB-2008-0272 (Hydro One's previous transmission rate application). This directive requires Hydro One to include in its next application:

1. A further analysis of the AMPCO "High Five" proposal on network charge determinants, and,
2. A suitable proposal for implementation for the Board's consideration in the event the Board decides to change the charge determinant.

The OEB decision also stated that:

> "Hydro One should address the various criticisms which have been made about AMPCO's analysis (and its expert's analysis) and should attempt to conduct some sensitivity analysis around the potential impacts on commodity prices.
>
> The Board also expects Hydro One to provide a comprehensive analysis of the transmission rate impacts for customers as well as an assessment of any potential adverse impacts on local conditions due to load shifting as described by VECC. Hydro One should also consult with the OPA and the IESO as to any interactions with other demand response programs."

Finally, the OEB stated that it should be possible to monitor such a program to some extent and measure its effect on commodity prices and directed Hydro One to include this in its analysis.

Hydro One invited key stakeholders who participated in the previous Hydro One Networks transmission rate proceeding, other transmitters, IESO, OPA and OEB representatives to participate in a discussion session on November 16, 2009. The main objective of this consultation was to seek input from these stakeholders on the terms of reference (ToR) that will guide the consultant tasked with carrying out the necessary study to fulfill the requirements of the OEB directive. In preparation for the meeting, stakeholders were sent an agenda and a document listing five propositions for consideration to guide development of the consultant study ToR. The meeting agenda focused on discussing these propositions. Stakeholders were also asked to make suggestions as to appropriate consultants who could carry out the necessary study of the Network Charge Determinant rate design.

Part 2 of the meeting was to present to participants an overview of Hydro One's Northwest Transmission Expansion Project for which Hydro One will be seeking approval under the *Environmental Assessment Act* and Section 92 of the *Ontario Energy Board Act*.

This document reports on the November 16, 2009 session.

Future sessions to discuss the Transmission Rate Application are tentatively scheduled for February and March, 2010.

1.1 Welcome and Introductions

Allan Cowan (Director, Transmission Applications, Hydro One) welcomed participants and noted that this was the first of several consultations with stakeholders prior to Hydro One filing its 2011/2012 Transmission Rate Application with the OEB near the end of the first quarter of 2010. He provided an overview of the session's two-part agenda as described above and thanked participants for their attendance. He encouraged them to raise their concerns and questions and to provide their ideas on the ToR and potential consultants with the credentials to carry out the study on the AMPCO proposal.

Chris Haussmann of Haussmann Consulting Inc. (HCI) introduced himself as facilitator for the workshop. He then asked participants to introduce themselves. In attendance were representatives from Andritz Hydro, the Association of Major Power Consumers of Ontario, Canadian Manufacturers and Exporters, Consumers Council of Canada, Energy Probe, Gemini Power Corporation, HATCH, Independent Electricity System Operator, Ministry of Energy and Infrastructure , Ontario Energy Board, Ontario Power Authority, Pollution Probe, Power Workers Union, SNC Lavalin, Society of Energy Professionals, Toronto Hydro, Union Gas, and Vulnerable Energy Consumers Coalition. Also present were Hydro One staff and the HCI facilitation team. The Electricity Distributors Association and other transmitters were invited but were unable to attend.

The full list of participants, together with the agenda, is provided in Attachment #1. Attachment #2 presents the more detailed questions and answers raised in the discussions that followed each of the presentations.

The following sections provide brief descriptions of the presentations made by Hydro One staff. Questions of clarification and discussion following each presentation are summarized in bullet form.
Points in *italics* represent responses or comments from Hydro One. All meeting presentation slides are available on the Hydro One Regulatory Web site at:
http://www.hydroonenetworks.com/en/regulatory/

2. OEB DIRECTIVE RE AMPCO PROPOSAL ON NETWORK CHARGE DETERMINANTS

Mike Roger (Manager, Pricing, Hydro One) provided a brief overview of how Hydro One currently arrives at network charge determinants and AMPCO's alternative approach. In the current method, network charges are based on a customer's monthly demand, taken as the higher of demand at the monthly coincident peak demand or 85% of the customer's maximum non-coincident demand between 7 am and 7 pm on non-holiday weekdays. Network charges currently represent approximately 6% of a customer's total bill and less than 60% of the transmission portion. The AMPCO alternative to the current method of calculating network charge determinants proposes a fixed monthly network charge in the current year based on a customer's actual consumption during the hour of peak demand on the five highest peak days of the previous year. Using this approach (the "High 5 Proposal") would result in a customer network charge that does not vary from month to month. Any decline in usage from peaks in the current year would result in reduced charges in the following year.

The OEB directed Hydro One (OEB Decision with Reasons on Proceeding EB-2008-0272, issued May 28, 2009) to provide at its next application further analysis of the AMPCO proposal and a proposal for implementation in the event that the OEB decides to change the charge determinant methodology. Hydro One has decided to retain a consultant to assist Hydro One in responding to the OEB's directive and will be issuing an RFP for their retention.

2.1 Discussion Summary

The following summarizes the key issues raised by participants during the discussion and their recommendations regarding the Terms of Reference (ToR) for the consultant study of AMPCO's Network Charge Determinants (High Five) rate proposal. A more detailed record of the discussion is provided in Appendix 2.

At the outset, there was some discussion to clarify the AMPCO proposal and how it would work relative to the current approach. The reader is referred to the detailed notes in Appendix 2 for those comments. AMPCO's stated motivation in putting forward its proposal was to improve overall efficiency of the system, including system operating costs, and to go beyond the current system of demand management that focuses on commodity price. AMPCO would like the study to determine whether or not its proposal would indeed improve the overall efficiency of the electricity system. Another stakeholder suggested that the study should focus on the drivers of network investment over the coming decade, and how the network charge determinant can be structured to incent customers to minimize those costs. AMPCO noted that its High 5 Proposal is unique and to its knowledge is not used in any other jurisdiction. Hence any study of the actual experience with methodologies broadly similar to its proposal would not provide relevant information.

This summary focuses on the stakeholders' recommendations for the Network Determinant Charge Study ToR. The discussion followed the five propositions provided to participants in advance of the session for possible inclusion in the study terms of reference.

Proposition 1: Identify the likely effects, costs and benefits of implementing a High Five rate design:

a. **Predicted load shift**
b. **Shift in transmission cost**
c. **Reduction in commodity cost**
d. **Who pays?**
e. **Who benefits?**
f. **What unintended consequences or side effects might such a rate structure incur, e.g. additional rate burdens on consumers with low elasticity of demand, not enough shifts in local load where capacity constraints are an issue, shifts in load that may create new capacity constraints, etc? Additional cost was another example of a potential consequence that should be identified.**

It was suggested that the ToR should precisely reflect the wording in the OEB decision. Hence, the ToR should refer not only to "likely" effects, but that the study should conduct an "impact analysis, including likely <u>and potential</u> effects". This would affect each of the points that follow (i.e. (a) to (f) above:

- 1(a) should read "the level of load shift".
- 1(b) should read "transmission cost <u>shifts</u>", not transmission cost <u>reductions</u> as suggested by some, because the OEB is interested in the magnitude of change without pre-judging the direction of change.
- 1(c) should not prejudge whether cost will go up or down, and so should read "magnitude of impact on commodity costs". It was further suggested that this was too general and should include "impact on peak hour electricity generation cost" to account for the high marginal cost of peak generation, much of which is buried in the provincial benefit charge.
- 1(d) and (e) should read "impact on customers, including who pays and who benefits".
- 1(f) should read "other potential positive or negative consequences" instead of "unintended consequences" to remove any connotation that the consequences would be negative only. And,
- A new point should be added to include the study of "impact on local conditions", because this was in the OEB's decision.

It was noted that very few utilities in North America bill on historical loads from the previous year, so this is a unique aspect of the proposal and the use of actual versus historic data should be noted as a specific issue the study should address.

The hypothesis of the AMPCO proposal is that peak demand drives network costs, so some thought that the study should, at the outset, ascertain whether this is correct or in the alternative, what the true drivers of network costs are. Theoretically only then can a network charge determinant be properly designed. If possible, the study should try to go through a process of identifying the short, medium and long term benefits of demand reduction during peak periods. However, potential mid and long term benefits related to system investments are difficult to forecast. Understanding the relationship between price and demand requires access to the appropriate data. If the necessary detailed demand data are available to and from the IESO, demand management will be more effective. So the study should identify the potential efficiencies and benefits of a properly designed charge determinant. The IESO representatives indicated a willingness to assist the consultant selected by providing requested data if it is readily available.

Also, the impact of setting charge determinants on transmission that supposedly influence the efficient use of both transmission and generation needs to be understood. The two sectors (transmission and generation) may have different cost drivers so a charge determinant may unwittingly be sending different signals and creating different impacts on the two sectors. The consultant should help us understand this. How best to balance any differential impacts may have to be left to the OEB.

With respect to "who pays" and "who benefits", there was extensive discussion on which customers should be included in that analysis within this study.[1] Some noted that AMPCO members represent only 15% of total demand, and favoured including residential and small business customers by addressing how LDCs (including Hydro One Distribution) can potentially pass through appropriate price signals to customers to enhance overall system efficiency. All Ontario consumers need to know how this will affect them. Others argued that small customer demand elasticity data is difficult to obtain and that the OEB limited its impact analysis request to commodity prices. Concern was expressed that the study scope be contained to allow it to be completed in time for the rate application filing in spring 2010. It was also suggested that the matter of the effect of a revised network charge determinant on LDCs could be left to the OEB and LDCs to sort out.

It was suggested the consultant should discuss the short and long term incentives and opportunities for all customers to react. The study should be looking at opportunities for incentives to encourage demand response in customer classes (other than large direct customers) and the long term impact of these opportunities across all customer classes.

In the context of additional rate burdens anticipated in the coming years, the ability of customers to pay any added rate burdens that may result from a change in the network charge determinant should also be considered. Many small businesses do not have options to adjust their demand by

[1] Much of this discussion took place during the consideration of Proposition 2 concerning monitoring.

reducing or shutting down operations during peak demand periods.

Several participants claimed that Hydro One understands better than any consultant what the cost drivers are on the network system and has better demand data than other Ontario parties including the IESO. Accordingly, some participants offered that Hydro One needs to distinguish between what the consultant will help them with and what they can best do themselves.

Finally, it was observed that rate making principles and independent regulators alone do not drive forecasts of peak demand and network investments. Political drivers play a role as well. Nevertheless, if possible, it is worth making the effort to align the rate structure to maximize the overall efficiency of Ontario's electricity network.

Proposition 2: Recommend a methodology to monitor the results of implementing AMPCO's proposal and its effect on commodity prices.

As reflected above, much discussion of this proposition related to the inclusion of LDCs and their customers in the analysis of who pays and who benefits and the difficulty of collecting data at the level of residential and small and medium enterprises. It was claimed by some that the best source of data on each customer's load profile is Hydro One itself, not the IESO.

With respect to monitoring of results, it was suggested that the positive and negative effects of the proposal first need to be identified and then criteria established to measure them. For example, reduction in system losses during peak periods can be measured. However, teasing out the effect of the change in the network charge determinant is very difficult because:

- Customers' load duration curves respond to a host of signals in addition to the network charge, such as weather and global adjustment;
- Customer demand profile data are not yet available – smart meters are only now being installed and it is not known whether LDCs can or will pass along appropriate price signals; and,
- The aggregate behavior of customers will lag any price signals they do receive.

Hence, the efficiency criterion cannot be directly monitored in the short term.

It should be possible to monitor who is making significant curtailments in times of heavy demand but to understand the effect on commodity prices will be more difficult. The IESO expressed a willingness to discuss what contribution it can make to the study and has some non-aggregated data, but noted that it would be challenging and complex to look at changes in load profile and the potential impact on cost (e.g. peak generation cost, commodity cost) if that load had been there.

The importance and difficulty of obtaining LDC participation in the study and in passing through appropriate price signals was noted again. Without their participation it may be next to impossible to determine if there is an advantage or disadvantage.

Participants were reminded that the OEB's directive states that it expects Hydro One to make an effort to determine how the effect on commodity price could be monitored. It does not refer to monitoring a host of costs and benefits. Participation of more customers will obviously enhance any benefits of the rate design, but the OEB did not ask for that. In reply, it was opined that intervenors focused the OEB's attention on commodity costs, thinking that commodity cost was a good proxy for peak generation costs. However, if this is no longer the case the Hourly Ontario Energy Price (HOEP) is sometimes greater than the commodity cost), some participants thought that limiting the monitoring to what the OEB directed in its Decision (the commodity cost) would undermine what these participants thought was the OEB's intent.

This study relates to the Hydro One transmission rate application. Expanding the scope of the study beyond the OEB's directive jeopardizes its completion in time for the rate application. It was suggested that perhaps the OEB should be approached at some point to encourage a pilot project with some Ontario LDCs to further explore this subject and gather appropriate actual data from the larger customer base.

Proposition 3: What has been the experience with this rate design since its implementation in New Jersey and Texas?

It was noted by AMPCO that there are significant differences in the load patterns and market structures between Ontario and the two U.S. jurisdictions that apply charge determinant methodologies with some elements similar to that proposed by AMPCO. Some felt that it might be useful to understand the differences between the AMPCO proposal and the approach taken in Texas and New Jersey, their experiences and whether or not they are relevant to Ontario. However, this would represent a scope change as the OEB did not request this kind of analysis. Further, as noted by AMPCO, its High 5 Proposal is unique and to its knowledge is not used in any other jurisdiction; hence a review of the New Jersey and Texas experiences may not be relevant.

Proposition 4: Address the various criticisms made by intervenors about AMPCO's analysis. (Will AMPCO produce Dr. Sen's report and all underlying data and calculations for peer review?)

The discussion around this proposition concluded that AMPCO would assist Hydro One to the extent possible to address the various intervenor criticisms of its proposal and to understand Dr. Sen's methodology, but that Dr. Sen's spreadsheets are proprietary and AMPCO could not commit to making those available. AMPCO's view was that the data he used are now outdated and they stated that all the calculations, algorithms, econometrics, interrogatory responses and undertakings are on the record. It was suggested that a more productive approach would be to ensure the selected consultant be made aware of all intervenor concerns, and using new and better data, be asked to develop a methodology that addresses those concerns.

Proposition 5: What are the implications of a High Five rate design for existing (and proposed) OPA load management programs?

In the discussion of this proposition, it was noted that the OEB expects Hydro One to consult with the OPA in analyzing the High Five proposal. It was also noted that the OEB had directed Hydro One to advance a network charge determinant for its consideration, but that it did not limit Hydro One to advancing a variation of the AMPCO proposal. Indeed, Hydro One should advance any proposal it feels would improve the overall system efficiency by providing better demand response signals that go beyond commodity demand, and include total system demand. The consultant's role in developing such a proposal should be included in the study ToR.

Changing the network charge determinant would require consideration of how Hydro One's revenue recovery risk is affected and how that risk can be mitigated. Also, implementation challenges that need to be considered include how to manage the entry and departure of major power consumers in the market. The ToR should include this as something for the consultant to look at.

In concluding this discussion, Hydro One asked participants if they had any suggestions of consultants that would be capable of conducting the required study. AMPCO offered to investigate and provide Hydro One with some suggestions at a later date. Others suggested E3 in San Francisco and Power Advisory Group in Boston. A few additional suggestions were received by e-mail.

2.2 Next Steps

Allan Cowan (Director, Transmission Applications) thanked participants for their comments and recommendations with respect to the Terms of Reference for the network charge determinant study. Stakeholders will be kept advised as to the issuing of an RFP, and will be updated on the study's progress at the next two stakeholder sessions, which will likely be in early February and in March, 2010.

3. NORTHWEST TRANSMISSION EXPANSION PROJECT

Randy Church (Manager, Major Project Co-ordination) provided a detailed overview of Hydro One's Northwest Transmission Expansion plans. As a result of its *Green Energy and Economy Act*, the Ontario government asked Hydro One in September of 2009 to immediately proceed with planning, developing and implementing 20 major transmission projects and to implement system upgrades to enable distribution connected generation. These network investments could total up to $2.3 B by 2012, creating thousands of direct and indirect jobs while bringing renewable generation on line, strengthening system reliability and increasing energy transfer across the province.

Randy described six major projects designed to connect renewable generation in the North by extending transmission to bring power to the south (Slide 4). Six projects are also planned for the South to connect renewable generation in that part of the province (Slide 5). A number of enabler lines are also being planned throughout the province to "accumulate" power from future renewable generation that is located in areas remote from the main grid (Slide 6). These lines will mostly be paid for by the generation proponents. The most imminent enabler lines are in the Goderich and Manitoulin Island areas. Other enablers will likely not proceed until we see the response to the feed in tariff program (FIT).

Randy then focused specifically on the Northwest Transmission Expansion Project (Slide 7). This project has an in service date of December 2013 and involves 430 km of single circuit pole green field line. The project will connect green energy producers, improve reliability, accommodate load growth, and facilitate future connection of remote communities and reduce dependence on diesel generation. The right of way will be largely on undeveloped public lands, terminate in a remote location and impact fewer than 50 landowners. First Nations and Métis communities in the area are being consulted and the Environmental Assessment will address issues related to the woodland caribou and traditional lands.

Some of the facility and capacity issues that Hydro One faces in the Northwest include load growth from new or expanding mining activity, renewable generation potential that will have to be connected to the grid, declining performance and costly maintenance of existing lines (Slide 8). Hydro One's proposed solution to service future needs in the area and to address the issues that have been identified centres on building a circuit from Nipigon through Little Jackfish to Pickle Lake (Slide 9).

Renewable generation that may need to be connected to Hydro One' system includes OPG's Little Jackfish hydroelectric development and wind generation on the east shore of Lake Nipigon and in areas north of Lake Nipigon (Slide 10). Increasing transmission capacity and reliability is important because of growing mining activity and the need to improve service to the region's communities. There is also a need to connect remote and First Nations communities that are currently off grid and often reliant on diesel generators, and to reinforce future inter-area transmission in the northwest (Slides 11-13). Hydro One's Northwest Transmission Expansion projects and plans will stimulate economic growth and development in the region and provide local employment (both during and after construction) and business opportunities (Slide 14).

Hydro One intends to apply to the OEB before the end of 2009 for an *OEB Act* S.92 Approval – Leave to Construct (Slide 15). It is anticipated that this process will take approximately six to nine months. S.92 approval is contingent on compliance with the *Environmental Assessment Act*. In this case, the environmental assessment (EA) will be an Individual EA. The EA Study will focus on transmission routing, station siting, and stakeholder consultation. Extensive First Nations and Métis consultation will be required. The EA process is described in more detail in Slide 16. In light of time constraints, Hydro One intends to run the S.92 and EA applications in parallel. The S.92 Leave to Construct application will refer to the general area (reference corridor) where the line will be built. The EA will determine the specific route. Hydro One has identified a reference corridor (Slides 17-18).

Hydro One's reference corridor is an early estimate of the likely route of the transmission line, delineated as a two kilometer wide corridor. This meets the requirements of the EA, while providing Hydro One with opportunities to mitigate any potential impacts or concerns that may be identified during the EA. It also provides a clear focus for participants at public information sessions. Using GIS-based computer models, the reference corridor was designed to avoid areas such as parks, bodies of water, wet lands and communities, but aligned with roads (to facilitate access), pipelines and clear-cut areas. The corridor was then verified using satellite imagery and helicopter fly-over (Slide 19).

An extensive consultation and communications program on the reference corridor has been initiated by Hydro One and is ongoing (Slides 20-22). Turnout at consultation events has been excellent, with a generally positive response. The project schedule, detailed in Slide 23, anticipates OEB S.92 approval in the fall of 2010, EA approval and start of construction in late 2011, and an in service date of late 2013.

3.1 Discussion Summary

It was noted that the line to the Little Jackfish area and on to Pickle Lake had been studied previously. Much of the data from the earlier study will be updated for the current EA that covers the entire route to Pickle Lake. Ontario Power Generation is responsible for the EA of the line from Little Jackfish Generating Station to the Hydro One line.

Southern Ontario ratepayers will have an opportunity to review the S.92 application when it is before the OEB.

There was a discussion about which corridor was being proposed for the line from Barrie to the GTA. Hydro One was asked to confirm the corridor in these notes.[2]

4. CLOSING REMARKS/NEXT STEPS

Allan Cowan (Director, Transmission Applications) thanked stakeholders for their interest, participation and input, noting that the next stakeholder meeting would likely take place in early February. The meeting was adjourned at approximately 11:45am.

[2] The southern terminus of the proposed new transmission corridor from Barrie to the GTA has not yet been finalized.

APPENDIX 1

AGENDA AND LIST OF PARTICIPANTS

OEB Decision and Directive – Network Charge Determinants

Marriott Downtown Eaton Centre Hotel
Salon 1, Lower Level
525 Bay Street, Toronto
November 16, 2009
9:00 a.m. – Noon

Continental breakfast will be available at 8:30 a.m.

AGENDA

Part 1

9:00 a.m.	Welcome/Agenda	Allan Cowan, Director, Transmission Applications
9:05 a.m.	Introductions	Chris Haussmann, Facilitator, Haussmann Consulting Inc.
9:10 a.m.	Ontario Energy Board Directive re AMPCO proposal on Network Charge Determinants	Mike Roger, Manager, Pricing
	Stakeholder Discussion and Feedback	All
	Stakeholder Recommendations re Network Charge Determinants study Terms of Reference and Consultant	
10:25 a.m.	Next Steps	Allan Cowan
10:30 a.m.	**BREAK**	

Part 2

10:45 a.m.	Northwest Transmission Expansion Project	Randy Church, Manager, Major Project Co-ordination
11:15 a.m.	Q&A	All
Noon	Adjourn	Chris Haussmann

LIST OF PARTICIPANTS

Name	Affiliation
Burell, Carl	Independent Electricity System Operator
Byck-Johnston, Michelle	Society of Energy Professionals
Clark, Wayne	Association of Major Power Consumers of Ontario
Dubeski, Phil	Toronto Hydro-Electric System Ltd.
Fedchyshyn, Michael	Gemini Power Corporation
Gibbons, Jack	Pollution Probe
Girvan, Julie	Consumer Council of Canada
Godfrey, Myles	HATCH
Grice, Shelley	Association of Major Power Consumers of Ontario
Harper, Bill	Vulnerable Energy Consumers Coalition
Ingman, Nicholas	Independent Electricity System Operator
Lindley, Stephen	SNC Lavalin
Long, Richard	Society of Energy Professionals
MacIntosh, David	Energy Probe
McKenzie, Kim	Power Workers' Union
McMahon, Pat	Union Gas
McOuat, Martha	Ontario Power Authority
Richmond, David	Ontario Energy Board
Sarin, Sudhir	Andritz Hydro
Sprackett, John	Power Workers' Union
Thiessen, Harold	Ontario Energy Board
Thompson, Peter C.P	Canadian Manufacturers & Exporters
White, Adam	Association of Major Power Consumers of Ontario
Wilson, Alastair	Gemini Power Corporation
HYDRO ONE	
Cancilla, Enza	Manager, Public Affairs
Church, Randy	Manager, Major Project Co-ordination
Cowan, Allan	Director, Transmission Applications
Dumka, Bohdan	Senior Regulatory Advisor
Hubert, Oded	Director, Regulatory Strategy & Compliance
Kim, Susan	Senior Pricing Analyst
Malenfant, Jim	Senior Regulatory Advisor
Power, Vicki	Advisor, Regulatory Affairs
Roger, Michael	Manager, Pricing
Skalski, Andrew	Director, Major Projects and Partnerships
Stadnyk, Alexandra	Community Relations Officer
FACILITATOR/CONSULTANT	
Haussmann, Chris	Haussmann Consulting Inc.
Mueller, Peter	Haussmann Consulting Inc

APPENDIX 2

FACILITATED DISCUSSIONS

QUESTIONS AND ANSWERS

Answers are presented in italics

Comments are attributed only to Hydro One, AMPCO and IESO speakers.

OEB Directive re AMPCO Proposal on Network Charge Determinants – Facilitated Discussion

- With respect to the use of the phrase "likely peaks" in Slide 4, only a shift in a customer's consumption away from actual peaks will result in a benefit to the customer. (AMPCO)

  Agreed. The current year charge would be based on actual peaks in the previous year. (Mike Roger)

Terms of Reference Proposition #1 (Slide 8): Identify the likely effects, costs and benefits of implementing a High Five rate design:

a. **Predicted load shift**
b. **Shift in transmission cost**
c. **Reduction in commodity cost**
d. **Who pays?**
e. **Who benefits?**
f. **What unintended consequences or side effects might such a rate structure incur, e.g. additional rate burdens on consumers with low elasticity of demand, not enough shifts in local load where capacity constraints are an issue, shifts in load that may create new capacity constraints, etc? Additional cost was another example of a potential consequence that should be identified.**

- It would be useful to make a distinction between the use of actual and forecast data, both of which could be used in the AMPCO proposal. Not many utilities in North America bill on historical loads from the previous year, so this is a unique aspect of the proposal. You may want to identify the use of actual versus forecast data as a specific issue.

- The elements in the last point on Slide 8 are really various shades of the question – what are the drivers for network investments in the province over the next five to ten years, and how would the current methodology versus the AMPCO proposal be affected by or impact these drivers?

- Hydro One needs to distinguish between what the consultant will help them with and what they will do themselves. For example, Hydro One understands better than any consultant what the cost drivers are on the network system. Perhaps there should be two terms of reference – one that is broad in nature and covers the overall study, and a second one that specifies what the consultant will help Hydro One with, as opposed to what Hydro One will do on its own as part of the study.

- To aid our discussion, I would find it useful to have a brief review of the background and the principles involved in network charges – what Hydro One sees as the benefits of the current rate design and what AMPCO thinks the benefits will be if its proposal is adopted.

  The principles of network charges were discussed at great length during two previous OEB proceedings. It really was a compromise. The rate design approach that was agreed was really a *compromise – a methodology that was implementable, reflected costs and provided incentives for customers to shift load away from peak periods by having charges apply to the higher of a customer's demand at coincident peak or 85% of non-coincident peak (NCP). The 85% NCP was also designed to ensure that no one got a free ride – customers not at the coincident peak also contribute to network costs. AMPCO feels that the current approach does not provide sufficient incentives to shift load and that their proposal would provide a stronger price signal to customers to shift load during the peak or to reduce consumption during the current year, knowing that they will see a benefit in the following year. (Mike Roger)*

- Isn't the commodity price an incentive?

  The commodity price changes hour by hour. AMPCO feels that their proposal would provide an additional incentive. (Mike Roger)

- Hydro One's current approach is designed for revenue recovery, but it is fundamentally anti demand management because there is no incentive for customers to go below the 85% NCP "ratchet". On the benefits side of the AMPCO proposal, any customer (not just an industrial customer) would have to look for the highest peaks of the year. Because the peaks in Ontario move (unlike New Jersey), Hydro One customers don't know when peaks will occur (sometimes they are all in July, sometimes in December) and will have to "hunt" for them – the High 5s, as the proposal calls them. In doing so, "mistakes" will be made, resulting in a reduction in peak loads on those days. This in turn will benefit all customers by reducing the commodity price on those days. There will be a few customers who in theory could shut down on those days (for example, a steel mill) and avoid some costs in the next year. (AMPCO)

- So those are the winners.

- The biggest winners on a proportional basis are those who successfully execute demand management without too many misses. (AMPCO)

- So it's a reward for demand management behavior. Who are the losers?

- There is nothing necessarily beneficial about demand response. In fact, there are many instances currently where subsidizing customers to reduce consumption causes total cost to increase. The legislation says that the OEB's objectives are to promote efficiency and efficient demand management. I would like to see rates that do better according to those types of criteria. The current approach to Network Charges was a compromise, as Mike Roger noted earlier. When this issue was before the OEB in 1998-99, there was an expectation of new entries and competition in the generation sector. Companies such as Ontario Power Generation (OPG) were strong proponents of things like the ratchet because they saw this as a way to limit competition, especially from behind the meter load displacement generation. The compromise was typical of Ontario and perhaps appropriate for its time. I didn't agree then, and it is even less appropriate now. From a first principles perspective, the Independent Electricity System Operator's (IESO) HOEP (Hourly Ontario Energy Price) does an adequate job of signaling the marginal cost of energy, but this doesn't say anything about the long run marginal cost of the system – bringing power to the customer. The wholesale price is about 25% of the wholesale consumer's bill and 20% of the retail consumer's bill. The IESO's wholesale market does not absolve the OEB and regulated parties from promoting efficiency and more efficient demand management. So AMPCO has put forward a rate design that we think will be more efficient. If it is more efficient, there are no losers because the total cost of the system to meet demand goes down. Customers will see the price signals and choose whether they want to respond. If it can be demonstrated that the AMPCO proposal is not more efficient, we won't support it. We don't have the data in Ontario because it is covered by confidentiality provisions, but where it is available in the US and elsewhere, the literature shows that as many as half of residential customers respond in efficient ways if shown efficient prices. We support efficiency, not demand response or demand management or "welfare". The customer's job is to be efficient. The regulator's job is to ensure that the proper rate signals are sent so customers can choose how to respond. (AMPCO)

- On a purely technical basis, a loser in the short term might be a customer whose load pattern is biased to off peak hours and is unable to reap a benefit in peak hours when others cut back. Analysis would have to verify this. (AMPCO)

- Is the efficiency trigger the only improvement? Something I don't see in the Terms of Reference (ToR) and that should be identified by the consultant are the benefits or improvements of the High Five proposal over the current approach. The consultant should quantify these improvements, and if the AMPCO proposal is implemented, subsequent monitoring should include these assumed improvements. The ToR should also look at who pays and how they will pay, as well as the layering of everything else that is coming down the chute for those customers, and at what point the burden may be too great.

- We are concerned about who will pay as a result of the High Five proposal, especially if it results in a shift of costs and a greater burden on residential and small business customers. Small businesses need to operate all the time to succeed and cannot easily shift load.

- Toronto Hydro currently almost always peaks at the same time as the network. There are few opportunities at the present time for LDCs to shift load to off peak. If this continues, what are the long term implications of the AMPCO proposal for LDCs?

- The second point on Slide 8 should read <u>reduction</u> rather than shift in transmission cost. If the demand response program works properly, transmission costs should be reduced by lowering peak demand. The third point on Slide 8, "reduction in commodity cost", is too narrow. HOEP does not reflect the extremely expensive true marginal cost of generation at the peak, since a lot of the cost is buried in the provincial benefit charge. So the third point should be broader, something like "reduction in peak hour electricity generation cost". In the last point on Slide 8, "additional rate burdens", should read "additional costs, if any" since as AMPCO has pointed out, demand response hopefully will drive efficiencies and reduce the cost to the whole system by decreasing the need for future generation and transmission capacity, thereby benefitting all customers.

- Could AMPCO explain why their proposal is better than simply deleting the 85% NCP from the current approach (Slide 2) and keeping the first part so that Network Charges would be based solely on customer demand at the monthly coincident peak?

- The AMPCO proposal focuses the incentive on the peak days of the year. If we base Network Charges solely on customer demand at the monthly coincident peak, customers would have an incentive every single month of the year to shift load away from peak, so during many months of the year the incentive will occur when the peaking plants are not operating anyway. Our proposal is after the peaks that ultimately drive system capacity. (AMPCO)

- The data show that Ontario experiences peak demand during the summer. The current approach promotes peak shifting in March and April when it has no value to the system. (AMPCO)

- I think you have to go back to the first premise in the AMPCO proposal. The first question to answer is whether the five highest peak days in the year drive transmission system costs? Once we know what drives system costs, we can address the question of how to best design charge determinants.

- I think this is a bit of trap when applied to Ontario because rate making principles and independent regulators alone do not drive forecasts of peak demand and network investments. Politics plays a role as well, so things don't necessarily get done the way they should be. But that doesn't mean we shouldn't try and do things properly. (AMPCO)

- You are defining doing things properly as something that promotes efficiency. Efficiency is something that reduces cost. You are assuming that reducing peak demand (the reaction to the price) will reduce transmission costs. This assumption – that peak demand drives system costs – should be verified. If this assumption is accurate, then you can continue down your path. If not, then you can't conclude that reducing consumption will improve transmission efficiency or reduce transmission investment. I think you are jumping too quickly to that assumption. We need to know as our starting point what drives transmission system investments before we design charge determinants that send messages about what is driving transmission costs. We also need to understand the impact of setting charge determinants on transmission that supposedly influence the efficient use of both transmission and generation. The two sectors may have different cost drivers so we may unwittingly be sending different signals and creating different impacts in the two sectors. We need to understand the impacts in both sectors. The consultant can help with this. How best to balance any differential impacts may have to be left to the Hydro One Board or other authorities.

- I don't disagree. I see it as a hypothesis rather than an assumption. There are a variety of costs and cost drivers in the transmission system. Some are long term, such as peak demand capacity needs, and others are short term, such as losses. So I think it is an appropriate part of the scope to go through a process of identifying the short, medium and long term benefits if we get demand reduction during peak periods. Potential long term benefits related to system investments are difficult to anticipate. Understanding the relationship between price and demand depends on data flows. Price is driven by a lot of things. We get very high prices in February and March when demand is low, but price is almost always high when demand is very high. If we can get good demand data, which you have to get by special request from the IESO, we'll be able to do a better job. So let's identify the potential efficiencies and benefits. If a good study based on good data concludes there are no benefits, we will withdraw our proposal. (AMPCO)

- So we are saying let's identify all the initial cost drivers – commodity, transmission and generation. (Chris Haussmann)

- The cost of delivering power is ten cents. (AMPCO)

- If I understand correctly, one of the things we need to get at is the effect of the proposal on the long term network investment requirement. (AMPCO)

- I suggest that if you want this study to meet OEB expectations, you should to the maximum extent possible use language in the ToR that is compatible with language the OEB uses in its decisions. ToR proposition #1 (Slide 8) is really about the broad topic of impact analysis that the OEB directed Hydro One to carry out. My recollection of the OEB's decision is that the OEB is interested not only in the likely effects, but also the potential effects. I suggest that you start this part of the ToR with language such as "impact analysis, including likely and potential effects". This would affect each of the points that follow. The first bullet should read "the level of load shift". The second bullet should read "transmission cost shifts", because the OEB is interested in magnitude. The third bullet should not prejudge whether cost will go up or down, and so should read "magnitude of impact on commodity costs". The next two bullets deal with customer impacts, so I suggest "impact on customers, including who pays and who benefits". Next I think you should add a new point, something like "impact on local conditions", because this was in the OEB's decision. Finally, in the last bullet, I don't like the use of the word "unintended", which suggests and would signal to the consultant that the impacts are all negative. I would say "other potential positive or negative consequences".

- I am looking for who pays and who benefits – the implications for all customers.

- I support the suggestions about language compatible with OEB expectations. The OEB was careful in its language and knows what it wants. Hydro One should do what the OEB has asked. Magnitude rather predicting shifts is what is important. The OEB asked about uncertainties, and I prefer that language rather than unintended consequences. (AMPCO)

- The consultant should discuss the short and long term incentives and opportunities for customers to react. Some of the customers with the flexibility to respond are obvious – those with operations for only a few hours a day. There are residential customers who can heat their water at night. We should be looking at opportunities for incentives to encourage demand response in other customer classes, and the long term impact of these opportunities across all customer classes, not just industrial. (AMPCO)

Terms of Reference Proposition #2 (Slide 9): Recommend a methodology to monitor the results of implementing AMPCO's proposal and its effect on commodity prices.

- The efficiency criterion is probably not directly observed in the short term. So we have to look at the shape of the load duration curve. For example, are customers reducing their consumption during high demand periods and increasing it when demand is low? It will be difficult to separate out the effect of the AMPCO proposal's price signal, since there are other signals, some of which move in opposing directions, such as the global adjustment. AMPCO customers will understand the benefits of this proposal. Other customers (and the OEB) will ask whether the AMPCO proposal will have adverse effects on them. Is there a reason why demand response should not generate the same benefits in the short or long term for price sensitive customers as it does for other customers, and how do you measure this? We are only now rolling out smart meters and time of use rates, so a lot of the success in this kind of rate reform depends on LDC willingness and ability to pass on these kinds of price signals to their own customers through retail service rates. Industrial end use customers represent only 15% of the electricity withdrawn from Hydro One's grid. If we are going to see big benefits from this over time, this will have to be rolled out by LDCs, which depends on uptake by LDCs and approval of LDC-proposed rate design changes by the OEB. This is a process that will take time. There are still a lot of customers who don't have time of use rates and interval meters. Many SMEs (small and medium size enterprises) don't have interval meters and are unaware of the IESO's web site and real time prices, so how would changing price signals have any effect on them? So there needs to be an ongoing process of promoting efficiency and efficient demand management. (AMPCO)

- The capability exists to monitor who is making significant curtailments in times of heavy demand – the demand shifts. I think the IESO can do that, and I believe that information also flows to Hydro One. To understand the effect on commodity prices will be more difficult, but could be modeled by the IESO to, for example, provide an estimate of the impact of customer X taking 100 MWs off the peak and what the peak price would have been if those 100 MWs were still there. (AMPCO)

- First we need to identify the benefits – the positive and negative implications of the proposed change. One of the potential benefits is reduction in system losses during peak periods, which can be measured. We can measure peak demand, but this is driven by exogenous factors, such as weather. We can look at the load duration curve and see how customers are responding, but aggregate data will not tell you much because the vast majority of consumers won't see a signal until sometime later. If you are going to show a new price signal to a set of customers, you have to look at the behavior of the customers who received the signal. The aggregate behavior will lag. For example, Toronto Hydro alone represents 25% of the aggregate, so if the signal is not transmitted to their customers or they don't understand it or have the ability to avail themselves of it, you won't see a change. That does not mean it was a bad signal, but rather that there were challenges in converting price signals to actual behavior by customers. (AMPCO)

- The IESO is certainly prepared to discuss what contribution it can make to the study and has some non-aggregated data, but it would certainly be challenging and complex to look at changes in load profile and the potential impact on cost if that load had been there. (IESO)

- The data that IESO gets comes from Hydro One. These are Hydro One customers and Hydro One has the best data. We can only get data aggregated by industry sector. Hydro One has data for every individual customer, which allows for much more detailed and accurate analysis. Don't unnecessarily burden the IESO. The question is whether Hydro One will make the data available to the consultant. (AMPCO)

- Also look at the effect on peak generation cost.

- The concern I have is that if this doesn't trickle down to the LDCs, it will be almost impossible to determine if there is an advantage or disadvantage. Whether an LDC like Toronto Hydro can send a signal to change customer behavior, and the link to commodity price and transmission cost, is an important question. Is Toronto Hydro the only LDC here today?

  The Electricity Distributors Association was invited but could not be here today. (Allan Cowan)

- Hydro One is the biggest LDC.

- Perhaps the study can look at how this rate structure most efficiently translates into LDC rate structures.

- Obviously if more customers have a saving, the proposed rate design will be more efficient. But this is a fairly gradual process. I don't think the OEB asked for that. This issue is in the OEB's hands and is a matter for the LDCs and the OEB to decide. Hydro One has an application before the OEB with a variety of rates – some fixed, some demand based, some energy based. (AMPCO)

- AMPCO customers are only 15% of the market, so it might be more effective evidence if the study covered a bigger segment of customers. This would facilitate the next step – the extension of the rate design to LDCs.

- Hydro One is also the largest LDC so maybe there is an opportunity. But I would hesitate to add scope to the study, thereby delaying the results. I'm not sure we should ask Hydro One Transmission to ask to commit its sister company. (AMPCO)

- At the risk of expanding the study, if this proposal is a good idea and is about efficiency with no losers, the OEB might be comforted if the study looked at some of the larger cities (Ottawa, Toronto) and predicted the response.

- The challenge is data. You can only get distribution customer data from LDCs. Neither Hydro One, the OEB nor AMPCO have access to this type of data. So we would need some LDCs to participate. There is literature in the US suggesting demand elasticity varies across customer classes. So you could set aside the regulatory complexity of Ontario and say as a first step that if this kind of signal were shown to smaller customers or LDC provided customers and they had the kinds of elasticities that we find in the literature, this is what we would predict. Perhaps the OEB should be approached at some point to encourage a pilot project involving some Ontario LDCs to further explore this subject and gather appropriate actual data. (AMPCO)

- We don't have to look to the US. Hydro One is the biggest LDC, has all the data, is a leader in demand management for small volume customers, and has lots of people who can do sophisticated demand studies, so I think Hydro One would be the perfect case study. We can use Ontario data. They have great data and load analysts.

- My experience in getting data from Hydro One has been fairly frustrating. This is a study that the OEB has asked Hydro One Networks to do as part of its next transmission rate application. If we advise or urge Hydro One Networks to implicate its distribution business to do additional analysis as part of its application, how will Hydro One transmission recover the cost except from its own customers? (AMPCO)

- The cost would be "peanuts" for Hydro One. Why can't we ask Hydro One to do the transmission study the OEB asked for, and as a good publicly spirited company, also do a separate distribution LDC study?

- My concerns are these. We have smart meters that are just starting to gather data. We have pricing periods that are in place that the OEB has specified for smart meters that may have to be revisited even from a commodity perspective as we move forward. To add another level of complexity by adding pricing periods for transmission needs to be carefully considered. I'm concerned about what can be accomplished by this study in the time available. If the timeline for the filing is late March of 2010, we need to carefully manage the scope of this study and what we can do in the next five months. There is data on price elasticities, but the range is minus 0.1 to minus 0.9. So you get results in the order of ten to one, and I'm not sure how useful this would be.

- If we are looking at the implications for all customers, you have to look at the impacts on LDCs and their customers. I thought this was included in the study.

- *At this stage, we saw the study looking at LDCs only as transmission customers. (Mike Roger)*

- I think it is important to look at the impact on other customers.

- As mentioned earlier, there are data out there around elasticity. I agree that using these data to generate new analysis is not an easy road to go down. Rather, we should ask the consultant to only present information from previously done studies. (AMPCO)

- I appreciate the fact that the OEB's directive was issued to Hydro One, and that Hydro One accounts for about 97% of the transmission business in the province. But this issue also impacts the other transmitters. So what is their role and how will they be involved in the analysis so we don't lose sight of the fact that this proposal will have a major impact on their transmission business as well. (IESO)

- *We invited the other transmitters to today's session, but they were not able to attend. (Mike Roger, Allan Cowan)*

- I again want to come back to what the OEB's decision and directive say – the words that are used by the OEB. Regarding impact analysis, the first proposition in the ToR (slide 8) should include some description of the impact on LDCs, which I would hope includes the possible impacts on LDC customers. There may be some or no impact, depending on an LDC's rate structure. But the request for monitoring (ToR Proposition #2, Slide 9) was confined to commodity cost impacts and I say leave it there.

- The OEB's focus was on commodity cost, perhaps in part because Pollution Probe, like most intervenors at the hearing, focused on commodity cost and the benefits of peak reduction. What we were driving at was that commodity cost was a good proxy for peak generation costs. But now this is no longer the case. If you go on the IESO web site, provincial benefit charges are often higher than HOEP. If we simply stick to commodity cost, we will not be reflecting the OEB's intent.

Terms of Reference Proposition #3 (Slide 10): What has been the experience with this rate design since its implementation in New Jersey and Texas?

- The AMPCO rate design proposal is different in its specifics from the rate designs in Texas and New Jersey. So comparisons must be done with great care because we are not comparing apples with apples. The folks in New Jersey know they only have about five months a year during which demand reduction/load shifting to reduce system peaks creates significant benefits. In Ontario we have about seven. So the differences between Ontario and Texas/New Jersey are very significant in terms of cost as opposed to demand response. Wholesale cost is much higher, so the net benefit from demand response is reduced. (AMPCO)

- It would be useful to have the consultant provide a clear articulation of the differences between the AMPCO proposal and the approach taken in Texas/New Jersey, and/or other jurisdictions that might be using a somewhat similar rate design. What was the experience with these somewhat similar designs? Can these observations be applied to Ontario and inform our assessment of the AMPCO proposal, or are the differences so great that few lessons can be drawn from the experience in other jurisdictions?

- The OEB didn't ask Hydro One to do this, so this would be extra scope. While it is true that AMPCO's testimony before the OEB did make reference to the experience in Texas and New Jersey, these jurisdictions are similar to Ontario, but not the same. Their market structures are different in many ways from Ontario. If you are going to answer the OEB's other questions by referencing a series of other jurisdictions, you would want to try and choose jurisdictions that are more useful as comparators. I'm not sure that Question #3 is necessary or useful to answer the questions that the OEB has asked. (AMPCO)

Terms of Reference Proposition #4 (Slide 11): Address the various criticisms made by intervenors about AMPCO's analysis. (Will AMPCO produce Dr. Sen's report and all underlying data and calculations for peer review?)

- The OEB has asked Hydro One to address the criticisms made by intervenors, which had to do with the implications, uncertainties, magnitudes and sensitivities, all of which would be captured by Proposition #1. The OEB has not asked for a peer review of Dr. Sen's report. Dr. Sen's report is public and part of the record, as are all of the interrogatory responses and undertakings that were fulfilled. The calculations, algorithms and econometrics were filed. The spreadsheets are not AMPCO's but belong to Dr. Sen and are proprietary. The data is outdated and Hydro One has access to superior data. If Hydro One wants to use old data to reproduce old results, go ahead but I'm not sure that this would be useful or answer the questions the OEB has asked. (AMPCO)

  The problem we see here is that the OEB asked Hydro One to answer the criticisms of intervenors, which included Dr. Sen's analysis and the reliability of his statistical results, his estimates of derived commodity costs and the transmission shadow price and the extent of assumed load reduction. To do this, the consultant needs to look at Dr. Sen's analysis. (Mike Roger)

- When you hire a consultant AMPCO will make itself available and we will do everything we can to help. But I can't commit to handing over methodologies and models or spreadsheets that are proprietary to Dr. Sen. No consultant would hand over a proprietary model to someone else. We will do everything we can to help, but I don't want this to be a smoke screen for something else. (AMPCO)

- If the intent is to have the consultant do some analysis with a new and more up to date or detailed set of data, let's make sure the consultant is aware of the concerns that were expressed by intervenors about Dr. Sen's analysis and methodology and that he takes these concerns into account in developing his own methodology, models and analysis. This makes more sense than rehashing the old study's analysis or methodology.

- There are legitimate methodological questions about appropriate time periods, windows and duration of shadow prices. These things are complex. The point is that elasticities are dynamic. We have better data now (2009) and are in a very different economic climate. Nickel producers are a lot more sensitive to power prices when the price of nickel is $4/pound than when it is $14/pound, as was the case when we did the analysis in 2007-08. We should be able to do a better job now that we have more data. If we get the right consultant who is familiar with the theory, maybe we'll come up with better recommendations about how to do this. (AMPCO)

Terms of Reference Proposition #5 (Slide 12): What are the implications of a High Five rate design for existing (and proposed) OPA load management programs?

- The OEB's direction was that Hydro One should consult with the OPA and IESO as to any interactions with any other demand response programs. I would put that into this proposition, and then include what are the implications for the OPA load management programs.

- How would we know anything about proposed OPA load management programs?

- I presume the consultant would talk to the OPA, who will provide the information to him if it is available to the OPA.

- This is one of those areas where you have to decide whether this is something you want the consultant to do or whether this is something that Hydro One should do.

- Does Hydro One have demand response programs for its transmission customers? If there are no programs there are no impacts. (AMPCO)

  No. Maybe the OPA or IESO do or there might be some coming. (Mike Roger, Allan Cowan)

- *Are there any suggestions for specific consultants who we should include when we send out the RFP? (Allan Cowan)*

- Before we get to that question, I want to go back to the ToR. One of the things Hydro One was directed to do was to come forward with a suitable proposal for implementation. Is the consultant going to have any role in this? If so, this role should be defined in the ToR.

  The current proposal is based on the previous year's actual consumption data. So we would look at the 2009 data, the five highest peaks and then determine what the charge should be for a customer. This is something Hydro One would do, not the consultant. I don't think we need an implementation proposal. Unless the consultant comes up with a new proposal, the implementation is described in the current AMPCO proposal. (Mike Roger)

- The consultant's study has to identify the delta (i.e. change) in the revenue recovery risk if Hydro One changes its rate design, and how that risk can be mitigated and managed. This will be an important factor in the OEB's decision. If you take existing data and project it into the future with a different rate design, it will be wrong. (AMPCO)

- Implementation may not be problematic from a first year perspective, which would use the previous year's historical data to build for the next year. But there will likely be implementation issues going forward. For example, if we were lucky enough to get a large new industrial customer in Ontario that didn't exist in the historical year, or a new customer that only existed for half a year, what do you do? It isn't simply a matter of going back and getting 12 months of data. Implementation issues will arise around how the data are used. We may want the consultant to think about this.

- Is it Hydro One's intention to hire only one consultant? (AMPCO)

  Our preference is to have just one consultant, but we may have to sub-contract out some components. (Allan Cowan)

- The more you load up the scope, the narrower the field, especially if you are asking for familiarity with Ontario rate making.

- E3 is a consultant that you might want to consider.

  They are in San Francisco. (Mike Roger)

- Power Advisory Group in Boston is another possibility. I understand that they have some experience on both sides of the border. (IESO)

- The OEB's decision says Hydro One should come forward with a further analysis of AMPCO's proposal and provide some suggestions as to how the proposal could be implemented. AMPCO's objective is to come up with something that drives efficiencies and efficient demand management. Hydro One is the rate making expert. If there are implementation issues with the High Five approach, which AMPCO put forward in part because it gives Hydro One greater revenue certainty, then maybe there is an alternative approach. If so, AMPCO would be delighted to hear it. To answer an earlier question about new entrants or customers who leave, these are important considerations. If there is a way to modify or adapt the High Five approach in a way that makes it easier to implement or to solve some of the issues that have been raised, we would expect Hydro One to come forward with this as part of "a suitable proposal for implementation". In other words, don't come forward with something that you know is not workable. Fix it and bring forward something that is suitable for implementation. (AMPCO)

- Maybe it's a High Four or a High Six

- Exactly. We don't want to lock ourselves down. That's what we have done with the status quo – tied ourselves to something that is clearly inferior. That is why monitoring is so important – see how it's working, look for ways to improve it, fix it if it isn't working. (AMPCO)

- So is AMPCO saying that Hydro One should do the implementation assessment or should the consultant do this? The IESO would not want to be put in the position, with no information, to have to determine charge determinants for a new customer that comes on the system. These are major policy issues and require solid information. (IESO)

- For a new customer you have to decide what class to put them in and what the connect charge should be. To do this, you have to have some information as to what you expect their load profile to be. What AMPCO is suggesting is that Hydro One do what the OEB has asked – further analysis on the AMPCO proposal and a suitable proposal for implementation. Implementation could be the High Five or some modification. The OEB also says, consult with OPA and the IESO. (AMPCO)

Northwest Transmission Expansion Project – Facilitated Discussion

- What is the proposed corridor for the line from Barrie to the GTA (Slide 4)?(Jack Gibbons)

  The existing corridor. (Randy Church)

- Which one? *There is only one corridor. (Randy Church)*

- Will it go to Claireville? *When it comes from Barrie, it will come down the existing corridor, but we don't know yet exactly where it will go in the GTA. (Randy Church)*

- Isn't there more than one corridor to the GTA? Are you talking about the Barrie to Holland Junction corridor?

  It can go a fair way down and approach the GTA on the existing main line corridor. At that point there are multiple options for termination at the southern end – Claireville, Kleinberg, or even Parkway. We can go quite a way down before the corridor is split off. (Andrew Skalski)

- Are you considering going from Barrie to Holland Junction to Claireville?

  I don't have those details here. (Andrew Skalski) The north-south line is just getting started. We don't actually have a chosen route yet, but the preferred choice would be the existing corridor. (Randy Church)

- There is more than one existing corridor. Does anyone else from Hydro One know the answer? *We are looking at different termination options. We can follow up, but my understanding is that there is just one 500 KV corridor. (Enza Cancilla)*

- Can you confirm which corridor will be used or is being considered? Please put this information in the meeting notes.

- How is your EA tied into the Little Jackfish EA? Both Jackfish and the line to it have been studied before. Are you linking up with OPG on this (Slides 9 and 10)?

  The EA for the line up to the Jackfish area (and on to Pickle Lake) is something that was already done in the past and we will pick up a lot of that information and update it. The connecting line between Little Jackfish and our line will be the responsibility of OPG and they will do the EA for that. (Randy Church)

- With respect to the Thunder Bay to Kenora line (Slide 4), is any thought being given to an eventual link into Manitoba and moving energy south, or is that too far out?

  It's too far out. (Randy Church)

- Is there just one rate application and one EA for the corridor, or are there two - one to Jackfish and one to Pickle Lake (Slide 9)?

  One application and EA all the way up. (Randy Church)

- Have you made any arrangements for consultations in southern Ontario on the proposed route?

  We had a webinar to allow some businesses and consultants to participate. But we haven't planned to have any consultations with the general public. (Randy Church)

- It is people in southern Ontario who will be paying for this. It seems reasonable to consult them.

  We have sent out public announcements and done a lot of advertising, such as Globe and Mail ads. What do you think might be helpful for southern Ontario? (Enza Cancilla)

- Whether or not there is a financial benefit to the people who will pay.

  The current consultation process is focused on the requirements of the EA Act. So we are consulting on the route and its impacts. (Randy Church) There will be an opportunity for stakeholder participation during the OEB's S.92 application process. The OEB will likely have hearings in Thunder Bay and Toronto. (Andrew Skalski)