RP-2003-0044

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c.15 (Sched. B);

AND IN THE MATTER OF applications by Centre Wellington Hydro, Veridan Connections Inc., EnWin Powerlines Ltd., Erie Thames Powerlines Corp., Chatham-Kent Hydro Inc., Essex Powerlines Corp., Cooperative Hydro Embrun Inc. and Hydro One Networks Inc. pursuant to subsection 74(1) of the *Ontario Energy Board Act, 1998* to amend Schedule 1 of their Transitional Distribution Licences.

RESPONSES OF HAMILTON HYDRO INC., HYDRO OTTAWA LIMITED, BRANTFORD POWER INC., MARKHAM HYDRO DISTRIBUTION INC., AND HYDRO VAUGHAN DISTRIBUTION INC. TO WIREBURY CONNECTIONS INC. ("WIREBURY") AND VULNERABLE ENERGY CONSUMERS' COALITION ("VECC") PURSUANT TO PROCEDURAL ORDER #5

SEPTEMBER 26, 2003

WIREBURY INTERROGATORIES TO THE LDC COALITION

INTERROGATORY #1

The LDC Coalition indicates that it has reviewed and supports submissions of THESL. In section 6(a) of its evidence, THESL submits that distribution is a natural monopoly and does not support competition.

Reference: Section 1

(a) What is the Coalition's definition of a natural monopoly and how does it apply to areas that are not currently served but could be serviced economically by one or more licensed distributors?

Response

A "natural monopoly" occurs when a defined market can be served at lower cost by a single firm than by a multiple firm industry structure. Network industries are widely recognized to have natural monopoly characteristics. In electricity distribution, contiguity has been an important element of technological and economic efficiency and a determining factor of the natural monopoly character of the industry.

The idea of natural monopoly would imply that areas which are not currently served, cannot be serviced economically by more than one distributor. While *ex ante*, two distributors may be geographically positioned to service a particular area at comparable cost, *ex post*, in the presence of a natural monopoly, only one entity could efficiently provide service.

(b) Please explain the economic justification for maintaining monopoly rights over unserviced territory when competition for the distribution rights can provide improved customer benefits without adversely impacting other customers or stranding the assets of the incumbent provider.

Response

Because of its natural monopoly characteristics, electricity distribution is regulated. Regulation – just as competition – inevitably has "imperfections". Among these are pricing at average rather than marginal cost; and establishing rates based on average characteristics of a customer class rather than on the specific attributes of each customer. Such "imperfections" often arise in part because of the difficulty in attributing costs to customers on an individual basis. Indeed, in networks, cost attribution is particularly difficult since the cost of serving the "next customer" typically depends on the spatial distribution of current customers.

As a result of cost averaging, rates do not precisely reflect the costs of servicing each customer at a specific point in time.

One of the consequences of these regulatory exigencies is that a "competitor" that offers to serve a new development at rates at or below those of the incumbent could be <u>reducing</u> rather than increasing the overall economic efficiency of the system. Efficiency will be reduced if the incumbent, as a result of scale economies, has lower incremental costs of servicing the area than the new entrant, but the entrant obtains the right to service on the basis that his incremental costs are lower than the incumbent's average costs.

Put another way, the new entrant has an unfair advantage because his (incremental) costs of servicing the area are lower than the utility's average cost, even though the utility's incremental costs could be lower still.

(c) How does the Coalition reconcile its position on monopoly services with respect to the building owners and landlords who are operating as unlicensed embedded distributors throughout its existing service area?

Response

In such cases, a building owner or landlord is treated as a general service customer and not as a distribution utility.

(d) *Would the Coalitions position change if the distribution services which are exempt under O.Reg. 161-99 were provided by a licensed distributor? Please explain your response.*

Response

If the distribution services were provided by a licensed distributor, customers would be metered and billed by the utility in whose service area the building lies.

INTERROGATORY #2

The LDC Coalition evidence refers to certain quotations from the Macdonald Report and the government's White Paper.

Reference: Section 3 & 4

(a) *If the government's intention was to limit distribution competition, why did the legislation treat exclusivity as a default license condition, why were no limits but on non-discriminatory access and why did the government pass O.Reg 161-99, which facilitated the expansion of embedded distribution in high-rise and other multi-residential buildings?*

Response

It is difficult to ascertain with certainty the intentions of government with respect to every element of its legislation and stated policies. Indeed, policies are often stated in general terms, leaving implementation to the regulator. Moreover, it is usually the case that general legislative and policy initiatives must take into account wide variation in existing circumstances which in turn may require exceptions. It is in this context, that O.Reg 161-99 is perhaps best interpreted.

However, in the broader picture, it is reasonable to conclude that the authors of the Macdonald Committee report did <u>not</u> envisage direct competition between utilities in the "wires" business. The Committee <u>did</u> envision such competition in other services that were or could be provided by distributors, and for this reason, explicitly recommended "that each distribution utility keep separate its monopolistic wires business from its competitive electricity sales and energy services activities." (<u>A Framework for Competition</u>, Summary of Recommendations, page v.)

Indeed, the Committee explicitly recognized the wires business to be a natural monopoly, (page 105). Non-discriminatory access, in turn was seen as a mechanism which would facilitate competition in other segments of the industry, for example, retail supply.

While the Committee did not envisage direct competition, it <u>did</u> see incentive creation for the network segments of the industry as an important public policy objective. As such, it specifically recommended incentive regulation for the wires businesses because it gives companies greater incentive to reduce costs and improve efficiency. (page 102).

(b) *In its evidence (page 3 of Appendix A), Networks highlights a quote from page 18 of the government's white paper. Does the Coalition believe that this quote accurately portrays the intent of the government? Please explain why with reference to the following quotes from Macdonald Report :*

- *"market changes will lead to "a restructuring in distribution" and a "new role for distributors" (para.4, p.73);*
- *"The distribution utility will be forced to compete for customers" (para.5, p.73);*
- *electrical utility businesses will require commercial acumen in "searching out new customers, and investigating new services and technologies" (para.4, p.73);*

Response

The specific quote from the government's white paper is:

> "An early move to competition provides the best prospect for reasonable rates and improved service options. However, transmission and local distribution remain natural monopolies and are not amenable to competition". Direction for Change, Charting a Course for Competitive Electricity and Jobs in Ontario, page 18, paragraph 2.

The quote appears under the section heading "Monopoly Operations and Competitive Businesses to be Separated". The second sentence refers to noncompetitive segments of distribution, in particular, wires businesses. This is further supported by the following passage which appears in the same section of the white paper:

> "Local distribution utilities would be required to separate their wires businesses from any competitive businesses they may have to develop in future. They would be required to establish separate subsidiaries for their competitive businesses." Direction for Change, Charting a Course for Competitive Electricity and Jobs in Ontario, page 18, paragraph 6.

The above quotes are consistent with the Macdonald Committee Report, as is evident upon a fuller reading of the passages from which the interrogatory quotes are taken. In particular, the Report states:

> "The Advisory Committee is convinced that changes in the other sectors of the electricity system will lead to a restructuring in distribution. The vertical separation of Ontario Hydro and the creation of a competitive market in generation will result in a new role for distributors. This new role will mean undertaking new responsibilities and will demand new skills – for example, forecasting, sophisticated purchasing and contract negotiating, dealing with the spot market and futures market, delivering energy services and products which respond to new needs, innovation and developments in technology….

> The move toward retail competition will also prompt changes in the distribution business. Retail access will result in a fundamental shift in the way a distribution utility does business. No longer can it be assured of its customer base for supplying electricity. There are no captive customers, and individual end-users will be able to shop around for their own electricity supply. The distribution utility will be forced to compete for customers and larger distributors should be able to obtain better supply arrangements for their customers.
>
> We see an electrical utility as a business. Commercial acumen will be a necessary element in dealing with competitive generation companies, searching out new customers, and investigating new services and technologies."

A Framework for Competition, page 73.

In short, the Macdonald committee concluded that wires businesses would continue to be natural monopolies while other activities, such as electricity supply procurement and the supply of energy services, would be amenable to competition and would require a commercialized posture.

(c) Have market conditions changed since the white paper in a way that would allow segments of the distribution industry to be competitive? If not, please explain why the legislation has allowed competition for service area amendments and why the regulations provide for unlicensed distributors in respect of certain specific lands and buildings. If no changes were expected, what does the Coalition think the Advisory Committee meant by "This is not the last word on the subject [of competition] … in our minds, this is only the beginning" (Reference: para. 4 in Macdonald Report cover letter to Minister).

Response

It would appear that to the extent that changes have occurred in distribution, they would tend to increase the potential for scale economies, particularly at the end of the spectrum populated by small utilities. This assertion would help to explain the consolidation that has taken place amongst small distribution utilities within the Province.

Restructuring in the generation segment of electricity industries has been driven by technological changes which have fundamentally altered scale economies in the industry. Similarly, restructuring in telecom has also been driven by major technological developments which in some cases have permitted "leapfrogging" of existing infrastructure. However, we are not aware of commensurate technological advancements in the distribution of electricity which would form the basis for direct competition in the wires business.

(d) How does the quote cited by Networks compare to the situation today where distributors have the ability to compete to install distribution services in the unserviced areas and to drive efficiencies, technological change and consolidation? In responding, please consider the government's terms of reference on distribution as noted in the Macdonald Report, which were to "investigate and access structural change options for phasing in competition in

the distribution system" and specifically "look at options that would enhance the efficiency of the distribution sector". (opening paragraph on Restructuring the Distribution System, p.72)

Response

Evidently, the Macdonald Committee did investigate options for phasing in competition in the distribution system and concluded that the wires business would continue to be a natural monopoly. The Committee sought to bring about competition in the supply segment of distribution businesses at that time and to create stronger efficiency incentives in the wires business through performance based regulation.

(e) Is the Coalition or any of its consultants aware of jurisdictions where there is competition for transmission or distribution services, including secondary capacity markets and competitive bidding for licensing or franchise rights? Please provide a brief description of these activities explaining how they could be applied in Ontario.

Response

The wires segments of distribution industries worldwide continue for the most part to be operated as (natural) monopolies and are typically regulated by a central authority. Together with transmission, they provide the network platform upon which the generation and supply segments of the industry can evolve towards competition. Where performance based regulation has been properly implemented on the monopoly segments, significant efficiency improvements and cost reductions have been observed.

INTERROGATORY #3

The LDC Coalition indicates that plant duplication and overlap would be a problem if new embedded distributors enter the market.

Reference: Section 7

(a) Please describe the plant duplication and/or overlap that would occur in the service areas of the Coalition members if their utility provided service to a new subdivision in a portion of their service area that is not currently being served.

Response

There is little risk of plant duplication and/or overlap if a utility provides service to a new subdivision within its service area.

(b) *Please describe how this situation would change if the new services were provided by an embedded distributor using the same connection point and the same type of distribution facilities used by the incumbent in (a).*

Response

Even in these very specific circumstances additional capital expenditures may be required. However, the stated conditions are far too narrow to properly reflect the potential for the Wirebury proposal to induce sub-optimal capital expenditures.

Network planning decisions involve consideration of multiple factors including the current spatial pattern of distribution assets, its strengths and weaknesses as well as uncertainties regarding future load growth and its spatial pattern.

The presence of embedded distributors requires a further level of planning and coordination between the embedded distributor and the surrounding utility. In the current setting, such planning can often be conducted on a cooperative basis with relatively modest regulatory scrutiny because the host and embedded utility are usually not competing with each other for customers.

Under the Wirebury proposal, an embedded distributor would be created with potentially many discontiguous distribution areas interspersed across multiple distributors. This, in turn would introduce another source of uncertainty into the network planning problem as host utilities would need to anticipate network development by the embedded distributor(s). Much greater regulatory oversight of capital expenditures would likely be required. In the absence of perfect adjudication by the regulator, there is risk of plant duplication and overlap. Moreover, the added uncertainty with respect to the future revenue stream, could have a detrimental impact on the utility's credit rating.

It should be kept in mind that the Wirebury proposal contemplates "choice" for existing customers of the utility, not just new ones. Under average cost pricing, the incumbent will be at an unfair disadvantage relative to an embedded distributor that can selectively offer to serve low-cost customers. If the host utility cannot compete fairly with respect to price, it may have the incentive to exploit other means of retaining current low-cost customers or to gain new ones. This could also lead to sub-optimal capital expenditure decisions, duplication and overlap.

A more effective way of driving efficiencies is for the regulator to continue to strengthen incentives through performance or incentive based regulation.

(c) What degree of duplication, surplus capacity and overlap currently exists in the utilities of the Coalition members and what amount of duplication and overlap has been eliminated since the Macdonald Report was written?

Response

We have not performed an analysis to determine the presence of surplus capacity and overlap. Since the Macdonald Report, there has been substantial consolidation among distributors. Some of these mergers have likely led to improved scale economies and hence reduced duplication.

(d) How do the member utilities currently approach long-term planing? Why does it make a difference who connects the customer if the connection is the same as your utility would have used?

Response

Please see response to b) above.

INTERROGATORY #4

The LDC Coalition suggests that a significant increase in administration could be imposed on a host distributor when embedded distributors are introduced.

Reference: Section 9

(a) Please describe and itemize the incremental requirements.

Response

There are a series of incremental administrative burdens for the host distributor where embedded distributor relationships exist. They include billing and settlement with the IMO on behalf of the embedded distributor, corrective adjustments to net system load shape data, Market Power Mitigation Agreement rebate calculations and the payment of the associated rebates, metering and billing data recording, retrieval and verification, and segregated reporting requirements of load and customer data for both the IMO and the OEB. A detailed analysis of all related administrative costs has not been conducted.

However, it should be noted that under the Wirebury proposal, there would be new embedded distributors potentially serving many discontiguous tracts across multiple host distributors. The resulting increases in administrative costs would likely dwarf those outlined above. First, one would expect significant increases in the costs of capital planning, development and regulation. Second, if utilities are forced to move to locational rates in order to be able to compete on a fair basis, the development, administration and regulation of rates could dramatically increase aggregate industry administrative costs.

(b) What amount of the Coalition members' existing administration is required to accommodate the existing level of embedded distribution, including buildings operating as unlicensed embedded distributors under O.Reg 161-99?

Response

No estimate of administration costs associated with existing embedded distribution is available. Multi-unit buildings are typically treated as general service customers.

(c) Does the Coalition agree that their utilities have an obligation to connect all residential or commercial customers located in buildings lying along their distribution lines that request individually metered service in writing? How would these connections impact their administrative and operating costs with respect to new multi-residential buildings seeking individual metering for each suite?

Response

Section 28 of the Electricity Act, 1998 states that a distributor has an obligation to "connect a building to its distribution system if,

(a) the building lies along any of the lines of the distributor's distribution system; and

(b) the owner, occupant or other person in charge of the building requests the connection in writing."

This is consistent with the terms within current licences for electricity distributors. It is our understanding that policies and associated costs of individual metering vary from utility to utility.

(d) If the Coalition members believe they do not have an obligation to connect customers in new multi-residential buildings along their existing distribution lines, please explain why section 28 of the Electricity Act, 1998 would not apply to individual electricity consumers in your licensed service area?

Response

Please see response to c) above.

(e) What is the difference in administrative costs for each of the member utilities between a high rise where the owner if operating as an unlicensed embedded distributor and a high rise where the owner is not?

Response

No estimate is available of the associated administrative costs.

INTERROGATORY #5

The LDC Coalition contends that LDC competition would contribute to "cherry picking" which would not support a level playing field approach.

Reference: Section 16

(a) *Would the Coalition members agree that cherry picking is driven by customer choice and competition to provide the best service value? If not please explain why.*

Response

It would appear that "cherry picking" is driven by the ability of a new embedded utility serving a new development to charge rates based on the incremental cost of service while the host utility charges rates based on the average cost of service across all customers. "Cherry picking" could be circumvented if the host utility were also able to offer rates to new customers based upon the incremental cost of service. However, this would lead to a complex locational tariff structure across all customers which would be difficult to administer and even more difficult to regulate.

Moreover, the move away from the current average cost pricing would break the implicit regulatory compact that has prevailed among customers and distribution utilities.

(b) *Please explain how existing distribution infrastructure would be more expensive than newly constructed distribution plant given the inflation and depreciation that would have occurred since the incumbent installed its distribution plant.*

Response

There is strong statistical evidence that the cost of maintaining, operating and upgrading older distribution infrastructure is significantly higher than similar costs for new infrastructure.

(c) *How does the capital cost of adding new customers compare to the average capital cost per existing customers?*

Response

The relative capital costs depend on the specific location and vary from utility to utility.

(d) *Since new customers are required to pay the connection costs and any capital shortfalls based on the incumbents existing rates, why would an incumbent LDC be at a disadvantage?*

Response

As indicated in the response to a) above, the utility would be at a disadvantage because the rates that it charges reflect costs that are averaged across infrastructure of different vintages and customers with varying characteristics.

(e) Without the threat of competition, what incentives exist to ensure that customers are provided the best service at the best price?

Response

Industries with decreasing unit costs over a defined market area will – through competitive forces – evolve into (natural) monopolies. In this case, the problem is not how to introduce competition where it cannot be sustained, but how to promote incentives that improve efficiency.

Leading regulators in many jurisdictions have moved towards variants of incentive or performance based regulation such as "price-caps" in order to improve the efficacy of the regulatory process and to reduce regulatory burden. There is now sufficient experience with these mechanisms to conclude that they are indeed effective at driving efficiencies and reducing costs.

The Wirebury proposal, if adopted, could substantially complicate the regulatory process and potentially reduce the effectiveness of performance based regulation.

(f) How would the ability to compete and expand into other service territories adversely impact an innovative efficient LDC?

Response

A utility for which improvements in scale economies and efficiency are the drivers underlying expansion will benefit, and those benefits would be ultimately shared with its customers. However, a utility which "competes" by exploiting imperfections in the regulatory regime can actually increase distribution costs to customers. For further discussion, please see response to Interrogatory 1 b) above.

(g) Where is the negative impact on the incumbent distributor if the new load is the same, the connecting customer pays for the connection costs and the incumbent distributor receives an ongoing contribution to its fixed assets without investing further capital in distribution infrastructure?

Response

Negative impact can result from a failure to capture further savings from scale economies which could occur if the existing distributor served the new load. There could also be a substantial increase in regulatory burden associated with capital expenditures and with respect to rates should utilities be forced to move to "locational" distribution tariffs in order to be able to compete on a fairer footing with embedded distributors. Greater uncertainty in network planning and revenues could also have adverse impacts on capital expenditures and the utility's credit rating.

VECC INTERROGATORIES TO THE LDC COALITION

INTERROGATORY # 1

Reference: *Evidence of the LDC Coalition, paragraph 1*

Preamble: *"the LDC coalition confirms that it supports the TH Electric System submission"*

Question:

(a) *Does the LDC coalition concur with Toronto's evidence (paragraph 15) that "a developer may have an interest in selecting a distributor that requires a lower capital contribution for an expansion of its system, this will likely result in higher distribution rates for the end-use consumer"?*

Response

The Coalition concurs with the statement that a developer may have an interest in selecting a distributor that requires lower capital contributions and this will likely result in higher distribution rates.

(b) *If so, is this agreement based on conjecture or the actual experience of the LDC Coalition's distributors?*

Response

Please see the TH Electric System response to VECC Interrogatory #4(a).

INTERROGATORY # 2

Reference: *Evidence of the LDC Coalition, paragraph 10*

Preamble: *"there are no existing requirements that would govern the design, installation, operation and maintenance of new embedded distribution systems nor are there any requirements that would provide for common standards between the host and embedded distributors"*

Question:

(a) *Please reconcile the above statement with the fact that there are currently some 75 distributors in Ontario that are fully or partially embedded within a host distributor and that Section 6 of the Distribution System Code specifically speaks to the relationship between host and embedded distributors.*

Response

The existing embedded distributor relationships are legacy issues. It is common for legislation and related regulations to take account of existing relationships and to facilitate their continuation, particularly if the alternative involves substantial unnecessary disruption. The Distribution System Code provides conditions to ensure that interactions amongst distributors continue to serve the public interest.

INTERROGATORY # 3

Reference: *Evidence of the LDC Coalition, paragraph 16*

Preamble: *"In either event, the incumbent distributor's remaining customers will suffer through higher rates"*

Question:

(a) *Is it the LDC Coalition's view that compensation to the incumbent utility should address the impacts of service area amendments arising from "cherry-picking" low cost customers?*

Response

Compensation cannot address the impacts of "cherry-picking" low cost customers. The fundamental issue is that "cherry-picking" can result in <u>higher</u> overall distribution costs because of a failure to exploit scale economies available to the incumbent utility.

Aggregate distribution costs will be higher if the incumbent has lower incremental costs of serving the area, but for regulatory reasons, is required to base rates on average costs. The entrant would then appear to have an efficiency advantage because his incremental costs of serving the area are lower than the utility's average costs.

(b) *If so, in the view of the LDC Coalition, what would be a reasonable way of calculating such compensation?*

Response

Please see response to a) above.

(c) *Does the LDC Coalition accept that, as principle, the incumbent utility and its customer should be held harmless as a result of any service area amendment?*

Response

To the extent that service area amendments occur, they should be primarily driven by overall reductions in aggregate current and/or future distribution costs. This in turn would allow all affected customers to benefit, including those of the incumbent utility. In some cases there could be regulatory gains resulting from distribution restructuring, but these too should ultimately be reflected in lower costs to customers of the incumbent utility. Thus, unless there is an over-riding public interest issue, incumbent utility customers should, at a minimum, be “held harmless” as a result of service area amendments.