

RESPONSES TO THE VECC'S INTERROGATORIES

INTERROGATORY 1:

Reference(s): Blackwell, page 7, paragraphs 21-23

- a) Is it Ms. Blackwell's position that an aggressive pole replacement program will lead to a temporary increase in depreciation expense such that the use of such values as a cost input will overstate future years' costs. If so, please explain more fully how this will occur when the depreciation will continue for the life of the newly replaced poles.

RESPONSE:

Response provided by Ms. Blackwell

- a) In my opinion, aggressive pole replacement program will lead to a temporary increase in depreciation expense, for the reasons stated in my evidence.

Equally import is that fact that under THESL's proposed methodology for calculating the wireline pole attachment fee, the indirect cost per pole is based on the depreciation expense for additions that are forecast to be incurred in the test year, 2015. The depreciation expense under THESL's approach reflects the number of new poles installed in the test year, as this amount largely determines the net additions to the accumulated depreciation for pole assets recorded in Account 1830. In addition, new poles typically have a higher cost than ones installed in previous years, due to the effect of inflation, thus increasing the depreciation expense per pole relative to a longer term average.

Depreciation expense for a single year will not be representative of future depreciation expense where capital programs drive higher investment (and hence depreciation expense) in some years rather than others. Accordingly, average depreciation expense over a representative period represents a better estimate of annual cost than a single year's data.

The fact that depreciation will continue for the life of the newly replaced poles has no impact on the depreciation expense associated with net additions in a single year.

See also the discussion at paragraphs 139 to 145 of my evidence.

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INTERROGATORY 2:

Reference(s): **Blackwell, page 8, paragraph 25 and page 59, paragraphs 165-168.**

- a) In Ms. Blackwell's view should the weighted average cost capital used include an allowance for income taxes.
- b) What is Ms. Blackwell's understanding as to whether or not income taxes have been included in the weighted average cost of capital used by THESL?

RESPONSE:

Response provided by Ms. Blackwell

- a) The weighted average cost of capital (WACC) should be based on the cost of debt and cost of equity that the Board approves for purposes of establishing the revenue requirement that forms the basis of THESL's rates for electricity rate payers. THESL has proposed that the Board approve a WACC of 6.19%, as indicated in its response to WR-Carriers-16 (b) and (c).

This is consistent with the Board's determination in RP-2003-0249, page 9.

- b) My understanding is that the WACC used by THESL is a pre-tax value, as indicated in THESL's Evidence, Exhibit 8, Tab 2, Schedule 1, Appendix B, page 9.

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INTERROGATORY 3:

Reference(s): **Blackwell, page 11, Footnote 7**

- a) Please confirm that the denominator used in the calculation should be 16.75 (i.e., 5.25+11.5).

RESPONSE:

Response provided by Ms. Blackwell

- a) Confirmed. The value of 31.3% cited in Footnote 7 is derived by dividing 5.25 feet by 16.75 feet.

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INTERROGATORY 4:

Reference(s): **Blackwell, page 12, paragraph 37**

- a) Please confirm that in the example given in paragraph 37 the assumption is that the 2.5 non-hydro attachers per pole are all "communications attachers".
- b) Please provide a schedule that sets out the derivation of the 54.6% allocation factor for indirect costs to all communications attachers.
- c) Please provide a schedule that sets out the derivation of the allocation factor using the same approach but assuming 1.6 users per pole in addition to the hydro attacher.
- d) Please provide a schedule that sets out the calculation of the allocation factor for indirect costs to all communications attachers using the same assumptions as in the Blackwell evidence but with separation space included as part of the dedicated communications space (as per the OEB in RP-2003-0249).
- e) Please provide a schedule that sets out the calculation of the allocation factor for indirect costs to all communications attachers with separation space included as part of the dedicated communications space (as per the OEB in RP-2003-0249) and also assuming THESL's 1.6 attachers per pole in addition to the one hydro attacher.

RESPONSE:

Response provided by Ms. Blackwell

- a) Confirmed.
- b) See Attachment A.

The pole allocation formula used to derive 54.6% was inadvertently based on the equal allocation approach, discussed at paragraph 35 of my evidence, where the separation space was fully allocated to communications attachers. The allocation factor using the adjusted equal allocation, with separation space included as common space is 52.3%..

- c) See Attachment B.
- d) See Attachment C for the calculation of the space allocation factor based on 2.01 wireline communications attachers, 1 hydro attacher and applying the proportionate use model. Under the proportional space allocation approach, the separation space is allocated to the attachers in the communications space. In other words, the separation space is treated as part of the pole space dedicated to the communications attachers, as

this approach presumes that communications attachers are incremental (rather than equal) users of the pole.

The OEB in RP-2003-0249 established the pole allocation factor using the equal sharing allocation approach. This is a different formula than the proportional space allocation formula. The Blackwell evidence proposed that, if the equal sharing allocation approach is used, the separation space should be considered common to all attachers, rather than dedicated to communications attachers, since all users are presumed to benefit equally from the pole and be equal users of the pole.

- e) See THESL's response to 8-OEBStaff-100, pages 7 and 8.

The formula for the allocation factor is the same as in Attachment A.

Number of communications attachers per pole = 1.6, assuming all non-hydro attachers are communications attachers, as indicated in WR-VECC-4 (a).

Total attachers per pole = 2.6, assuming one hydro attacher and no other non-hydro attachers

	Space allocation	Power	Communications (all attachers)
A. Buried depth	6.00	2.31	3.69
B. Clearance	17.25	6.63	10.62
C. Communications space	2.00	0.00	2.00
D. Separation space	3.25	1.25	2.00
E. Power space	11.50	11.50	0.00
F. Total pole space	40.00	21.69	18.31
Allocation of pole space		54.2%	45.8%

The formula for the allocation factor proposed in the Blackwell evidence is as follows:

$$= \left\langle \left\{ \frac{(C)+(D)}{[(C)+(D)+(E)]} \times [(A)+(B)] \right\} + (C)+(D) \right\rangle \div (F)$$

Number of communications attachers per pole = 2.01

	Space allocation	Power	Communications (all attachers)
A. Buried depth	6.00	4.12	1.88
B. Clearance	17.25	11.84	5.41
C. Communications space	2.00	0.00	2.00
D. Separation space	3.25	0.00	3.25
E. Power space	11.50	11.50	0.00
F. Total pole space	40.00	27.46	12.54
Allocation of pole space		68.7%	31.3%

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INTERROGATORY 5:

Reference(s): **Blackwell, page 13, paragraphs 41-42 and page 40, paragraph 110.**

- a) Please confirm that, per the Evidence of Mr. Timothy Brown (paragraphs 5-6), not all THESL poles with costs recorded in Account 1830 necessarily have wireline communications attachments. If not confirmed please explain why.
- b) Please confirm that if the methodology uses the total costs recorded in Account 1830 and the corresponding full pole count, then the assumed number of attachers per pole will have to take into account those poles where there are no wireline attachments. If not confirmed, please explain why.

RESPONSE:

Response provided by Ms. Blackwell

- a) Confirmed.
- b) I do not confirm. The wireline pole attachment fee is based, in part, on an allocation of the indirect costs per pole to the wireline pole attachers. The derivation of the total indirect cost per pole is based on the indirect costs for all poles divided by the total count of poles associated with those poles. It is assumed that the indirect costs per pole do not differ substantively between poles with wireline attachments and those without such attachments, absent information that would indicate otherwise.

The average number of wireline attachers per pole is used to determine the contribution to the indirect cost per pole that should be provided by wireline attachers for those poles to which they attach. It would be inappropriate to include all poles, including those poles without any wireline attachments, in the derivation of the average number of attachers per pole. To do so would artificially lower the average number of attachers per pole. Applying this lower value have the effect of requiring wireline pole attachers to contribute to the recovery of the indirect cost of poles to which they do not attach.

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INTERROGATORY 6:

Reference(s): **Blackwell, page 26, Table 4 and page 36, Table 6.**

- a) Please confirm that in her calculations, Ms. Blackwell assumes there are a total of 2.51 non-hydro attachers per pole and that 2.01 of these are wireline communications attachments. If not, please explain.
- b) If confirmed, please explain why in the Adjustment column in Table 6 the allocation factor applicable after one removes data inputs unrelated to wireline communications shouldn't be 21.83% (i.e., $27.26\% * (2.01/2.51)$).

RESPONSE:

Response provided by Ms. Blackwell

- a) Confirmed.
- b) There is insufficient information on the record of the proceeding to verify that the proportion of data inputs related to wireline communications attachments versus all third party attachments is directly proportional to the ratio of the average number of wireline communications attachers to the total number of third party attachers per pole.

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INTERROGATORY 7:

Reference(s): **Blackwell, page 38, paragraph 111**

- a) Are the circumstances under which THESL receives grants and/or contributions such that one would expect to see the proportion of grants/contributions relative to embedded value of THESL's assets to be generally the same across all types of assets or is THESL more likely to receive contributions/grants for some types of assets over other types of assets?

RESPONSE:

Response provided by Ms. Blackwell

- a) There is insufficient information on the record of the proceeding to provide a response.

I am aware of filings by other electrical utilities that provide a further breakdown of account 1995 used to track contributions and grants that associate these with various assets such as poles and wires. THESL has not provided this more detailed breakdown.

RESPONSES TO THE VECC'S INTERROGATORIES

INTERROGATORY 8:

Reference(s): **Blackwell, page 43, paragraph 122**

- a) Please clarify the discussion in paragraph 122. Is it Ms. Blackwell's view that there are no benefits to replacing poles before they reach their end-of-life?
- b) If there are no benefits, is it Ms. Blackwell's view that spending for such replacement is unnecessary and that THESL should therefore not be permitted to recover the cost from either electricity consumers or 3rd party attachments?
- c) In the alternative, if there are benefits, why should the cost of replacement be recovered entirely from electricity consumers as opposed to all users of the poles?

RESPONSE:

Response provided by Ms. Blackwell

a), b), c)

The response must be considered in the context of the entirety of that section (paragraph 118 to 129), and specifically all of paragraph 122 of my evidence, which states:

"THESL indicated that poles are replaced before they reach their end-of-life for a number of reasons, including replacing poles that are located in an area where the company is engaged in projects involving work on other assets. **Wireline communications attachers derive no material benefit when THESL replaces a pole prematurely as part of a project to upgrade other assets owned by THESL.** Wireline communications attachers are however significantly penalized because this activity inflates the net embedded cost per pole." (emphasis added, footnote omitted)

The statement regarding benefits is specific to wireline communications attachers and poles that are replaced prematurely as part of a project to upgrade other assets owned by THESL. For example, when THESL replaces poles in the process of completing a project to renew its underground circuit plant, or convert the box construction configuration used to support power-specific assets, there may be benefits for THESL and electricity rate payers in the form of improvements in the delivery of electricity.

I have no opinion on the magnitude of the benefits that may flow to THESL and electricity rate payers as the result of the capital programs THESL proposed and which would also result in pole replacements, or the appropriateness of including those

programs in the rate base and revenue requirement that form the basis of THESL's rates for electricity rate payers.

However, wireline communications attachers do not benefit from the premature pole replacements that result from such programs. Instead of receiving a benefit, wireline communications attachers incur additional costs when poles are replaced prematurely. Under the terms of the support structure agreement with THESL, wireline communications attachers are required to move their attachments at their own expense, and at the time and date specified by THESL. The costs associated with moving the wireline attachments would not have been incurred, or at least would have been deferred, absent THESL's pole replacement program.

I also am aware that wireline communications attachers are required to pay for pole replacements when an existing pole cannot accommodate the attachments they wish to place. The make ready charges levied by THESL recover the costs of new poles and their installation. THESL retains ownership of the pole. Whether electricity rate payers may benefit or not from such pole replacements, the wireline communications attachers pay the entire cost of the replacement.

Finally, I suggest at paragraph 129 of my evidence that the Board should take into consideration the impact that premature pole replacements has on net embedded cost per pole, but that I have been unable to make an adjustment to THESL's net embedded cost without further evidence from THESL.

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INTERROGATORY 9:

Reference(s): **Blackwell, pages 50-51, paragraphs 144-145**

- a) Given that pole attachment rates are being set for 2015 and subsequent years thereafter (until reset through a subsequent application) why is it appropriate to use historical depreciation costs for 2011-2015?

RESPONSE:

Response provided by Ms. Blackwell

- a) As noted at paragraph 143 of my evidence, estimating depreciation expense based on a single year is not appropriate, as it reflects variations in capital programs. An average of historical depreciation costs for the five-year period 2011-2015 was used to represent an annualized depreciation expense that is less variable. As noted in my evidence at paragraph 144, it would be more appropriate to use the average depreciation expense for all poles in use, but that information was not available.

In other regulatory proceedings, including in the proceeding leading to RP-2003-0249, the annual depreciation expense was based on an estimate derived from historical information on embedded and net embedded costs and the asset life for poles that effectively reflected the average depreciation expense for all poles in use.

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INTERROGATORY 10:

Reference(s): **Blackwell, page 57, Table 13**

- a) Please confirm that the \$185.60 average cost value used in Table 13 does not account at all for the impact that inflation would have had on the per pole cost of treatment over the period.

RESPONSE:

Response provided by Ms. Blackwell

- a) Confirmed.

The amount of \$185.6 (stated in thousands of dollars) was calculated as the average of the costs over the most recent five-year period in order to even out the fluctuations in costs, and to take into account factors noted at paragraphs 151 through 158 of my evidence which should result in a downward trend in these costs. An adjustment for inflation for the costs reported for each of the five years is unnecessary under the circumstances and would not have a material impact on the pole attachment rate.

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INTERROGATORY 11:

Reference(s): Blackwell, pages 64-65, paragraphs 184 and 188

WR-Carriers-4

- a) Is it Ms. Blackwell's understanding that the 46,405 figure represents: i) the total number of poles with 3rd party attachments or ii) the number of poles for which data has been gathered by the Pole Inspection Program to date (and which is only 80% complete) that were found to have 3rd party attachments.
- b) Would the later interpretation address some of the inconsistencies noted in the Ms. Blackwell's evidence?

RESPONSE:

Response provided by Ms. Blackwell

- a) THESL's response to WR-Carriers-4 stated that the figure 46,405 was obtained from data gathered by the Pole Inspection Program, retrieved in March 2014. THESL has relied on this information to support its estimate that there are currently 1.61 attachers per pole. However, as discussed at paragraphs 170 to 177 of my evidence, there is considerable uncertainty as to whether the figure 46,405 represents a reasonable estimate of the number of poles with third party attachers in total or wireline communications attachers specifically.
- b) I am of the view that the interpretation of the figure 46,405 does not address the inconsistencies noted in my evidence, as discussed in paragraphs 170 to 195 of my evidence.

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INTERROGATORY 12:

Reference(s): **Blackwell, page 67**

- a) Are the other 0.5 attachers per pole assumed to also use/share the "communications" space on the pole? If not, where and how are they assumed to be attached?

RESPONSE:

Response provided by Ms. Blackwell

- a) The 0.5 attachers include third party attachers other than wireline communications attachers. These other third party attachers may have attachments in the communications, separation, or clearance space on the pole, as indicated in THESL's response to WR-Carriers-2.

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INTERROGATORY 13:

Reference(s): **Blackwell, page 11, paragraph 34 and page 69, paragraph 198**

- a) Please confirm that under the proportional use approach as described on page 11 in total all third party attachers (including third party wireline communications attachers plus other attachers) would be allocated 31.3% of the indirect costs. If not, please explain what the the allocation of indirect costs would be.
- b) If there are 2.5 third party attachers in total why wouldn't the portion of these costs attributed to each attacher (including a wireline communications attachers) be 12.52% (i.e., $31.3\%/2.5$) as calculated on page 11 as opposed to 15.6% set out on page 69?

RESPONSE:

Response provided by Ms. Blackwell

- a) This is not confirmed. Under the Proportional Allocation factor for allocating indirect costs, the fee for wireline communications attachers is based on the proportionate use by these attachers of the useable space on the pole as the basis for allocating the non-useable or common space on the pole (i.e., buried and clearance). The issue before the Board is to determine the fee for wireline communications attachers. THESL has not proposed a fee, or changes to a fee, for other third party attachers.
- b) The number of third party attachers in total is only considered when applying the Equal Sharing Allocation methodology. The 2.51 third party attachers in total is not an input under the Proportional Allocation factor methodology. The allocation for all wireline communications attachers under the Proportional Allocation factor of 31.3%, and therefore, is divided by 2.01 and not 2.51 or 2.5.

RESPONSES TO VECC'S INTERROGATORIES

INTERROGATORY 14:

Reference(s): **Blackwell, page 70, Table 20**

- a) Please confirm that under the Proportional Allocation method the calculation of each of values in Rows A and B is based on the 31.3% of footage for the item concerned divided by 2.01 communications attachers (e.g., For Row A: $0.93 = 6 \text{ feet} \times 31.3\% / 2.01$).
- b) If confirmed, please explain why the numerator used is 2.01 as opposed to the total number of non-hydro attachers.

RESPONSE:

Response provided by Ms. Blackwell

- a) Confirmed.
- b) The value 2.01 is used in the denominator, not the numerator as indicated in the interrogatory.

The Proportional Allocation method does not directly consider the allocation of pole costs to third party attachers other than communications attachers. The number of all third party attachers, including communications attachers is a factor under the Equal Sharing Allocation method.

See the response to WR-VECC-13.

RESPONSES TO VECC'S INTERROGATORIES

INTERROGATORY 15:

Reference: Ware, page 2, paragraph 4

- a) What is Dr. Ware's understanding of the Ontario Energy Board's policies with regard to pricing of non-electric services provided using regulated electric utility resources (i.e. is it incremental costing, fully distributed costing or some other approach)? Please provide references to relevant OEB decisions that support the response.

RESPONSE:

Response provided by Dr. Ware:

Regarding the pricing of the relevant service at issue, pole access for wireline attachments, the Board in its CCTA Decision RP-2003-0249 used the equal sharing methodology to allocate common costs, but acknowledged that a case can be made for competing cost allocation methodologies such as the fully distributed cost methodology.¹

¹ *In the Matter of an Application pursuant to section 74 of the Ontario Energy Board Act, 1998 by the Canadian Cable Television Association for an Order or Orders to amend the licenses of electricity distributors, Decision and Order, RP-2003-0249, March 7, 2005; see also footnote 23 in the Expert Report by Dr. Ware.*

RESPONSES TO VECC'S INTERROGATORIES

INTERROGATORY 16:

Reference: Ware, page 7, paragraph 14

At paragraph 14, Dr. Ware states: "The FDC pricing methodology is grounded in sound economic principles and is a methodology widely used by regulators in North America for allocating common capital costs between different uses for different products."

- (a) Focusing on the first part of that sentence, "The FDC pricing methodology is grounded in sound economic principles", please provide references to the economic literature supporting this statement.
- (b) At note 21 of his evidence, Dr. Ware cites a textbook that he co-wrote, entitled *Industrial Organization: A Strategic Approach*. At page 846 of the book, he states; "FDC pricing will be inefficient for two reasons. First, FDC prices are not Ramsey prices: they are not based on marginal costs or demand elasticities. Second, even though the revenue from a product will be set at least as great as the allocated costs, FDC prices will not, in general, be subsidy free." Does Dr. Ware still believe that FDC prices will be inefficient, as he wrote in 2002? If not, please explain why not.
- (c) At paragraph 16, Dr. Ware provides a quotation from Alfred Kahn, to the effect that common costs "may be distributed on the basis of some common physical measure of utilization, such as minutes, circuit-miles, message-minute-miles, gross-ton miles, cubic feet, or kilowatt-hours employed or consumed by each. Or they may be distributed in proportion to the costs that can be directly assigned to the various services. [...] [T]he allocations among the various services are often made in part on the basis of the relative number of physical units of consumption or utilization by each, and the total allocation dollars are then divided by those physical units to get the unit costs." Between the two sentences cited, in fact the second sentence after the first sentence cited, Dr. Kahn also wrote as follows: "Quite simply, the basic defect of fully distributed costs as a basis for rate making is that they do not necessarily measure marginal cost responsibility in a causal sense." Could Dr. Ware reconcile this statement with his belief that certain forms of fully distributed costs can be economically efficient.

RESPONSE:

Response provided by Dr. Ware:

- a) Economic principles of FDC pricing are explained, for example, in Spulber, Daniel F., *Regulation and Markets* (Cambridge, Massachusetts: MIT Press), 1989, Section II: Competition and Pricing under Increasing Returns to Scale, Chapter 3: Cost-Based Pricing.
- b) The quoted sentence from p.846 of the textbook co-authored by Dr. Ware relates FDC pricing to Ramsey pricing. Ramsey pricing maximizes total welfare subject to a multi-product firm breaking even under the constraint of uniform pricing. It allocates common costs based on detailed information about the demand elasticities and cost functions of all regulated products.

Cost-based approaches to the recovery of common costs on the other hand are more commonly used and preferred by regulators for a variety of reasons. Cost-based approaches are less information intensive in a context in which the regulated firm likely possesses an information advantage (asymmetric information); they are transparent, and they reduce the potential for regulatory gaming.

- c) The statement by Dr. Kahn that FDC does not necessarily measure “marginal cost responsibility in a causal sense” refers to the increase in cost if the quantity of a service provided is increased, or alternatively, the decrease in cost if the quantity of a service is reduced. Changing the number of pole attachments does not alter the common costs of the pole, provided there is sufficient space on the pole because the common costs are fixed. Hence, no common cost allocation methodology will correspond to marginal cost.

Even though FDC pricing cannot identify marginal cost in the usual sense, it does attempt to estimate the relative burden of a common cost imposed by different users – see for example the condominium example in my reply to VECC Interrogatory 18.

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INTERROGATORY 17:

Reference: Ware, page 8, paragraphs 20 and 21

At paragraphs 20 and 21, Dr. Ware provides two reasons why he thinks that an "equal sharing rule" for allocating common costs is not consistent with economic efficiency.

(a) At paragraph 20, Dr. Ware states: "First, an equal sharing rule bears no relationship to economic activity. A user who places multiple times as heavy a demand on a utility pole will pay the same contribution to common costs as any other user of the pole." Given that causal incremental costs have already been accounted for at the previous stage, could Dr. Ware please explain how taking into account relative usage at this stage further contributes to economic efficiency.

(b) At paragraph 21, Dr. Ware states his second reason for thinking that equal sharing is economically inefficient: "Second, an equal sharing rule creates perverse incentives: Two users that take up space on the pole and combine their operations will reduce their total contributions to common costs even though their economic demands on the pole network are unchanged." Explain why Dr. Ware thinks that the magnitude of savings in pole attachment fees, due to combining operations, will be sufficient to outweigh the costs of reaching such an agreement and of ongoing coordination. Could Dr. Ware provide his best estimate of the costs of such arrangements, and compare them to the expected reduction in pole rental fees?

(c) Does Dr. Ware have any other reason for believing that a proportional use allocation of common costs is more economically efficient than equal sharing?

RESPONSE:

Response provided by Dr. Ware:

- a) Fully distributed cost pricing in which common costs are allocated based on proportionate use or relative shares of demand
 - i. achieves reasonable sharing of the benefits of joint-use between pole owners and pole tenants (communication attachers),
 - ii. is more closely connected to cost causation,

- iii. provides a financial incentive to share poles, and
 - iv. reflects the fact that pole attachers do not enjoy the rights and advantages of ownership.
- b) The sole purpose of the mentioned example of perverse incentives is to indicate that an equal sharing methodology is not robust to changes in the ownership structure of pole attachers.² Dr. Ware has not examined any cost saving from reduced pole rental fees, nor their size relative to the costs of reaching such a coordination agreement.
- c) An equal sharing rule makes no attempt to allocate the division of common cost between users who impose differential burdens on the facility. Moreover, an equal sharing rule cannot account for differences—legal or operational—in rights and advantages provided by pole ownership relative to tenancy.

² The renter of a unit of an apartment building with five units in total pays the cost of his unit plus one-fifth the cost of all common areas. The renter does not pay half the cost of common building areas just because all the other four units in the apartment building are occupied by a single person.

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INTERROGATORY 18:

Reference: Ware, page 11, paragraph 31

At paragraph 31, Dr. Ware states: "In conclusion, the equal sharing rule is not an appropriate methodology for allocating common costs to set regulated rates for wireline pole attachments and has no basis in principles of economic efficiency." Suppose that that full distribution of costs is intended to achieve the objective of economic fairness, or equity, rather than economic efficiency. Under this assumption, could Dr. Ware please provide his views as to why equal allocation of common costs among various users is not appropriate?

RESPONSE:

Response provided by Dr. Ware:

My analysis is restricted to the objective of economic efficiency. Whether an equal sharing rule satisfies any presumed objective of economic fairness is questionable. To give just one example: condominium owners share common building costs and expenses related to common areas (e.g. roof replacement) according to a schedule set out in the condominium declaration. The share of common costs allocated to a particular condo unit is usually calculated by the size of the unit, with the owner of a large three-bedroom condo paying a higher monthly condo fee compared to the owner of a small one-bedroom condo. Equal sharing of common condominium costs would arguably be considered by many not to satisfy the principle of "economic fairness."

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INTERROGATORY 19:

Reference: Brown, page 3, paragraphs 5-6

a) Paragraph 6 states that "in almost every case of poles with attachments there are least two attachers, being Bell and Rogers." However, is it Mr. Brown's view that all THESL poles with an attachment will have wireline communications attachments from Bell and Rogers or could there be some with no wireline communications attachments from either of these parties but that do have some other form of wireline attachment?

b) If Mr. Brown is of the view that all THESL poles with an attachment of any kind will have both Bell and Rogers attachments, please explain the basis for this position.

c) If there are some THESL poles that have an attachment but not wireline communications attachments from Bell and Rogers, couldn't this explain the 1.6 average determined by THESL?

RESPONSE:

Response provided by Mr. Brown:

a) Based on my experience overseeing the design and construction of telecom and cable networks, it is very rare to find a hydro pole with only a single communications attacher. Traditionally, the incumbent telecom provider and the cable company serving the same geographic area will build their networks using the same existing support infrastructure. They served the same customers, and it only made sense to use the same existing hydro poles for example. As competitors started to build their wireline networks, they too attached their communications lines to the same poles, either by attaching their own cables to the poles or by overlashing their cables to the existing cables of the telecom providers or cable companies.

This is no different in the City of Toronto. My experience is that the vast majority of Toronto Hydro poles that have wireline communications attachments have at least two such attachers - Bell and Rogers.

b) No, my view is not that all Toronto Hydro poles with an attachment of any kind have both Bell and Rogers wireline communications attachments. It is my view that the vast majority of Toronto Hydro poles with wireline communications attachments have at least Bell and Rogers as attachers. They may also have other wireline attachers such as Cogeco, Telus and Allstream. They may also have wireless or other non-hydro attachments.

c) As stated previously, the Carriers' submission is that, for the purpose of determining the average number of attachers per pole, only poles with wireline communications attachments should be considered. THESL has adopted a different methodology which is based on different assumptions. I cannot comment on this methodology.

RESPONSES TO THE SCHOOL ENERGY COALITION INTERROGATORIES

INTERROGATORY 20:

Reference: Ware, page 8 [*The Carriers presume the reference should be to Brown's evidence*]

a) Under Row E in the table, please explain how dividing the Net Embedded Cost per pole by an average life of poles yields the Depreciation Expense, when the Net Embedded Cost represent the Gross Costs reduced by the accumulated depreciation rate to date.

Response provided by Mr. Brown:

RESPONSE:

a) This calculation used net embedded cost as the gross embedded cost of THESL's poles was not included in the EDA's evidence in the 2003-0249 proceeding. I agree that this will understate the depreciation cost. A better approach would be to use the depreciation expense identified by Ms. Blackwell in her evidence of \$42.30. Attachment A provides the a revised version of the table at page 8 of my evidence which includes this adjustment.

Proposed Wireline Pole Attachment Rate (2.5 Wireline Attachers)

<i>Price Component - Per Pole</i>	<i>\$</i>	<i>Explanation</i>
DIRECT COST		
A. Administration Costs	\$1.54	Blackwell estimate adjusted to remove allocation of shared services costs and for 3.0 third party overhead attachers (2.5 wireline plus 0.5 other overhead attachers)
B. Loss in Productivity	\$0.33	Blackwell estimate adjusted for 2.5 wireline attachers
C. Total Direct Costs	\$1.87	A + B
INDIRECT COSTS		
D. Net Embedded Cost per pole	\$967.30	EDA estimate for THESL, adjusted to remove power-specific fixtures
E. Depreciation Expense	\$42.30	Blackwell estimate
F. Pole Maintenance Expense	\$4.77	Blackwell estimate
G. Capital Carrying Cost	\$59.88	D * weighted average cost of capital of 6.19%
H. Total Indirect Costs per pole	\$106.95	E + F + G
I. Allocation Factor	12.54%	
J. Indirect Costs Allocated	\$13.41	H * I
Annual Pole Rental Charge	\$15.28	C + J

RESPONSES TO VECC'S INTERROGATORIES

INTERROGATORY 21:

Reference: Ware, page 10, Table 2

- a) Please confirm that Table 2 assumes two non-hydro users per pole.
- b) Please re-do Table 2 assuming there are 1.6 non-hydro users per pole, consistent with THESL's calculations.

RESPONSE:

Response provided by Dr. Ware:

- a) The calculation in Table 2 implicitly assumes two communication attachers per pole.

b) Table 2: Fully Distributed Cost Allocation (1.6 Communication Attachers)

Space	Classification	Feet	Power Allocation	Communication Allocation per User
Non-Usable	Buried Depth	6	$\frac{11.5}{16.75} \cdot 23.25 = 15.96$	$\frac{3.28}{16.75} \cdot 23.25 = 4.55$
	Clearance	17.25		
	Communications Space	2	-	1.25
Usable	Separation Space	3.25	-	2.03
	Power Space	11.5	11.5	
		40	68.7%	19.6%

