Meeting #4

Pole Attachment Working Group (PAWG)

"Policy Review of Wireline Pole Attachment Charges"

Draft Minutes of Meeting

Prepared by

NGL Nordicity Group Limited ("Nordicity")

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Wireline Pole Attachment Working Group Meeting #4

Meeting Date	Tuesday, January 31, 2017	
Location	2300 Yonge Street, Toronto, 25th Floor (ADR Room)	
Time	9:00 a.m. to 4:00 p.m.	
Organized by	Ontario Energy Board (OEB)	
Facilitated by	Nordicity Group Limited (Nordicity)	
Participants	**OEB**	1) Michael Lesychyn 2) Maureen Helt 3) Vince Mazzone 4) Ian Richler 5) Nancy Marconi 6) Judy But
	Nordicity	7) Stuart Jack 8) Tanveer Ahmed 9) Emily Macrae
	Utilities	10) Casey Malone (Hydro Ottawa) 11) Ben Hazlett (Hydro Ottawa) 12) John Boldt (Hydro One) 13) Roy Rogers (Cornerstone Hydro Electric Concepts) 14) David Haddock (Horizon Utilities) 15) Jagoda Borovickic (London Hydro)
	Carriers	16) David Wilkie (TBayTel) 17) Tim Brown (Cogeco) 18) Kris Eby (BH Telecom) 19) Michael Piaskoski (Rogers) 20) Leslie Milton (Rogers)
	Ratepayer Groups	21) Bill Harper (Vulnerable Energy Consumers Coalition) 22) Mark Rubenstein (School Energy Coalition)
	Regrets	23) Arjun Devdas (Canadian Electricity Association)

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1) Introduction	Mr. Lesychyn: Last meeting was divided into two parts, presentations by OEB and Nordicity then breakout sessions to look at a number of key issues. First topic was what cost data should be collected and tracked going forward. There was agreement that costs had to be allocated according to categories: power, common, other. The second topic was should there be a single rate province rate. The third topic was should there be an adjustment to the rate going forward. Both groups agreed to the principle of the adjustment but no one agreed on a mechanism for how to do this.

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	There was an agreement between LDCs and Carriers on the use of OEB existing methodology for embedded cost calculation. We're going to have Nordicity look at that issue in more detail in the next presentation.
2) **OEB Presentation: Discussion of Last Meeting Minutes Action Items**	Ms. Milton: There's no way I said the strand rate is 2 dollars. I never said that. It wasn't in the first version of the minutes. I don't know the rates and two dollars doesn't mean anything. Mr. Eby: I don't recall that conversation at all. Ms. Helt: It's noted that Leslie acknowledges that she didn't say that. Mr. Harper: If I recall, there was a general conversation about strand rates. It's hard to say what the rate would be because different Carriers use different rates. Ms. Milton: Everyone uses strand, you need it. Everybody is overlashed to strand. You may own the strand or use someone else's strand. Mr. Bolt: Does the owner of the strand get compensated? Ms. Milton: In some cases, yes, for the use of the strand. Mr. Brown: In years of being at Cogeco, I've never issued an invoice or received payment. Mr. Lesychyn: Your comments are noted Leslie and we will make a correction. There was a question about what we meant by majority in the minutes. Mr. Piaskoski: Did it include the facilitator, Nordicity, as part of that number? Ms. Milton: Not sure what it means majority, given that the interests might be skewed. Mr. Rubenstein: I wasn't at the meeting but I don't agree with the use of the term majority in all instances. Mr. Lesychyn: Your views will be noted when we return to these issues later in the day. I just had a question about what the Carriers were saying. Mr. Piaskoski: I can explain this. Allocation percentage for the common cost. 2005 decision. See handout. Mr. Lesychyn: The statement was that utilities are paying more than half. If you look at these numbers in the handout then that's not clear. Ms. Milton: The point is we are using 2 feet of space. It's just a number. Mr. Boldt: And it's common space. Mr. Lesychyn: Space and cost are linked here. Next point is that Carriers use 2 feet, but are charged for more than half, and don't think that is fair. Ms. Milton: 1.7 is the number of third party telecom attachers but Bell is also on the pole so the total is 2.7. Mr. Ahmed: We can show you the CRTC data but that number would already include Bell. Ms. Milton: But it's not a third party attacher. Bell is already on its own pole.

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	Mr. Boldt: No, not always. Ms. Milton: In this case it does. Bell doesn't pay itself so it's not included in billable attachers. Mr. Malone: Is that based on actual data or assumptions? Ms. Milton: Actual data. Poles with billable attachments. Mr. Malone: Why the large gap between Hydro Ottawa and Bell? Where does the discrepancy come from? Mr. Ahmed: We can check with the CRTC to verify. Mr. Piaskoski: Perhaps Tanveer and Leslie could look at the decision together at the break. Mr. Lesychyn: I'd like myself and Maureen to be part of that conversation. Annex A: Michael had a question about where 1.3 came from. Tanveer sent me an email with the analysis if you'd like to take a look at it. Basically the number is 1.32. Annex C: we'll be returning to this issue. There are two action items, so far: 1) Look at the CRTC decision during the break and 2) take a look at the escalation cost this afternoon. Mr. Malone: Is the CRTC's definition of attacher the same as ours? Mr. Lesychyn: That might be part of the problem. Ms. Milton: All the poles are owned by Bell so I think it's the same but I'm happy to walk through it.
3) **Presentation by Nordicity**	**Slide 9: 2005 Order – Illustration of Capital Cost Recovery** **Currently Used Net Embedded (Net Book Value Method) (table)** Mr. Ahmed: The point we want to highlight is if we use this model it provides the return. It gives you an IRR of about 10.3%. If we use this approach and assume that nothing else is changing in pole infrastructure, the rate year-over-year declines. I think that is what's happening now with the 2005 decision. What we try to do is make a projection of the 40 years useful life of the pole so that everyone gets one rate year-over-year. **Slide 10: 2005 Order – Illustration of Capital Cost Recovery** **Currently Used Net Embedded (Net Book Value Method) (bar graph)** Mr. Ahmed: The framework we have provides almost the same result but the difference is that the rates will fluctuate year over year. **Slide 11: 2005 Order – Illustration of Capital Cost Recovery** **Annualized (Discounted Cash Flow) Method (table)** Mr. Ahmed: If we use the same inputs and apply a DCF model. In this case we don't call it depreciation, we call it amortization. **Slide 12: 2005 Order – Illustration of Capital Cost Recovery** **Annualized (Discounted Cash Flow) Method (bar graph)** Mr. Ahmed: Any questions so far?

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	Mr. Harper: I think there are two fundamentally different approaches. The issue is what is the appropriate approach to year? Both approaches have their problems. I don't think these are the only two options, we don't know what the future is going to be. Mr. Ahmed: The data we've collected so far is for 10 years. Mr. Rubenstein: This goes back to the discussion I've raised in previous discussions. It's not clear to me that 2016/17/18 are going to look like 2015. Especially with large utilities making replacements. Mr. Ahmed: The issue is that is an estimate. If we use an estimate we are switching to a hybrid approach. Mr. Rubenstein: I understand that, but some of those estimates are based on approved plans. Ms. Milton: We have a big concern about where those replacements are taking place. If they are bigger 70ft poles then we shouldn't be paying those costs. I know you are using 25 years as an illustration but we don't think that is appropriate. Mr. Boldt: When a company replaces a pole they are paying everything, nothing gets capitalized. According to 1830 it's only capitalized less their contribution. That's how it works. Mr. Malone: That applies to any contributed capital from any third party projects. Ms. Milton: Has that always been the case? Mr. Boldt: Yes. Ms. Milton: Well, we will check. This is a Q and A on the model. Mr. Rubenstein: I agree with Leslie, the accounting life on a pole is a lot longer than 25 years. Mr. Harper: And if it's longer then you'll have a lot more poles out there when you are doing your calculations. Mr. Haddock: In the GTA area, many poles get replaced long before their end of life with road widening. For Milton in particular along main arterial roads. Mr. Boldt: The company pays for the material but half the labour only. The contribution made by the Ministry of Transportation or the municipalities does not get capitalized. Mr. Malone: On average for relocation, the pole owner pays around 70%. Ms. Milton: And you are charging municipalities a lot less than Carriers for streetlights. Hydro One charges municipalities $2.04 for streetlights. How is that equitable? Mr. Boldt: I'll be answering that this summer. The Electricity Act allows those poles to be there. They lobby the government. Ms. Milton: We pay for the right of way as well. Mr. Boldt: We don't. Mr. Harper: Can you separate out how do you want to account for the streetlights? If that rate differs from cost allocation, who picks up the difference? Competition in the market is different from costing issues for the pole.

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	Ms. Milton: You don't necessarily have to charge everyone in the same way but you have to be accounting for everyone in a fair way. Mr. Boldt: Everyone is included for the number of attachers on the poles that we, Hydro One owns. Ms. Milton: It can be quite complex. In theory you can get the results but in practice we will have to look at the data. Mr. Boldt: Just a question, Tim has indicated Cogeco does not charge for overlashing. Does Rogers? Mr. Brown: I've never got a bill from Rogers. Ms. Milton: Why is this relevant? Mr. Piaskoski: Tanveer, have you applied these models to the data you have collected? Mr. Lesychyn: You'll see that later.
4) OEB Presentation	**Slide 15: Cost Data Inputs** Ms. Milton: There's one number that seems to be way out of line, I assume that's Toronto Hydro? We'd have a lot of questions about that. Mr. Lesychyn: I just took a look at the data that was submitted. Mr. Ahmed: In the first data request, we did ask for the admin cost but Toronto Hydro was the only one that submitted. Mr. Harper: In all three cases did the utilities use utility-specific data? We don't have three cases of utility data here. Ms. Milton: And only one company's data was actually tested in a proceeding. Mr. Lesychyn: I agree, that's why we look at it as a straight average vs. a weighted average to straighten things out. Ms. Marconi: If there's a model agreed upon and it's utility specific data we wouldn't use these numbers. Ms. Milton: If that's the case then we need meaningful numbers to look at. Ms. Marconi: I agree, it depends on where we go. Mr. Lesychyn: It could be used. We're not saying it should be used. Ms. Milton: We think the $40 is unbelievably high but let's go on. **Slide 16: Direct Costs** Mr. Rubenstein: So the point is that when we are back here in 10 years we'll have the data? Mr. Lesychyn: No, the idea is that the utilities would be charged with tracking this information going forward in these accounts. Ms. Marconi: If there was a utility specific rate and if they are tracking this data, this could shape the rate. It doesn't mean you couldn't put a default rate in for now.

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	Mr. Rubenstein: I think we should certainly track it going forward. Mr. Ahmed: In the model there is a maintenance item and a loss of productivity. It might be best to handle both in one account. Mr. Malone: It could be a little bit more difficult for us to track it going forward. Mr. Lesychyn: So your thought is, it would be easier to track this separately? Mr. Malone: Yes. Ms. Milton: But are the actual costs incurred by your people, how are they tracked? Mr. Malone: Under a different account. Mr. Harper: Are Toronto Hydro and Hydro Ottawa, are those recent estimates? Ms. Milton: Toronto Hydro was not tested, just Hydro Ottawa. Mr. Harper: Both of them are at least in theory recent numbers. Whereas Hydro One shows the Milton escalation. Mr. Lesychyn: One is a proxy the other is actual. **Slide 17: Attachers** Ms. Milton: I think we should go with actual rather than presumed. I can dispute the Toronto Hydro numbers. I don't disagree with your 95% but I disagree with the data that was submitted. Mr. Ahmed: The data submitted represents about 97% of the pole population. Mr. Harper: When I look at 1.3 or 1.4 it's not clear what the denominator is in the equation. Mr. Lesychyn: Joint use poles. Mr. Harper: I would assume that if you throw in streetlights and other things this number would increase. Mr. Ahmed: Our number includes traffic lights. Mr. Lesychyn: It does. Mr. Harper: Just trying to understand the numbers before we debate. Ms. Milton: There are a lot of poles that only have Bells. Other Carriers should not be subsidizing this. We should be excluding Bell poles because it skews the results. Mr. Harper: So we should also exclude Roger poles? Ms. Milton: You're assuming your cost data is perfectly accurate and that space allocation is precise. That's not correct. There is no way you are going to be able to cut out the power-specific costs. Mr. Ahmed: If we add Hydro One into the picture there's only a 0.1 difference. Hydro One did not have the GIS data base so we asked to look into billing database. Mr. Boldt: We have a GIS database but we track using a permit database. The two don't have comparable data. The GIS doesn't break it down by company. It's not tagged that

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	way. Mr. Eby: Wouldn't the permit show that? Mr. Boldt: We've never overlaid them into the GIS system. Mr. Eby: But the billing against that permit would be accurate. Mr. Boldt: That's right. Mr. Lesychyn: We're going to return to the issue Tanveer and Leslie were discussing and go back to a question Kris had. Mr. Ahmed: On the issue of 1.74 attachers we will add a comment and talk to Rogers first. We'll do an equalization and explain what we've done. Ms. Milton: The issue is not resolved until we actually see the comment. Mr. Eby: I'm struggling a little with the 1.4 and 1.5 understanding that the data is as received. What was in that data? Physical attachments or billable attachments. Mr. Boldt: From our perspective, when the guys go out they identify whether a pole has joint use, not who is on it. Then we look at the number of permits on a pole. You pay to overlash. We counted all those permits up and overlaid it with the GIS information. It's billable attachers and physical attachers. Mr. Lesychyn: Casey, how does Hydro Ottawa do it? Mr. Malone: From our GIS system it's actual pole location and then you check to see if there is an attacher. Then we go back through to see whose it is. Count up total attachers and total numbers of poles with attachers and then we divide it out. Very similar to what John does, but it's within one system. Mr. Boldt: It does account for overlashers. Mr. Lesychyn: Does it account for a carrier that overlashes its own strand? Mr. Boldt: No they are only billed once. That's from the 2005 decision. **Slide 18: Space Allocation** Mr. Lesychyn: A bit more controversial here looking at the use of space. Ms. Milton: The power company also needs the space. If you've got a joint use pole, both parties need the separation space. That's why we say it should be common space. Both parties need the separation space in order to use the space. We both benefit. They wouldn't be renting the pole out to use if there wasn't separation space. Mr. Ahmed: It depends on the allocation methodology used. Ms. Milton: It does. Both parties need clearance and separation if they want to be on the pole, that's our position. Mr. Boldt: We share poles with Thunder Bay. We build that space in regardless of who uses it. All that's saying is that the telecom worker needs that space for their safety. Ms. Milton: But no one is going to be sharing the pole unless there is separation space. In that case it will be a single use pole. Mr. Boldt: In most places in Ontario, we never put a pole in that doesn't allow separation

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	space. Ms. Milton: But if you want to talk about equal sharing both parties need that space. Mr. Rubenstein: To me it's an incremental step between equal sharing and proportionate. I don't know enough about how that works at this point. Mr. Haddock: I'm wondering, if there was no safety space, would someone who is certified as a line-man be able to access it? The costs would go through the roof. That would be a safety requirement if there was no space. Mr. Boldt: Just to complicate matters, the wire sags. In long spans as the sag increase, the line of sight also increases. If you don't have that distance considered, you have a primary neutral lying up against your telecom wires. Ms. Milton: The sag is a sag in your lines and not our lines so you should build in the appropriate amount of space and the neutral is for power. That is your issue. Mr. Boldt: I'm just explaining how it works. I agree with you, it's your workers who aren't qualified to work there with the sag. Mr. Eby: Going back to the development of these safety regulations, this was about hardening up the guidelines for both utilities and Carriers in the use of these structures. I think these guidelines were written to direct all the users. Mr. Boldt: What happened was that the requirement for the separation of the pole has already been there. Mr. Eby: The statement wasn't directed just at the telecom providers. Mr. Lesychyn: That's the part that the Carriers have with the issue. Noted. Mr. Boldt: There's a lot of stuff out there that fundamentally was engineered wrong at the beginning. It will get changed now we are working there anyways. Our technicians will make the calculation. **Slide 19: Indirect Costs - Capital** Mr. Lesychyn: My feeling for this deduction would be that somewhere between 15% and 18% would be a good approach. Ms. Milton: We haven't seen how this deduction has been done by anyone. We have a lot of questions about Hydro One's methodology. We haven't looked at the data. We have a sense that 15% may be way too low. Mr. Lesychyn: It's based on 5 utilities: Toronto Hydro, Hydro One, Hydro Ottawa, London Hydro, Horizon. Mr. Harper: How many of these are based on utility-specific analysis and how many are just using past decisions? Mr. Ahmed: Hydro One used 15%, London used 37% and we applied that to Horizon as well because they did not use that detail. Toronto Hydro we proxied it and Ottawa used 8%. Mr. Rubenstein: The RP-2003-0249, where does that come from? It's been a while but I remember pulling the underlying data on those cases. Ms. Milton: When I look at what we pulled, there has been some adjustment to remove

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	power but I don't think I was able to determine how that was done. Mr. Boldt: I sat through that case and there were requests from the OEB for that data. Ms. Milton: But in the end they just used the Milton data. Mr. Boldt: The 15% was from what would be a reasonable number. Ms. Milton: You're saying that on the record there might be some other discussion around 15%? Mr. Boldt: I know we talked about it. It's a hard thing to come up with. Mr. Lesychyn: We'll go back and look at the EDA for where that information came from. That's an action item. Mr. Piaskoski: The 18.2% is that a weighted average? Mr. Ahmed: Yes. Mr. Rubenstein: But the discrepancy between the percentages is so large. There's got to be something going on. Ms. Milton: That discrepancy needs explanation. Mr. Rubenstein: It seems to me that's too big to be natural, there must be an issues in classification. Mr. Lesychyn: I don't disagree but I still think the weighted average is a pretty good average. Mr. Rubenstein: We don't have enough data points. Mr. Piaskoski: 37% could really be skewing things. We need to be able to drill and really test these numbers as Leslie has been saying. Mr. Ahmed: But can we do it? The accounts are not that detailed. Those accounts are not available. Mr. Rubenstein: But I think the utilities could explain what they put into those sub accounts. Mr. Boldt: The difficult part is that it all goes into those sub accounts. Urban and rural differences are huge. Hole prices can be different depending on what you are doing. Using the designs I was able to extrapolate the hardware on the pole and the value of that hardware as well as the labour to install it. Mr. Harper: You did a variety of poles. Did any of your poles approach 30% plus? Because if none of them did, then clearly there's a mismatch. Mr. Boldt: Yes, we had one at 31%. It's a crossarm, you can look at the drawing and see. It's at a corner, with guy wires. There are other things that can be more expensive and some things that are cheaper. Rock drilling in some parts of the province. Could you do 100 of these to get an average with different settings? You probably could. Mr. Piaskoski: John has made a valiant effort. He's taken some standard pole designs that he believes that are representative of the population. We have gone through this data and have a series of questions to see whether these proxies are reasonable. At this point though, we are not ready to concur because we have a lot of question to ask.

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	Ms. Milton: It sounds like Horizon or London Hydro has done a lot of work as well and we'd love to see that work. Mr. Harper: Then we could at least see how these numbers compare. Ms. Borovickic: Basically we looked at labour and materials for different poles. Mr. Harper: So you took materials cost for arms and materials cost for the pole and applied that to the total costs in the account. Ms. Borovickic: This account contains all poles. It's from actual numbers. Mr. Piaskoski: John could you do something like this? Mr. Boldt: Well, as I stated, I looked at raw cost of the wood and other materials for poles of different sizes. In our system there is also a labour component. Once I calculated those things I took the common cost and divided that by those ratios. For example the cost of the truck. I'm doing the labour component to set the pole and put the fixtures on the pole. That ratio and then the common cost divided by the ratio of doing that work. Mr. Ahmed: So the rationale would still be applicable on a pole from 30 years ago? Mr. Boldt: It would be comparable. Mr. Piaskoski: So John, you've separated materials? Mr. Boldt: Yes, we build each structure. Mr. Piaskoski: I'm curious to see what you would come up with if you applied the London Hydro methodology. Ms. Borovickic: And I will try their approach. Mr. Boldt: But it's an issue of what we do and do not track. Ms. Borovickic: I'm going to apply the same technology to different poles and see what the numbers look like. Mr. Boldt: So did you apply the price of the poles? Ms. Borovickic: It's already there. Mr. Lesychyn: I think you need to step back. There's a number of data points here. Everyone is in that range. When you get down to it and look at all the assumptions, I think we are going to end up arguing on a number between 15% and 18%. Mr. Rubenstein: I don't think that's it at all. Ms. Milton: Can I ask a basic question about account 1830? Are fixtures included in 1830? You're applying the ratio to a pole that has a ton of fixtures that aren't covered by the account. If you are just applying the ratio to your 1830 then you have a problem. Mr. Harper: John, she's not questioning the proportions you came up with. The issue is the pool of costs is not just poles and fixtures that are Hydro One, it also includes specific costs for Bell poles. In theory your ratio would be appropriate to apply, if you could

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	subtract the fixtures on Bell poles. Mr. Rubenstein: What do we think the materiality of that is? Ms. Milton: It's a lot of fixtures. Mr. Piaskoski: About 40% of poles would be Bell poles. Mr. Ahmed: Are Hydro One and London Hydro comparable? Mr. Boldt: Not if you are looking at Northern Ontario. Mr. Ahmed: The calculation I think is not comparable. Ms. Borovickic: Our average installation cost is $7500 to $8000 per pole on greenfield. Mr. Piaskoski: John can you deduct those fixtures that are on Bell poles? Mr. Boldt: I don' think so. It would be very difficult. Mr. Ahmed: One option may be that you have fixtures there but you don't know the cost of the poles. Mr. Boldt: But you don't know which fixtures are on them. Ms. Milton: Different rates of depreciation too. Mr. Rogers: We're on Hydro One poles, they are on ours. There's a lot of information going into this. I think we are still going to see a close comparison across the OEB. Mr. Rubenstein: I don't know. Ms. Milton: You are applying it to an account where you haven't taken out any of the fixtures from third parties. Mr. Malone: What we can do is take that power fixture component that we know from a standard pole and redo it across the poles. Ms. Milton: That is a way to proxy it but we have a lot of questions about the source data and methodology. But I agree, that is one way to do it. Ms. Borovickic: I have questions on the data I submitted and the table I now see here. Some things were not added together correctly. It's about 30% to 70%. I don't know how this 10% engineering was added to the fixtures. Mr. Rubenstein: We have two problems. First, we don't have a consistent methodology. We also don't have agreement about how these numbers are applied. Mr. Lesychyn: That's why I identified it as a key input for discussion. Mr. Piaskoski: 1830 has to represent the costs on the pole only. Mr. Rubenstein: I assume Hydro One is attaching to a lot more Bell poles than others? Are they an outlier? Ms. Milton: Ideally you want to pull out any fixtures on a third party pole. Mr. Harper: This sounds like mostly a Hydro One issue. Ms. Milton: No it's not, as Casey just said for Hydro Ottawa. A lot depends on the age of the poles, how often they have to put in new poles. There are a lot of different factors.

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	Mr. Ahmed: We might go through this analysis and still find 18%. Ms. Milton: I don't think so. I mean I know Casey's got 8%. There's no real point to doing this if we are just coming up with proxies that we are not comfortable. Mr. Lesychyn: We are trying to come up with the best data set that we can. We have more data than any other utility in this area. Mr. Rubenstein: I don't think we are there yet. Based on the discussions today we can't settle on 18%. Ms. Borovickic: But we didn't use the same methodology. We need to agree on the same methodology. Ms. Milton: And we need to ask questions about the methodology and understand the source data. **Slide 20: Indirect Costs - Capital** Mr. Lesychyn: The next issue is the cost for the neutrals. Some data was provided by the LDCs. The grounding is required for worked and public safety. Mr. Piaskoski: There are two different aspects, grounding and bonding. Mr. Lesychyn: And the point is you need both. Mr. Piaskoski: No, we do not. There is an ESA requirement for the two to be bonded, whether we are there or not. Mr. Brown: Understand that the telcos have their own grounding system. Mr. Lesychyn: In other words if you were not grounded to the neutral what's going to happen? Mr. Brown: A work order should not be there in the first place. The two systems must be bonded for everyone's safety. Ms. Milton: The neutral is there because of hydro. Both systems need the ground but the neutral is only there for hydro. Ms. Borovickic: We have to ask a question. Do utilities send the request to bond or do joint use parties do that? Mr. Brown: Hydro charges 100% of that cost. Ms. Borovickic: But hydro doesn't need that bonding so why would they send that request? Mr. Lesychyn: You can't connect unless you meet that requirement. Mr. Brown: In practice the hydros don't come along sometimes for a long time. Ms. Milton: The bonding is done but it's an operational requirement motivated by hydro being on the line. The only reason the neutral is there is because of hydro. Mr. Boldt: You need the neutral. Anything that comes on must bond, otherwise you must bond. Mr. Brown: I have my own grounds. Hydro One has different requirements than CSA. We ground every 300 meters.

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	Mr. Boldt: Bell maintains their own poles. They don't pay anything to use. Ms. Milton: But it's your neutral. Mr. Boldt: When Bell comes in, they actually put phases in because their safety standards are even higher for their workers. Ms. Milton: But it's your neutral. Mr. Boldt: They're not treated any different after the fact. They pay the same as you after the fact. You need the neutral, you need the bond. Ms. Milton: No we do not need the neutral and we pay to bond. Mr. Brown: CSA requires the systems to be bonded. Mr. Lesychyn: Do you need the neutral to be bonded? Mr. Brown: It's not a one way thing. It's for the benefit of both parties. Ms. Borovickic: But where to bond? If you do not send the request we will not do it. Mr. Brown: I do not need it for my grounding system I have my own grounding system. Right now we pay for 100% of that even though we both benefit from it. Mr. Harper: When you say you pay for it, what's involved? Mr. Brown: We pay for the wire and to bond it to our strand. Mr. Harper: Is it capitalized? I'm getting "a yes" and "a no" here. If you were putting up your own pole, would you require a new neutral line? Mr. Brown: No. Ms. Marconi: Is there a similarity between the separation space and the neutral? They are both required, both electricity and communications equipment are on the same poles. There could potentially be a similar treatment. Is it the same with the neutral costs? Mr. Brown: It's not. I agree it should be shared for the bond but not for the neutral. The bonding is for the safety of all workers. It's required for all parties. Mr. Lesychyn: Aren't you using their asset? Mr. Brown: I'm using their asset and they are using mine. Ms. Milton: You only have a neutral if you have hydro. The comparison with the separation space is not completely accurate. Mr. Brown: We install the same grounding if it's our own pole or a hydro pole. Mr. Rogers: Does your worker ever use a temporary bond if he breaks that strand? Mr. Eby: Rarely are they slicing strands. I haven't seen it done today. I did it 25 years ago. You can't stretch strand. Mr. Lesychyn: So Roy, your point is that they need the neutral to do certain types of work. Mr. Rubenstein: I have a question, when they bond to you, is there anything extra you need to do?

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	Ms. Marconi: Does that change the costs compared to if you had a hydro only pole? Mr. Boldt: We just maintain the pole. Mr. Harper: So you don't have to maintain anything additional. Mr. Boldt: No. Everyone bonds to us and relies on our grounding. Ms. Marconi: If it was a telecom only pole are you avoiding any costs? Mr. Brown: No, we incur costs to bond. Mr. Boldt: If you are running the down ground every 300m, you'd have to tell me how many down grounds you're putting in and where you are incurring extra costs? Mr. Brown: I'm not replying on your system for my grounding. I have my own system. Mr. Boldt: Could you show us where you've grounded and how often recently? Mr. Brown: I can bring up design drawings for every pole profile. Mr. Boldt: Do you ground for copper? Mr. Brown: I'd have to check. Mr. Boldt: You must have maintenance expenses to replace copper after it's stolen. Mr. Brown: I have a grounding system and I maintain it. Mr. Boldt: I'd challenge that. You're not installing a lot of grounds on poles. Mr. Lesychyn: Should this cost be allocated is the first question. The second question is what kind of allocation. Some issues are more important than others here. We are going around in circles. **Slide 21: Indirect Costs - Maintenance** Mr. Lesychyn: Looking at utility data from the five utilities we did a 5 year average for indirect costs, maintenance. Should vegetation be included in the rate? If you take a look at a typical pole you see that you have to clear the line every so often. The question becomes what kind of allocation should be put in place? Mr. Piaskoski: Just to step back, different LDCs treat vegetation differently. Many of the LDCs let us do it ourselves. I see it as an issue that needs to be discussed in detail. If the goal of this working group is to come up with methodology, then I am suggesting that vegetation should be excluded and dealt with separately on a case by case basis. Mr. Brown: I agree. It's already being dealt with efficiently. Don't fix it if it isn't broken. Mr. Eby: I also agree. Over the year I've received bills from the utility for their line clearing and I'm fine with that. Mr. Brown: Varies a lot by utility based on their environment. Brush etc. Mr. Eby: Different utilities have different approaches but also different resourcing; some do it themselves but not all. Mr. Lesychyn: So the Carriers' position is that it is a negotiated relationship with the utility and that is how it should continue.

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	Mr. Eby: It's been handled well so far in my experience. Mr. Brown: There's a method because there's a signed agreement. Mr. Wilkie: We do it on a case by case basis. We've used outside contractors on occasion. Mr. Piaskoski: It would probably be very difficult to come up with an agreed upon methodology for these services. We'd spend a lot of time arguing over it. Mr. Haddock: I think the contentious issue is going to be the trimming around the pole. Everyone benefits from the trimming above. Ms. Borovickic: We have cycled trimming. I would be interested to see how much a telecom spends on trimming, if they do any. Mr. Haddock: After we do any trimming, I doubt there is any more trimming required. Mr. Rogers: When we do our cycled trimming we start at the bottom. It's about protecting the whole pole, not just the hydro space. Mr. Boldt: What I would like to see here, is how much Carriers have spent on forestry over 5 years. We are already taking care of vegetation. Mr. Piaskoski: But that's what we said we'd have to do is sit down and renegotiate our agreements. We don't need the OEB or an overall methodology. This is a conversation that can happen between the five major Carriers and Hydro One if you need it. Mr. Boldt: Lots of time we are flexible moving into forestry because we've already been doing it. Mr. Piaskoski: John do you agree with us that we should be discussing this with each LDC on an individual basis. Mr. Boldt: I'm saying we already take care of vegetation and we are not being paid for it. Mr. Lesychyn: Is it more efficient for each utility to go out there and negotiate? Mr. Brown: If I go back to the agreements I have I'm supposed to do my own clearing. If I don't they can go out and do it then charge me for it. Mr. Boldt: But the administration of tracking that stuff is huge. Mr. Brown: If there's an issue we discuss it with our LDCs, we have that flexibility in our agreement. Mr. Boldt: So can you show that information over 5 years? Mr. Brown: I don't know how we track that information. We have a maintenance budget and it's huge. Mr. Boldt: Just try it. We had to provide lots of data as part of this exercise. Mr. Piaskoski: Michael I have a suggestion. Could we get together and share some data to help give you an idea of the scope? Mr. Lesychyn: I agree, I think that would be helpful. Mr. Rubenstein: We need to know who is being billed and how much that costs.

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	Mr. Harper: In the ideal world, the utilities would be compensated appropriately some way each time they did work on forestry. I have an issue. To say it's in the agreement when what's in writing, doesn't necessarily correspond to what happens in practice. Mr. Lesychyn: So Bill you want to know what's being paid for and who is paying for it. Mr. Harper: In each case you can come up with a standard. Every time we come up with a standard there are always exceptions. So you need to come up with a standard that applies to those that fit those standards. It's about saying that we have an agreement and we are doing what that standard says. Ms. Milton: The problem with coming up with a default is that they all do very different things. I don't think we've seen the data to say whether that is possible. Mr. Brown: I have 35 agreements with LDCs. In those agreements is the clause I read out. Mr. Rubenstein: It's more than just you have an agreement. It's also a question of enforcement so that everyone is happy. I bet you there are plenty of small utilities where it's not the trouble to administer tracking. Mr. Brown: And that happens given where we operate. I'm not saying we don't want to pay for any vegetation management. There is some we do ourselves. We all benefit. Ms. Milton: There are also productivity loss costs, but that's a separate issue from vegetation. Mr. Piaskoski: John we are going to have this discussion again when we renegotiate our agreement but I want to hear from Casey. Mr. Malone: Most of the LDCs trim in and around the secondary and telecom spaces. There is benefit for all parties. Normally the LDCs do not put that cost back to the Carriers. As directed by the OEB in 2005 it's not put back into the rate. Hydro Ottawa's preference is that we'd like to see this work reflected in the rate. Mr. Haddock: In reality we don't charge for administrative reasons. Ms. Borovickic: We trim when we trim, but we don't charge. It's too much work. Mr. Piaskoski: We do our trimming in accordance with the agreements we have. Mr. Lesychyn: Let's say hypothetically, vegetation is included going forward. How will that affect the relationships with the LDCs? Mr. Rubenstein: I don't know, what are the terms of the agreements? Ms. Helt: It would all depend on the terms of the agreement. Ms. Borovickic: We will be revising and resigning our agreements. Mr. Ahmed: It could be that we identify a number in the rate, a few dollars. And you can decide whether you want to pay that or do it on your own. Mr. Haddock: But in lot of cases the utility will be doing the trimming no matter what. Ms. Helt: I think the ideal situation would be that if the agreement didn't exist and Carriers did all the trimming, it's built into the rate. I think that's already happening. If it's totally pushed out of the rate then I don't know what is going on with all of these individual agreements.

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	Mr. Harper: What is the standard allocation methodology that we would apply to this type of cost? **Slide 24: Overlashing Revenues** Mr. Lesychyn: In terms of overlashing revenues, every separate corporate entity pays a rate to the LDC in proportion to their current agreement. Ms. Milton: There are grandfathered overlash agreements but that is a separate discussion. Mr. Lesychyn: We clarified this morning that there is not an overlashing charge of $2. Ms. Milton: There may or may not be, I can't be sure how the other telcos pay. Mr. Brown: We have the right to collect from the carrier under the agreement. Ms. Milton: There is always a strand. Then there is a per attacher fee. If you put up your own strand and add an attacher you still pay a fee. It's a per attacher fee. We don't track the data on an attachment basis. When an application is made for each attachment, they have to justify the weight to the LDC to maintain the structural integrity of the pole. Mr. Lesychyn: Incrementally does that put more stress on the pole and prematurely age the pole. Mr. Boldt: The issue that hasn't been brought up is power supplies that fall outside of the telecoms space. Mr. Lesychyn: I want to make it clear, if you overlash your own strand you only pay once? Ms. Milton: You pay the cost to upgrade the pole and the LDC gets the additional revenue if you are an additional attacher. Mr. Rubenstein: If Bell overlashes on you… Mr. Brown: It's on a per metre basis. Mr. Lesychyn: Should an entity that is paying that $22.35 be paying any additional fee? Mr. Rubenstein: Ideally it should be on attachments but no one has the data so it's on attachers. Mr. Harper: It's a much bigger problem, it's a function of the data. Mr. Lesychyn: So the consensus is to just drop the issue? Mr. Boldt: What are the chances that one carrier will take all that space? Because of the capital expenditure, the chances are very slim. But there are rare cases of reverse monopoly where that happens. Mr. Brown: It's not that they don't have access because they do. Mr. Malone: If you are consolidating Tim, then that really helps us. Ms. Milton: Given the low number of attachers then there's tension here. Mr. Piaskoski: So what is your conclusion Michael? Mr. Lesychyn: It sounds like people are happy with the situation as it is now.

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	Mr. Rubenstein: Just to be clear we are not happy but we understand the data limitations. We should be working on a data plan so that in ten years we can work with attachments. Ms. Milton: I think there is a theoretical problem because you can actually share strands and if we start working with attachers then we need to work through that issue. Mr. Rubenstein: I understand but in a decade we need to be collecting this data. Mr. Lesychyn: What kind of burden does that put on utilities? Mr. Boldt: When you are talking about attachments, what if they are dipping underground? By attachers they are paying their share. Mr. Ahmed: But in the communications space you have only have 3 or 6 poles. Mr. Boldt: Normally 3. Mr. Malone: There's a loss of productivity factor for dipping underground but it is immaterial. It's not exercised but it is there in the agreement. Mr. Boldt: I know in Quebec they do charge twice for a pole attachment. Mr. Eby: Mark, just to extend on your point. I think you were suggesting collecting data on how many attachers vs. attachments. Let's assume that can be obtained. I think it's tracked today. If we want to talk about charging for attachments, they are already being charged through the attachment fee the LDC receives. Mr. Rubenstein: I don't want to have the argument of attachers vs. attachments right now. I understand today for historical reasons the data doesn't exist. Mr. Malone: Hydro Ottawa has attacher and attachment data. Mr. Rubenstein: I don't think Toronto has it. I would like to see recognition of the data limitations in any kind of document that comes out of this process. Mr. Piaskoski: Mark, would it really make a difference? Mr. Rubenstein: It may not. Mr. Piaskoski: So either the cost will be applied to the attachers or the attachments. The dollar value would be the same it's just a question of allocation. Mr. Rubenstein: On an equal sharing basis. Ms. Milton: You're saying that in an equal sharing model you would look at each attachment rather than each attacher. Another fibre on a strand consumes no extra space on a pole. Mr. Boldt: But it does sag a bit more with ice loading. Ms. Borovickic: Exactly. Ms. Milton: It's a different allocation but I think the jury is out on whether that approach would actually be fairer. **Slide 25: Charge Annual Adjustment** Mr. Lesychyn: Talked to one of our finance people on charge adjustment. OEB decisions

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	to date have not approved any adjustment formula. Here's one idea for a formula that aligns with the existing process. Mr. Piaskoski: How would you determine the productivity gain? Mr. Harper: The way it works is the OEB looks at all the utilities and identifies which ones are more and less efficient. There is a different productivity factor applied to each. Mr. Rubenstein: It's an OEB model that is company based. Mr. Harper: It assigns them to one of these cohorts with the expectation that if you are not very productive, more can be expected of you. Inflation also factors into rates. Mr. Rubenstein: It's actually more complicated because there is also an individualized stretch factor for each utility. Mr. Lesychyn: For I-X for year one, we'd have to have a standard rate and then adjust going forward. Mr. Rubenstein: Where it doesn't work is adjusting each utility based on their productivity. You would also not be accounting for rebasing. It wouldn't work for year 6 or year 7. Ms. Marconi: But wouldn't they be updating their rate? Mr. Rubenstein: So you'd need to update it at the time of rebasing. Mr. Piaskoski: In the interim you'd have a default rate for the entire province. Mr. Rubenstein: But what are you doing for the pole attachment rate? Mr. Piaskoski: Utility could come in with their specific costing data. Mr. Rubenstein: That works for a custom rate but I thought the trend was towards something more broadly applicable that works for several years. Mr. Malone: CRTC does phase 2 methodology on forward looking factors including productivity gains. Ms. Milton: But the assumption has always been that it is a rough proxy based on historical data. For background, in theory this sound fine but for it to be fair we need to know what the data is. And once we have the methodology we need to know whether these rates reflect the trends. In theory if your costs are going up, this works. But we are not at that point yet because we don't know how costs have moved historically. Mr. Rubenstein: I think this methodology would actually significantly underestimate costs. Mr. Lesychyn: Historically, we have had no adjustment and we are trying to make these calculations without any understanding of the escalation. Mr. Rubenstein: I completely agree with you. My point was to Leslie. If you are doing it on a province-wide basis, then you have a problem. Mr. Lesychyn: Is there a process in place already that we could piggy back on? Mr. Rubenstein: Sure, I-X generally works. But need to take rebasing into account.

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	Mr. Ahmed: Since the data is pulled from OEB's RRR records, you can just refresh the model after five years. **Slide 26: Bell Issue** Mr. Lesychyn: The Bell issue. I knew this issue would come up anyways. When I looked at this I stepped back a bit and read the Hydro One decision. One of the things that I found was that Hydro One said there is no cross subsidization of costs. The OEB concluded that there is no impact on pole attachment arrangements. If you take the Bell attachments from the Hydro One poles, then the cost to other Carriers would actually increase. Mr. Piaskoski: This is a really tough issue. The findings are a bit deceiving even though when you first read them they seem to make sense. John and I completely disagree on this issue. Let's imagine a world where Hydro One and Bell cooperate on building poles and let each other use the poles without charging each other. This works in a situation with no competition. Then other players come along and they need access too. My argument is that Bell has made a capital contribution to all the poles that Hydro One has access to. You can't treat Bell as a rate paying attacher because it has already paid for the pole by building all the other poles. Hydro One has already recovered, let's say, 40% of those poles from Bell. The balance is what it needs to recover from the other Carriers. Bell cannot be treated as a rate paying attacher. Mr. Ahmed: But most of the poles Rogers uses, Bell is already using. Mr. Rubenstein: I said take the embedded cost and take out 40% as Bell's contributions. Mr. Ahmed: It's the same formula that we were talking about in relation to the CRTC. Mr. Piaskoski: Yes, the CRTC did the exact same thing. Mr. Boldt: We are looking at a rate for when someone is attached to a pole, our pole, not a Bell pole. In BC, Bell owns 40% of the pole. The way our agreement is that if it's our pole and Bell is the first one there, they pay. We use net embedded cost of the pole to calculate. Where we have 60% of the pole, we own all of those poles. Mr. Piaskoski: Why would you pay for Bell's poles? Mr. Boldt: We pay the make ready. If a new pole has to go in, you pay those costs. Mr. Piaskoski: But I am paying about the cost of the pole in the first place, 20 or 30 years ago. We're not talking make ready. At the beginning you paid for 60% of poles and Bell did 40%. You get to use Bell's poles and they use yours. Mr. Boldt: Calculating the rate that all the attachers should pay is what it all comes down to. Mr. Piaskoski: Bell has contributed to the pole population that Hydro One has available to use. Mr. Rubenstein: Why is it not different then, say they did charge Bell $22.35 or whatever

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	the cost would be? They are essentially saying that if they charged each other it would even out. That's how I see it, but Mr. Piaskoski sees it very differently and I'm struggling with that. Ms. Milton: Let's back up to see what the CRTC did. They said some of the poles are just poles and some of the poles are in the joint ownership pools. They said that 40% of the pole is a telecom specific cost. It's cost base was based on the idea of the ownership share. Mr. Rubenstein: But when we talk about joint, it's joint use but not joint ownership. Mr. Boldt: Exactly. Ms. Milton: It's a proxy for saying what the cost of those poles would be from CRTC's perspective. Mr. Piaskoski: Here you have a million poles and have access to all of them, 60% are owned by Hydro One but you can use all of them. Mr. Harper: But looking back in time I don't know what the 60/40 was based on. Mr. Boldt: It's a long history. With similar arrangements across Canada. What would happen if we started charging Bell and Bell started charging us? Mr. Piaskoski: You've already had Bell pay for the capital cost of your poles through the poles they have built that you can use. Mr. Boldt: We do charge Bell in some locations and they charge us. So what's the difference? We could start charging each other. Their agreement is actually up next year so this could actually happen. We're putting all the attachments on our poles and this is how much is costs so this is how much we need to charge. What we do in Thunder Bay is no different than what we do in Ottawa but we are not doing the admin and having to charge each other. Mr. Piaskoski: What would the equivalent fee be that Bell should have paid if this arrangement were not in place? Bell is not a regular rate payer. They contributed capital. Mr. Boldt: Bell could charge us as much as they want. But we don't do it that way. Mr. Lesychyn: If we come down with the standard rate, then this issue melts away doesn't it? The utilities will come in with their own data and input it into the methodology for a custom solution? Mr. Rubenstein: But we just had that with Hydro One didn't we? The issue is not resolved. Mr. Piaskoski: We don't know all the details of what's going on between Bell and Hydro One. Mr. Harper: You at Rogers pay a rate based on the assumption that Bell is paying the full rate. That's how the rate is calculated right now. To the extent that Bell does not pay the full rate, the question is whether that offset is more or less. Your rate is based on the assumption Bell pays the full rate. Mr. Piaskoski: We don't know what rate would be paying. Mr. Boldt: They pay the same as you if you look at the MEUs.

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	Mr. Piaskoski: We're not talking about MEUs. Mr. Boldt: In areas where there's no agreement in place, we pay each other. Mr. Rubenstein: When that happens, where does that revenue turn up? Mr. Boldt: I don't know which account. I would think it's OM&A. **Slide 28: OEB Pole Attachment Rate Tool** Mr. Lesychyn: We've put a tool together and the aim is to standardize the approach going forward. Ms. But will explain. Ms. But: We wanted to introduce a tool to facilitate discussion on costs. This tool would allow the LDCs to use data and default rates. You can see the impacts using different assumptions and scenarios. Data from past proceedings was only used for direct costs because we didn't have data from the working group. We have a line on whether a cost would be applicable to the Carriers for land right of way. This is based on previous discussion with this working group. Would this be a good template for LDCs to track pole replacements costs? Mr. Lesychyn: The values we are using here are just for illustrative use. Mr. Piaskoski: And they are based on Hydro One, Hydro Ottawa and Toronto Hydro data. Ms. Marconi: Yes. All of the cost categories we've reviewed in the presentation today is reflected in this tool. Mr. Piaskoski: So columns H and I are the five LDCs that have provided data so far? Ms. Marconi: Yes. Mr. Lesychyn: We've hidden some of the data for illustrative purposes. Mr. Piaskoski: So don't we need to agree on what the line items are? Mr. Lesychyn: Exactly. Ms. Marconi: The purpose is to show that there is this spread sheet that could be provided to LDCs so that they could come up with their own rates and make adjustments easily. Mr. Lesychyn: The idea is to standardize the process. Ms. Milton: But it's not just the name of the line item. You also need to know how they collect that data. Ms. But: This is data that I pulled from the LDCs, if we assumed the same deduction for power then we can see the results. This data projects a new default rate of $40. This looks consistent with Hydro One and Toronto decisions. Mr. Lesychyn: But the neutral and the vegetation have a big impact. That's why I wanted to make sure we talked through those issues. Ms. Milton: So does equal sharing.

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	Mr. Lesychyn: I don't disagree. Ms. Marconi: I think the main thing here is to see whether there are comments on the usefulness of a template like this. There's a lot as Leslie said about having the right numbers and making sure that those go in. Mr. Ahmed: So the cost inputs for those models are all linked to those 4 or 5 accounts? So could you just pull that data automatically? Ms. But: Yes. Ms. Milton: So some are weighted averages depending on the columns? Ms. But: Yes, so columns H and I are weighted. Mr. Lesychyn: I think there are advantages and disadvantages for weighting in each case. Mr. Rubenstein: The tool is great for us to walk through numbers and test sensitivities. Outside of this room, what is the purpose? Will a model like this be used for a utility-specific rate and some kind of escalator? Ms. Marconi: I don't think we've landed on the end point but as you've said it is useful to use in the meantime. Could this be helpful? Mr. Malone: I know Toronto Hydro and Hydro Ottawa developed a very similar tool. Mr. Lesychyn: Do you think it would be helpful Casey to standardize that tool? Mr. Malone: Sure. Mr. Rubenstein: I'm not sure if that goes far enough though. We have a better sense of the categories but we are still fighting over the data inputs and the methodologies. I would have hoped that if we were going to fight at a OEB hearing that would happen once, or twice. That's why I wasn't maybe in favour of one provincial rate but a few rates. These fights all take time. Mr. Lesychyn: So you're in favour of like a rural vs. urban rate? Mr. Rubenstein: I was thinking something like a high, medium, low cost so that we can minimize the time we need to fight at the OEB. Mr. Piaskoski: I think that as a sensitivity analysis this is great. But as for line items, we've seen today that we still don't have agreement. I don't know who is going to decide how to define these items? Is that the OEB and Nordicity? Mr. Jack: We're trying to go one level down. Ms. Milton: We haven't even seen the data. I think this is a useful too but the devil is in the details. Mr. Boldt: Is the issue how you get the data and what data you pick from? There's a lot of data that isn't here. Ms. Milton: But for instance the way Toronto Hydro came to admin cost if fundamentally different from Hydro Ottawa. We haven't talked about that much because those are smaller costs but there are also larger costs where there is significant variation. A lot of

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	LDCs also charge for permits separately. How is that going to work? Mr. Lesychyn: But if the process is standard then that should make it easier going forward right? Ms. Milton: Well we can test the data once we see it. Mr. Rubenstein: Pole data is bizarrely complex as you guys know. And I will tell you that only gets more complicated for some of the utilities that are not in the room. Ms. Milton: We don't want to be here for every hearing.
5) **Nordicity Presentation (part 2)**	**Slide 14: Comparative Cost Summary 2005 vs 2017** Mr. Ahmed: There are few data points that we didn't get so we used the information from Ms. But and Michael. Our model uses weighted averages. As for accumulated depreciation, we had some information that we received after the first meeting. We used that ratio to calculate the net embedded cost. We came up with 38.05% over 10 years. There is variation with Ms. But's calculation of 19% but her work is also for just 5 years. Looking at slide 28, this shows information that we already reviewed at the second meeting. **Slide 15: Illustrative Rate Based Updated Inputs** Mr. Ahmed: I think Ms. But, you have $43 and we got $41. This shows the impact that different assumptions make on the results. **Slide 16: Data Summary – Capital Cost per Pole** Mr. Ahmed: Again, this is similar to the approach used by Ms. But. Ms. Milton: And the bottom row that's a ten year embedded average? Mr. Ahmed: Yes. We show that in the next slide. **Slide 17: Data Summary – Maintenance Cost per Pole** Mr. Piaskoski: So is vegetation management covered in this category? Mr. Ahmed: Yes. Mr. Boldt: Where did you get these numbers? Mr. Ahmed: These are based on the numbers that LDC's provided. We will distribute the Excel so that you can make comments. Mr. Piaskoski: Going back to Power Fixtures in the top table. Could you explain? Mr. Ahmed: We were trying to reconcile with Ms. But's work. Ms. Milton: What are the numbers for given that the label says Power Fixture? Mr. Ahmed: We can show you in the Excel. Mr. Harper: Are each of these individual points calculated from the Hydro One data. Mr. Ahmed: We'll show the data from each table. Mr. Piaskoski: Why did you want to compare with Ms. But's? I got the impression that what she was creating was just artificial.

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	Mr. Lesychyn: We did throw in the default numbers for that model.
	Mr. Ahmed: Our focus is on the data we received from the utilities.
	Mr. Piaskoski: So if I understand, Ms. But created a model based on the three proceedings and your model is based on the data collected from 2-4 LDCs. Because I just again caution that the Toronto Hydro data has not been tested in a decision.
	Mr. Lesychyn: No Michael, are model and projected cost is based on the 5 year average of PAWG data, three proceedings and slightly different cost allocations for inputs, but we are trying to work with the best data we have.
	Mr. Piaskoski: So I understand that Tanveer is working with the data that he collected. Will we be able to trace the inputs?
	Mr. Ahmed: Yes, you'll be able to take a look at our work. We are clear when we proxied it, that information is highlighted.
	We actually went through the rest of the slides at our last meeting.
	Nordicity Model
	Ms. Borovickic: Need to change the split for engineering. It's not 10%. More like 7% and 3%.
	Mr. Rubenstein: Just to go back to slide 14 I have a question.
	Mr. Ahmed: In slide 28 we showed the net embedded cost to the cost ratio.
	Mr. Rubenstein: Why are you using a straight average?
	Mr. Ahmed: It reflects how we got the data from the first data request. The 1830 extract does not show accumulated depreciation.
	Mr. Rubenstein: So how does the ratio change year to year?
	Mr. Ahmed: We could probably add a column here.
	Mr. Rubenstein: I just want to know if it is constant or it's changing.
	Mr. Ahmed: It is changing.
	Mr. Piaskoski: Casey, what's in account 1830 is that gross costs?
	Mr. Harper: It's gross but it's not broken down in more detail.
	Mr. Piaskoski: So 1830 always shows gross.
	Mr. Ahmed: In 2015 there was some replacement, that explains the decrease of accumulated depreciation.
	Mr. Rubenstein: It just seems to me that an average understates the net embedded cost.
	Mr. Ahmed: The net embedded cost increases year over year. If we use the average I think it's reasonable.
	Mr. Rubenstein: But if you look at your numbers that's pretty linear. It's not up and down. I would say my assumption is better than your assumption because it clearly reflects the trend.
	Mr. Ahmed: I think it's just one approach to take. Eventually, these poles will be replaced,

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	that means the net embedded costs will start to decline. Mr. Rubenstein: That's why I've been saying it's important to look at what's going on. In terms of cases I've seen for 2019 there are more poles being replaced. Mr. Harper: History would suggest that the numbers are generally going up no matter what three years you look at. Mr. Rubenstein: To me, the data does not support using an average. Mr. Ahmed: The variation only becomes significant in the last four years. I don't know if it's possible to determine the average life of a pole and use that as a basis to calculate the net embedded cost? We would need more data. Mr. Boldt: Are you trying to determine the average age of a pole. Mr. Ahmed: Yes, looking at the population. There is a straight line deprecation. Mr. Boldt: I think that's something that we could provide. Ms. Milton: You still don't know if it's a whip or not. Ultimately these poles should last 50 years. There are rare circumstances but ultimately the poles should last for a long time. Mr. Boldt: I think it's going to spike for the next few years. A lot of these poles are very old. Mr. Lesychyn: But it will level out over the long term. Mr. Rubenstein: I disagree with that. Ms. Milton: But poles last a really long time. Mr. Rubenstein: The accounting lives of these assets do not account for the real lives of these assets. Mr. Boldt: Some of the best poles we have are the oldest poles. Mr. Ahmed: The DCF model that we talked about this morning is also in this file. Mr. Lesychyn: I think you need to recognize that Tanveer has done his calculations and we've done ours and with the hearings, they are all in the same $40-50 range. Ms. Milton: But Michael we didn't get to argue methodology in two of those hearings. That's why we are here. Mr. Lesychyn: Let's move on to where do we go from here and how to move this forward. Ms. Milton: What will the staff report do? Mr. Lesychyn: It will provide some recommendations. Ms. Helt: It will be presented to the OEB and all the options are open, they may decide a hearing is necessary. It just depends. Nordicity's draft report will be sent out for comments so if there are things in terms of process then we would want to hear from you. Mr. Piaskoski: Would we be able to provide written comments as part of the process before the report. All the assumptions and all the methodologies that have gone into these calculations have not been agreed upon and tested. Or maybe the OEB and Nordicity think you already have enough information to make decision.

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	Mr. Rubenstein: I think there's a lot of complexity and disagreement. Is it that the staff report will be a proposed approach? Or will it be a summary of what was heard? Will it present a recommendation on the way forward? These are very different options. Mr. Lesychyn: I think it could be either Mark, I would need some further direction from Lynne. Ms. Helt: I agree Mark, that there is a lot of disagreement and that would have to be noted in the report. It may still make a recommendation but it will present the different views of the parties. Nordicity's findings will be part of that. Mr. Harper: So does Nordicity believe that it needs more input? It depends on how the process works and where people feel is the most appropriate point to provide feedback. Mr. Piaskoski: Personally, I would say that we would like to provide written submissions to assist Nordicity in writing their reports. Ms. Helt: Okay, and those submissions based on the presentation today. That's up to Nordicity to decide. Mr. Rubenstein: I'm uncomfortable with that. Is the point that each side is making an argument to Nordicity? There's an inequality of arms issue. My client has less resources than Rogers to bring these issues back up with the OEB. Mr. Lesychyn: The answer here is that Nordicity, myself and Nancy need to sit down and figure out what the process is given the budget and timelines. The process could go on forever with rebuttals. Ms. Helt: In terms of timing and budget, not to disagree with you but this has been a long process and we want to get it right. I agree that you and Nancy and Lynne should discuss process going forward. The Carriers want the chance to write submissions before Nordicity writes its final report. Mr. Piaskoski: We also have questions about the data that John provided. We're almost getting into a proceeding with interrogatories here. Mr. Lesychyn: And that's what I'm afraid of. Mr. Rubenstein: Based on past experience, I think Nordicity will come up with a general framework, staff will make some adjustments and there will be a draft report with the chance for feedback. But the first case that these findings are applied to we will be back here fighting over these same issues. This is a consultation right? Not a hearing. We need to figure out data, methodology. Mr. Harper: The Nordicity report needs to acknowledge where the consensus exists. We have to confirm that there has actually been on consensus and on which points. The last thing you want is saying there was consensus and receiving submissions to the contrary. Ms. Milton: I think you can say consensus if everyone agreed. I don't think that applies in many cases. If there wasn't consensus you have to list who held which position. I don't think majority is useful in this case because it's arbitrary who is in this room. That's not a flaw in this process but that's just the way it is. Mr. Rubenstein: Well there are three groups here and each one wants something different. I'm not sure that each issue lends itself to a single sentence summary. If the

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	end result is a utility specific rate, then proxies will not be sufficient. Mr. Lesychyn: I think that would be a two phase process. You need the best of both worlds. Mr. Ahmed: As you said the issues are attachers for example. The data we have is the best we can get. The only thing to decide is whether to use the actual or the presumptive. Mr. Lesychyn: Looking to past OEB decisions, they favour actual. Ms. Milton: But they refused to listen to our arguments on that. Mr. Rubenstein: I understand that in front of a panel the OEB doesn't want to get into every decimal, that's why we are here to some degree. But there are other issues that will be important going forward that we have not discussed. Mr. Harper: An issue the OEB needs to struggle with is, if you establish a methodology, only 1/5 of the utilities are coming in every year. What do you do with the other 4/5? Do they stick with the existing rate? A default rate? Ms. Helt: The idea of doing a standard rate vs. another rate just becomes a bit more complicated. Mr. Harper: Some of the utilities are under recovering their costs. The question comes down to, can you change the retailer rate? The dollars involved are far less than what's on the table here but the issues are the same. What we are doing here is almost a bit of groundbreaking work for these other areas. Mr. Piaskoski: I have a suggestion for the minutes. Instead of focusing on that, let's get a summary of what you see as the main issues. We can go back and forth on that instead of passing the minutes around. Mr. Lesychyn: I see the minutes and the issues as one and the same. We can organize the minutes in terms of issues and prioritize. The issue is, what are the three main material inputs? Net embedded costs. Number of attachers. And whether we include vegetation and the neutral costs. Mr. Piaskoski: The allocation is huge. Mr. Boldt: I agree. Mr. Ahmed: We still have to agree on the allocation but do we agree on the cost numbers? Ms. Milton: No. The piece per power specific is not ready yet. Mr. Rubenstein: So what you do with the numbers? Do you take the average? These are big differences.
6) Conclusion & wrap-up	Mr. Lesychyn: concluded the meeting by thanking everyone for participating and indicated that he would be getting back to everyone on the next steps in the process shortly. Mr. Piaskoski: requested a copy the excel spreadsheet prepared by Nordicity and Tool prepared by the OEB to go over the data and calculations in each.

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	Mr. Lesychyn: confirmed both would be made available to everyone.
7) Action items	Please note the Excel spreadsheet prepared by Nordicity and the OEB's tool will be sent in separate documents.