

APPENDIX C

EVIDENCE OF DONALD A. FORD
ON BEHALF OF THE
CANADIAN CABLE TELEVISION ASSOCIATION

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APPENDIX I: CURRICULUM VITAE – DONALD A. FORD

APPENDIX II: SPACE ALLOCATION ON A TYPICAL 40 FOOT POLE

INTRODUCTION

This evidence has been prepared by Donald A. Ford on behalf of the Canadian Cable Television Association ("CCTA") in conjunction with its application to the Ontario Energy Board ("the Board") asking the Board to set rental charges for the use of local distribution company ("LDC") support structures by cable operators in Ontario.

Mr. Ford has participated in a number of regulatory proceedings and negotiations regarding the rental charges to be paid by cable operators for access to support structures owned by electric power utilities and telecommunications carriers. A copy of Mr. Ford's curriculum vitae is provided as Appendix I to this evidence.

PURPOSE OF THIS EVIDENCE

The purposes of this evidence are threefold. The first is to provide the Board with an overview of costing and pricing methodologies applied to support structures by a number of Canadian and U.S. regulators. The second is to propose a methodology for use by the Board in setting prices that the local electric power distribution companies under its jurisdiction may charge to cable television operators who use a portion of the communications space on utility poles to support their cable television plant. The third is to propose a specific rental charge by applying that proposed methodology to the best relevant costing information available at this time.

BACKGROUND

This section provides background on the nature of support structures which are the subject of CCTA's application, describes the history of joint use and sharing of support structures and explains the relationship between ownership versus tenancy of support structures and the sharing of costs.

THE NATURE OF SUPPORT STRUCTURES – POLE USAGE

The term "support structures" is used to denote facilities such as poles and duct (conduit) that are used to carry or contain electrical power and/or communications wires and cables. Given that the main support structures at issue in CCTA's application are poles, this evidence is restricted to matters related to utility distribution poles.

A typical distribution pole is 40 feet (12.2 metres) in length. Normally, six feet (1.8 metres) of the pole is buried below ground. Minimum ground clearance is specified in Canadian Standards Association ("CSA") codes and by utility standards as 16.5 feet. In most cases for a 40 foot pole, a total of 17.25 feet (5.25 metres) is allowed for ground clearance, which includes an allowance for sag in the cables. Immediately above the clearance section is the communications space on the pole, which is typically two feet (0.6 metres). Above that is the neutral or separation space which again is specified by code, and is normally 3.25 feet (one metre). The top 11.5 feet (3.55 metres) of the pole is power space. This means that on a typical 40 foot distribution pole there are 13.5 feet of usable space (16.75 feet if the separation space is included). A diagram illustrating the allocation of space on a typical 40 foot pole is provided in Appendix II.

The two foot communications space can accommodate a number of users and cables. The user will attach a steel strand to the pole, and lash one or more communications cables to the strand. Typical spacing of the strand attachments is one foot, which means that a maximum of three strands can be attached to each side of the pole. Use of the "field side" of the pole is rare, with most cable operators and telecommunications carriers preferring the more accessible "road side" of the pole on which construction and maintenance are easier. The most common configuration is three strands occupying the communications space on distribution poles in urban areas, and one or two is the norm in rural areas.

A HISTORY OF JOINT USE AND SHARING

There is an extensive history of sharing of distribution poles, initially between power utilities and telecommunications carriers, and subsequently also with cable operators as that industry came into being in the 1950's. Power utilities and telecommunications carriers are granted access to public lands for the purpose of erecting pole lines, and also arrange easements on private lands for this purpose when it is required. There are sound economic reasons why power utilities and telecommunications carriers have developed a number of schemes for jointly using distribution poles. In addition, joint use has been encouraged by municipal governments and their administrators because it results in a reduction in the number of poles erected on public lands.

There are a number of arrangements in place between power utilities and telecommunications carriers in Canada that provide for the joint use or sharing of poles, and some of those are described here to illustrate the types of arrangements in effect. Hydro One and Bell Canada have an agreement to provide reciprocal access to each other's poles, with the power utility owning and maintaining approximately 69 per cent of the poles and the

telecommunications carrier owning and maintaining the balance. Similar arrangements are in place between Hydro Québec and Bell Canada, between Nova Scotia Power and Aliant and between New Brunswick Power and Aliant. Under these joint use arrangements, other parties wanting to use the communications space apply to the owner of each pole to lease space.

In Manitoba, the power utility owns all the poles and grants a lease to the incumbent telecommunications carrier for the entire communications space on each distribution pole. Other parties wanting to use the communications space apply to the incumbent telecommunications carrier to sub-lease space.

In British Columbia, distribution poles are jointly owned by BC Hydro and Telus. These arrangements began when BC Tel was the incumbent telecommunications carrier prior to its merger with Telus. The power utility and the telecommunications carrier share the costs of erecting and maintaining each distribution pole, with a split of the asset cost of approximately 60/40 being carried on the books of the power utility and telecommunications carrier, respectively. Maintenance costs are similarly shared. Under such joint ownership arrangements, other parties wanting to use the communications space apply to the incumbent telecommunications carrier to lease space.

As noted earlier, in addition to the economic incentives to share poles, there is also pressure from municipalities and provincial governments to minimize the number of distribution poles erected on public property for aesthetic reasons. For example, the British Columbia Ministry of Transportation has a single pole line policy. Joint use of support structures was also addressed by the Local Networks Convergence Committee appointed under the authority of the Minister of Communications which recommended in 1991 that Canadian policy and regulation should continue to promote the sharing of support structures. The Canadian Radio-television and Telecommunications Commission ("CRTC" or the "Commission") has expressed its view on more than one occasion that it is in the public interest to minimize the number of support structures through the joint use of those structures. For example, in Telecom Decision CRTC 95-13¹, the Commission stated it was of the view that it is in the public interest to minimize the number of support structures through joint use of those structures². In Telecom Decision CRTC 99-13³, the Commission discussed extensively the advantages of joint use of support structures⁴.

¹Telecom Decision CRTC 95-13, Access to Telephone Company Support Structures, 2 June 1995.

²Page 9.

As a result of these economic incentives and policy initiatives, duplication of pole lines is essentially non-existent. While this is a desirable objective in many respects, it also means that there is no choice of support structure provider for other parties such as cable operators requiring access to such facilities - they cannot gain access to rights of way to build their own, and must make arrangements with the owners of the poles or those controlling the communications space to lease capacity. The CRTC noted this in Telecom Decision CRTC 99-13.⁵

At the same time, the users of the communications space are increasingly in competition with each other and the power utilities. Many power utilities are offering telecommunications services, either directly or through an affiliate. Regulatory changes have allowed electric power utilities to provide many services traditionally offered by cable companies and telecommunications carriers. For example, power utilities in British Columbia, Alberta and Ontario or their affiliates offer fibre optic telecommunications services using existing public utilities facilities in competition with telecommunications carriers. Many are also offering high speed Internet services in competition with cable companies and telecommunications carriers.

Accordingly, not only is there not a competitive market in the supply of support structure space, but additional parties needing space are often required to obtain this critical input to their own operations from the same companies with which they compete. As a result, negotiating access can be protracted. Indicative of the significance of dealing with competitors that are also suppliers is the recent trend in regulators being called upon to decide support structure access matters. For much of the history of joint use of support structures, access by cable operators was achieved through negotiations. In many recent cases, such as the one which is the subject of the CCTA's application, negotiations have proven to be unsuccessful.

On a related issue, given the extent of competition among support structure users and the emerging competition from affiliates of the electric power utilities, competitive equity requires that there be no preferential access or rental charges accorded any user of the

³Telecom Decision CRTC 99-13, Part VII Application - Access to Supporting Structures of Municipal Power Utilities - CCTA vs MET et al - Final Decision, 28 September 1999.

⁴Paras 112 through 132.

⁵Para 179.

communications space on support structures, including affiliates of the power utilities and the incumbent telecommunications carrier. However, rate parity among affiliates and third party users of the communications space should not be used as a sole test of reasonableness; there could be an incentive for a utility to charge an unreasonably high rate to an affiliate to justify the same rate being charged to others when, in fact, the financial relationship between the utility and the affiliate neutralizes the impact of the higher rental charge on the affiliate.

TENANCY VERSUS OWNERSHIP

Whether a cable operator leases a portion of the communications space from the owner of the pole or sub-leases space from the telecommunications carrier holding the head lease on the communications space, it is important to note that the cable operator is a tenant, not an owner. In addition to the obvious legal differences, there are a number of operational differences between tenancy and ownership. The operational differences confer financial benefits on the owner of the poles.

As a tenant user of communications space on a pole owned by a power utility, the cable operator is obliged to adapt its plant design to make use of whatever support structure space is available to it. The cable operator has no role in the planning of pole lines, no say in where a pole is located, and indeed no assurance of access to the communications space on a given support structure at all. The tenant has none of the rights of ownership of the pole, and accordingly should not share in the costs of the pole as if it were an owner.

This difference between tenancy and ownership has been recognized and found to be significant by the CRTC in terms of how the costs of support structures are shared. For example, in Decision 99-13 in rejecting the fully distributed costing approach proposed by the then Municipal Electric Association, the Commission stated it was of the view that in determining the appropriate costs to be recovered from the cable companies, it is important to consider that they do not have the rights of ownership of the pole.⁶ The Nova Scotia Utilities and Review Board (“NSUARB”) in Decision NSUARB - P-873⁷ concurred with this finding of the Commission by quoting this paragraph of Decision 99-13 in its entirety.

⁶Para. 222.

⁷Nova Scotia Utility and Review Board, In The Matter Of The Public Utilities Act and In The Matter Of An Application By Nova Scotia Power Incorporated For Approval Of An Increase In Its Pole Attachment Charge, January 24, 2002, p. 22.

OVERVIEW OF COSTING AND PRICING APPROACHES

This chapter provides an overview of the broad nature of support structure cost and price components under the following headings:

- The Nature of Support Structure Costs
- The Issue of Subsidization
- Contribution

THE NATURE OF SUPPORT STRUCTURE COSTS

This section discusses the various operating and capital costs associated with support structures, including those costs related to the use by cable operators of a portion of the communications space on poles.

There are two broad categories of costs associated with support structure use by cable operators – direct costs and indirect costs. The direct costs, also termed causal or incremental costs, are those costs that are directly attributable to the use of a portion of the communications space by a cable operator. These costs vary in response to changes in the use of the communications space. The term “avoided cost” can also be used to denote direct costs – they are costs that would not be incurred by the owner of the pole if a cable operator’s facilities were not present in the communications space. The indirect costs, also termed fixed costs, are those costs associated with the support structure that are incurred by the owner of the pole whether or not a cable operator’s facilities are present in the communications space. In other words, the indirect costs do not increase or decrease when another party’s facilities are attached or not attached to the pole.

Throughout this evidence, the direct and indirect costs associated with support structures are evaluated from the perspective of determining costs and setting a rental charge for the provision of service to a party attaching its facilities to a pole owned by a power utility. Whether a cost is classified as direct or indirect is not an absolute classification - it depends on the purpose for which the cost is being classified and the perspective from which the classification is being made. For example, costs which are considered indirect with respect to the provision of support structure lease services to cable operators could well be considered direct costs with respect to the provision of electric power distribution services or other services provided by the utility.

DIRECT COSTS

There are two types of direct costs – one-time or non-recurring costs that are usually incurred in advance of the cable operator attaching its facilities, and on-going or recurring costs that the owner of the pole incurs in terms of operational support or increased expense.

For example, one-time direct costs incurred by the owner of the pole could be expenses for the inspection of cable operator installations. Any make-ready costs incurred by the owner of the pole to accommodate the needs of the cable operator would also be considered as one-time or non-recurring direct costs.

Ongoing or recurring direct costs would include administering contracts for, accounting for and billing of support structure usage by cable operators. Also included in recurring direct costs would be any operating costs incurred by the owner of the pole that are caused by the cable operator's ongoing use of a portion of the communications space. For example, any costs incurred by the owner of the pole for any loss in productivity (extra costs to carry out its own construction or maintenance work) caused by the presence of a cable operator's facilities in the communications space would be considered recurring direct costs. In the latter example, when the owner of a pole is an electric power utility, such loss in productivity costs would likely be considered a recurring direct cost attributable to any and all users of the communications space, to be shared among all users of the communications space.

Although there are exceptions, it has been the general practice in negotiated contracts and regulatory decisions for one-time direct costs (such as the one-time costs associated with make-ready work and conducting inspections) to be recovered through a one-time charge to the cable operator. On-going direct costs (such as accounting and billing costs) are generally recovered through an annual rental charge.

INDIRECT COSTS

The indirect or fixed costs associated with the support structure are those that are incurred by the owner of the pole whether or not a cable operator's facilities are present in the communications space. They can include both capital-related costs and operating costs. Examples of capital related costs are depreciation or amortization, the capital carrying cost based on the net asset value of the pole which includes the appropriate mix of interest, return on capital and taxes or payments in lieu of taxes and any property taxes paid on the value of the support structure facility. Indirect operating costs could include, for example, any costs incurred for pole maintenance.

THE ISSUE OF SUBSIDIZATION

Much discussion has taken place over the years regarding the alleged subsidization of cable operators by the owners of support structures. This section discusses the minimum rental charge requirements for ensuring that such subsidization of cable operators or their customers by support structure owners or their customers does not take place.

To ensure that subsidization of a cable operator by the owner of a support structure does not take place, the support structure owner must recover from the cable operator all direct costs associated with the use of a portion of the communications space by the cable operator. In other words, to avoid being subsidized by a support structure owner, a cable operator must reimburse a support structure owner for all costs caused by or attributable to the use of a portion of the communications space by the cable operator. As long as any and all such costs are recovered by an owner of a support structure from a cable operator, no subsidy of the cable operator by the support structure owner is taking place.

It is sometimes alleged that cable operators are being subsidized because of the costs they “avoid” by using utility support structures rather than building their own. This is an improper use of the term “avoided cost”. As described above, an avoided cost in terms of the costing of support structure is a direct cost – one that the owner of the pole would not incur but for the presence of the cable operator’s facilities in the communications space on the pole. If support structure rental charges were determined on the basis of the costs the tenant avoided by leasing space on an existing utility pole rather than constructing its own support structure, then all the benefits of sharing support structures would accrue to the owner of the pole. The owner of the pole would achieve double recovery of the costs of the pole - from its core service revenues as well as from support structure rental revenues - while the tenant would incur costs that are equivalent to ownership but without the rights, advantages and privileges provided by ownership. Alternatively, the owner of the pole could choose not to recover the costs of the pole from its core service revenues, thus resulting in a subsidy flowing to the customers of the utility from the cable operators.

It should be emphasized that a rental charge paid by a cable operator that covers only the direct costs, or the costs caused by the cable operator, would not necessarily be considered fair and reasonable. Indeed, the majority of annual rental charges for the use of support structure communications space by cable operators, whether determined through negotiation between the parties or set by regulators, include a contribution toward the annual indirect or fixed costs of the support structure.

CONTRIBUTION

As noted above, the majority of annual rental charges for the use of a portion of a support structure's communications space include a contribution toward the annual indirect or fixed costs of the support structure. As explained in the section on the nature of support structure costs, the term indirect costs in this context means costs that are incurred by the owner of the support structure whether or not there is a tenant making use of the communications space.

The costs that are indirectly related to the provision of pole attachments would generally be considered direct costs with respect to the provision of electric power distribution services. As a result, the utility should have a reasonable opportunity to recover these costs in full through the prices established by the regulator and charged to the utility's electric power customers for its core services. This means that any contribution paid by a cable operator is in the nature of a "windfall" to the owner of the support structure. The owner of the support structure is receiving revenue against which no cost is attributable, since all direct or causal costs have already been covered in the annual or one-time charges. Depending on how this additional revenue is treated in the determination of electric power rates, the contribution can be considered to be a benefit to the power utility, its customers, or both.

Parties to negotiated support structure agreements and regulators adjudicating support structure rental charges have generally agreed that the payment of such contribution is fair and reasonable inasmuch as the cable operator and its customers receive a benefit from the use of a portion of the communications space on support structures owned by others. The arrangements for leasing space on such support structures is economically more attractive than constructing dedicated support structures for use by the cable operator although, as discussed earlier, access to public property for purposes of constructing such support structures would probably not be granted.

The contentious aspect of the issue is deciding on the level of contribution. In other words, how should the benefits of the shared support structure arrangements be shared between the owner of the support structure and its customers on the one hand, and the cable operator and its customers on the other? In the next chapter of this evidence, the approaches adopted by a number of regulators are considered and compared.

ACCEPTED COSTING AND PRICING METHODOLOGIES

This chapter provides an overview of the current support structure costing and pricing methodologies used by four regulators:

- CRTC
- Alberta Energy and Utilities Board (“EUB”)
- NSUARB
- Federal Communications Commission (“FCC”)

CRTC

It is the approach of the CRTC in establishing support structure rental charges for non-owner tenants or users of utility support structures for such users to be responsible for the causal or direct costs incurred by the utility as a result of the tenant’s use of the support structure, and in addition make a reasonable, usage-based contribution to capital-related (indirect) costs. This approach was first put forward by the Commission in Telecom Decision CRTC 77-6⁸, and was repeated in Telecom Decision CRTC 78-6⁹. Telecom Decision CRTC 86-16¹⁰ established a precise formulaic methodology based on this approach.

The Commission’s most recent decision on support structure rental charges, Telecom Decision CRTC 99-13, used this same methodology in arriving at a prescribed rental charge, inclusive of administration costs, loss in productivity and contribution, of \$15.89 per pole. It should be noted that while this decision was found by the Supreme Court of Canada to be beyond the jurisdiction of the Commission, the Court made no finding with respect to the merits of the methodology used or the rental charge prescribed in the decision.

The Commission’s approach to determining support structure rental charges is discussed under the following headings:

⁸Telecom Decision CRTC 77-6, Bell Canada, Tariff for the Use of Support Structures by Cable Television Licensees, May 27, 1977.

⁹Telecom Decision CRTC 78-6, British Columbia Telephone Company, Tariff for the Use of Support Structures by Cable Television Licensees, July 28, 1978.

¹⁰Telecom Decision CRTC 86-16, Support Structures and Related Items - Public Proceeding on Rates, August 15, 1986.

- Causally Attributable or Direct Costs
- Contribution Toward Fixed or Indirect Costs
- Summary of the CRTC Support Structure Costing Approach

CAUSALLY ATTRIBUTABLE OR DIRECT COSTS

The Commission's approach throughout its determinations has been that the rental charges for support structures should, at a minimum, exceed the causally attributable incremental costs, referred to by the Commission as Phase II costs.¹¹

The methodology used by the Commission has remained consistent with providing recovery of what economists generally consider to be economic costs. In the case of support structures owned by power utilities, the causally attributable or direct costs associated with cable operator use are administration costs (the costs of billing and collections, issuing permits and administering contracts) and costs due to loss in productivity (the cost of the additional time for the utility to do its own work because of the presence of the tenant's cable in the communications space).

As the Commission noted in Telecom Decision CRTC 95-13, there are no causal or direct costs associated with the structures themselves since the poles are in place regardless of whether cable operators have attachments, and the owner is required to permit attachments only where spare capacity exists.¹²

CONTRIBUTION TOWARDS FIXED OR INDIRECT COSTS

The concept of contribution as it has been used by the Commission in regard to support structure rental charges is that it is an additional charge over and above the causally attributable or direct costs which contribute to the fixed common costs of the pole. In Telecom Decision CRTC 86-16, the Commission determined the level of contribution as a

¹¹ See, for example, the methodology employed by the Commission in Telecom Decisions CRTC 77-6 and 78-6, its detailed methodology specified in Telecom Decisions CRTC 86-16 and 95-13, and its statement in Telecom Decision CRTC 95-13 that the rates for support structures should, at a minimum, exceed the causally attributable Phase II costs.

¹²Page 17.

usage-based share of the annualized fixed structure costs. In Telecom Decision CRTC 99-13, the Commission again adopted a usage-based share of the annualized embedded fixed or indirect structure costs in determining an appropriate level of contribution.

There are two elements involved in the CRTC's determination of the appropriate level of contribution - the magnitude of the annualized fixed structure costs (the indirect costs) and the usage factor.

ANNUALIZED FIXED STRUCTURE COSTS

The Commission includes in its determination of annualized fixed structure costs both operating and financial costs. In Telecom Decision CRTC 86-16, the Commission found that the following six costs could be considered to be components of the fixed structure cost: maintenance, administration, depreciation, income tax, capital carrying charges and property taxes¹³. Maintenance and administration charges are the actual average costs per pole for annual pole maintenance and administration expenses. The depreciation cost is the average annual depreciation charge per pole as reflected in the books of the pole owner. The capital carrying charges, including income taxes, are determined as the pole owner's pre-tax cost of capital times the average net embedded cost per pole (the historical cost less accumulated depreciation). The determination of the cost of capital is made using the actual or deemed capital structure for the pole owner, its actual embedded cost of debt and its allowed or deemed pre-tax return on equity. Property taxes are based on actual annual property taxes, if any, paid to a municipality. In Telecom Decision 99-13, the Commission determined the fixed structure costs as the sum of depreciation, interest and maintenance costs¹⁴.

The Commission has rejected the use of current replacement costs as the basis for such fixed structure costs, finding instead that embedded costs provide a more appropriate measure of the costs associated with support structures¹⁵.

¹³Telecom Decision CRTC 86-16, page 32.

¹⁴ Para 225.

¹⁵Telecom Decision CRTC 86-16, page 26.

USAGE FACTOR

The Commission bases usage, also termed the space allocation factor or the cable distribution allocation, on a pole space model. In Telecom Decision CRTC 99-13, it considered that cable operators occupy one foot of the communications space and also require half (1.6 feet) of the separation space for a total of 2.6 feet of the 16.75 feet of usable space¹⁶ (please refer to the diagram in Appendix II for the origin of these dimensions). This resulted in a space allocation factor of 15.5%.

During the proceeding leading to Telecom Decision CRTC 99-13, the power utilities proposed the use of the Glaeser Model for determining space allocation, which would have resulted in a space allocation factor of 35%. The Commission rejected the Glaeser Model on the grounds that it did not appropriately reflect the fact that cable operators do not have the rights of ownership of the pole¹⁷.

Since the contribution is over and above the causally attributable or direct costs, there are no direct costs associated with the contribution. The revenue from the contribution portion of support structure rental charges therefore either adds to the surplus generated by the utility or is used to lower other rates charged by the utility.

SUMMARY OF THE CRTC SUPPORT STRUCTURE COSTING APPROACH

In summary, the support structure costing and pricing approach which was developed by the Commission in the late 1970s and refined in the 1980s remains the basis of the Commission's current approach. This approach involves the determination of the causally attributable or direct costs incurred by the owner of the pole as a result of the user placing its cable on the pole (such as administration costs and any loss in productivity) and adding to that cost a usage-based contribution to fixed support structure costs developed on the basis of the embedded costs of those support structures.

¹⁶ Para 224.

¹⁷ Para 222.

EUB

In EUB Decision 2000-86¹⁸ the EUB adopted the proposal of TransAlta Utilities Corporation (TransAlta) for a rental charge for shared use of overhead facilities and rejected the proposal of TELUS which was based on Telecom Decision CRTC 95-13.

According to EUB Decision 2000-86, TransAlta submitted that, based on the relative costs of a hypothetical system where each utility constructs its own support structures, and since TransAlta requires longer poles than telephone or cable companies, it should bear a higher than average share of the costs. It stated that in areas where only TransAlta and one other party (telephone or cable) are present, TransAlta accounts for 54% of the cost and the other party accounts for 46% of the cost. In an area where TransAlta and two other parties are present (telephone and cable), TransAlta accounts for 38% of the cost while telephone and cable each account for 31% of the total cost. TransAlta further stated that when the weighted average system is taken into consideration, each of the telephone and cable utilities account for 36% of the total. Based on its annual embedded cost per pole of \$51.00, TransAlta proposed an annual rental charge of \$19.00/pole/year. Finally, TransAlta submitted that its proposed methodology is a reasonable middle-ground between incremental and avoided cost methods. (It should be noted that this use of the term “avoided cost” is different from the avoided cost that can be used to determine incremental or direct costs. As TransAlta has used the term, it refers to the costs “avoided” by cable operators when they lease rather than build support structures.)

The EUB found that there is an incremental cost for distribution poles when they provide shared use, and considers it reasonable that the telecommunications carriers and cable operators that benefit from the use of TransAlta’s distribution poles should pay an appropriate rental charge so that TransAlta’s other customers do not incur or cross-subsidize this additional cost. Based on TransAlta’s evidence that the annual embedded cost per pole is \$51, the EUB accepted as reasonable TransAlta’s allocation of 36% to each of telecommunications carriers and cable operators. It therefore approved an annual pole rental charge of \$18.35, rounding down slightly from the \$18.36 that the 36% allocation of the \$51.00 annual embedded cost per pole would yield.

¹⁸Alberta Energy and Utilities Board, Decision 2000-86, TransAlta Utilities Corporation, 1996 Phase II - Constitutional Question, December 27, 2000.

During the four years the EUB's decision on support structure rental charges was pending¹⁹, TransAlta and the cable operators agreed on a lower rate. TransAlta's local distribution business was also sold to UtiliCorp Networks Canada (Alberta) Ltd. (UNCA) during this period. UNCA has continued to honour the negotiated rental charge and forego the additional revenue it could receive by charging the EUB-approved rental charge.

NSUARB

In the proceeding leading up to Decision NSUARB - P-873, Nova Scotia Power Incorporated (NSPI) submitted that an appropriate support structure rental charge would be one based on a fully allocated cost approach. However, inasmuch as that approach would yield a rental charge of \$26.95 compared to the then existing rate of \$9.60²⁰, NSPI opted for a rental charge based on the pricing methodology utilized by the CRTC in Telecom Decision CRTC 99-13.

The Board accepted the evidence submitted on behalf of the Federal Bureau of Competition Policy that a pole attachment service can hardly be described as a basic or core service provided by NSPI, and that an approach based on incremental (direct) costs plus a contribution to common (indirect) costs is preferable where the customers receiving the service do not enjoy the advantages that an ownership interest in the poles would convey.

As noted in Decision NSUARB - P-873, the principal focus of the hearing was on whether NSPI correctly applied the methodology set out in Telecom Decision CRTC 99-13. The Board considered all the costing evidence and approved a pole attachment charge of \$14.15 based on the CRTC methodology, including the use of the 15.5% space allocation factor.

¹⁹The decision was delayed while the EUB considered the constitutional question of its jurisdiction in this matter.

²⁰The NSUARB approved a rate of \$9.60 in 1996, which was the same rate as approved by the CRTC in Telecom Decision CRTC 95-13.

FCC

The FCC has been authorized to resolve certain pole attachment disputes between utility companies and cable television systems since 1978²¹. At that time, Section 224 of the Communications Act of 1934 was enacted empowering the FCC to adjudicate disputes between cable system operators and the owners of support structures concerning pole attachment rental charges, provided that the state in which the parties are located has not certified that it regulates pole attachments.

In enacting Section 224, Congress specified that each pole attachment rental charge should be deemed just and reasonable if it assures a utility the recovery of not less than the additional costs of providing pole attachments, nor more than an amount determined by multiplying the percentage of the total usable space which is occupied by the pole attachment by the sum of the operating expenses and actual capital costs of the utility attributable to the entire pole. In other words, the legislation defines limits for pole attachment rental charges that extend from the support structure owner's incremental (direct) costs as the lower limit to the cable operator's share of the support structure owner's fully allocated costs as the upper limit. The FCC considers incremental costs to consist of those costs that the support structure owner would not have incurred but for the cable attachments. Fully allocated costs, according to the FCC, refer to the operating expenses and capital costs of owning and maintaining poles, including depreciation, taxes, administrative expenses, maintenance expenses, and a return on investment.

The FCC translated the upper bound of the zone of reasonableness defined by Congress into the following formula:

$$\text{Maximum Rate} = \frac{\text{Space Occupied by CATV}}{\text{Total Usable Space}} \times \frac{\text{Net Cost of a Bare Pole}}{\text{Carrying Charges}}$$

The "Space Occupied by CATV" as a ratio of "Total Usable Space" is a simple arithmetic average of one foot in 11 for 35 foot poles and one foot in 16 for 40 foot poles, or an average of one foot in 13.5, leading to a CATV allocation of 7.4%.

The "Net Cost of a Bare Pole" is determined as 85% of the net investment per pole in the case of electric utilities and 95% of the net investment per pole in the case of telephone companies, reflecting the greater investment in utility-specific pole equipment in the case of

²¹A summary of the history of pole attachment regulation by the FCC can be found at www.fcc.gov/eb/mdrd/PoleAtt.html

electric utilities. The net investment per pole is the gross pole investment less the depreciation reserve divided by the number of poles.

As the upper bound of the zone of reasonableness has been used by the FCC to determine rental charges, incremental or direct costs do not play a role.

The Telecommunications Act of 1996 expanded the scope of Section 224 to include pole attachment rental charges to be charged to third party telecommunications carrier users and made several other changes that are relevant to the issue of pole attachment rental charges. The 1996 Act created a distinction between pole attachments used by cable operators solely to provide cable service and pole attachments used by cable operators or by any telecommunication carrier to provide any telecommunications service. The Act prescribed a new methodology for determining pole attachment rental charges for the latter group. The new formulas require that, in addition to paying their share of a pole's usable space, these telecommunications service providers also must pay their share of the fully allocated costs associated with the unusable space of the support structure. However, it should be noted that cable operators providing Internet services as their only telecommunications services are not considered by the FCC to be telecommunications carriers for purposes of applying the pricing formula.

COMPARISON OF METHODOLOGIES

The four methodologies examined break down into two categories, one of which uses direct costs plus a usage-based contribution approach (CRTC and NSUARB), and the other of which uses a fully allocated or fully distributed costing approach (EUB and FCC).

The NSUARB states that it has adopted the CRTC methodology of pricing support structure attachments at direct costs plus a usage-based contribution to indirect costs, and it appears that the application of that methodology by the NSUARB is consistent with the way the CRTC applies it. For example, both use net embedded costs in determining the annual carrying cost of the pole, and both use the same approach to determining the space allocation factor in setting the level of contribution. Given the same input data, the CRTC and NSUARB approaches would be expected to yield similar support structure rental charges.

While the EUB and FCC both use a fully allocated or fully distributed costing approach, there is a significant difference in the level of rental charges. The difference is due to the allocation of those costs among the various users. The EUB accepted TransAlta's proposal to allocate the costs to a single communications space tenant at 46% of the costs, and to two communications space tenants at 31% each based on the relative costs of a

hypothetical system in which each utility constructs its own support structures. The FCC, in contrast, allocates 7.4% of the costs to a cable operator based on the ratio of pole space used to total usable space on the pole. Unlike the CRTC, the FCC does not assign any separation space usage to cable operators. This results in the difference in the space allocation factors between the CRTC and FCC (15.5% versus 7.4%).

In comparing the EUB and FCC approaches, it should be noted that, while the FCC terms its approach a fully allocated cost methodology, it does not set the rental charge so as to recover in full the costs allocated - it assumes implicitly that most of the fixed structure costs are recovered from the pole owner's core business. The direct and an allocated share of the indirect costs form the lower and upper bounds of the rental charge, respectively. The EUB methodology results in a recovery of 46% of the indirect costs with a single communications space tenant, and a recovery of 62% of the indirect costs with two users of the communications space. In the latter case, TransAlta recovers all but 38% of the indirect costs even though TransAlta uses 11.5 feet of the usable space compared with two feet (or 5.25 feet including the separation space) for the two communications space tenants.

Neither the EUB nor the FCC includes any direct costs in determining the appropriate rental charge. It should be noted, however, that while the FCC does not include direct or incremental costs in setting the rental charge, the enabling legislation does set the lower limit of pole attachment rates at a level that assures the utility the recovery of the additional costs of providing pole attachments. In effect, the upper bound of the FCC approach provides for a usage-based contribution without also providing for the recovery of direct costs.

RECOMMENDED COSTING AND PRICING METHODOLOGY

In recommending a costing and pricing methodology to the Board, two fundamental principles have been followed. The first is that the rental charge must provide for the recovery of all direct costs incurred by the support structure owner as a result of the occupancy by the cable operator of a portion of the communications space. The second is that, in addition to the recovery of direct costs, the rental charge should provide for an additional payment in the form of a contribution towards indirect costs, based on the actual costs of the support structure which the owner incurs whether or not a cable operator's facilities are present.

The rationale for the first principle is that tenants should not be subsidized by owners. If such direct costs were not recovered through the support structure rental charge, then the possibility of subsidization of cable operators and their customers by electric power distribution utilities and their customers would exist. The full recovery of direct costs ensures that there is no subsidization taking place from the utilities or their customers to the cable operators.

The rationale for the second principle is based on considerations of fairness, competitive equity and the public interest. From the perspective of fairness, a contribution allows for a reasonable sharing, between the support structure owner and its customers on the one hand and the cable operator and its customers on the other, of the benefits arising from the joint use of support structures. At the same time, it is important to recognize that, as tenants, cable operators do not have any of the rights, privileges or advantages of ownership and, therefore, it is appropriate to limit the level of contribution. From the perspective of competitive equity, it is important to ensure that the limited supply of support structures is not being used to extract monopoly rents from cable operators when they are often in competition with the owners of support structures for certain services, and that reasonable access is not being denied. At the same time, given the competitive situation, it must be ensured that cable operators are treated equitably relative to others that have access to the support structures. Finally, from the perspective of the public interest, owners of support structures should be provided with financial incentives to agree to their joint use so as to limit the number of poles on public lands.

DETERMINING COSTS

The direct and indirect costs should be determined using the actual financial accounts of the support structure owner. As described in detail in earlier sections of this evidence, direct costs are those costs that are causally attributable to the presence of the cable operator's facilities in the communications space on the pole. Some of those direct costs, such as those for inspections and any make-ready costs, will be one-time or non-recurring costs. Other direct costs, such as those for administration of contracts, billing, collections and loss in productivity, will be recurring costs.

The indirect costs are the fixed structure costs that the owner of the pole incurs whether or not there is a tenant in the communications space. Included in indirect costs are pole maintenance costs and capital carrying costs (the financial costs associated with depreciation, interest, return on equity, income tax and property taxes). The indirect costs should be determined using the actual booked depreciation and the embedded pole costs on the owner's books. This ensures that the contribution is based on the actual costs incurred by the owner of the support structure.

The use of replacement costs for determining capital carrying costs has been put forward by some utilities in regulatory proceedings from time to time. However, such an approach has typically not been accepted by a regulator in setting rental charges for access to support structures. The rational approach is to base capital carrying charges on net embedded or actual historical capital costs less accumulated depreciation using, as the source of that information, the financial accounts of the utility. For these reasons, the use of embedded costs is recommended.

DETERMINING THE APPROPRIATE LEVEL OF CONTRIBUTION

The level of contribution could range from a share of fixed (indirect) costs based on usage to a full allocation of indirect costs.

The use of fully distributed costing to set prices for non-core services of a utility is not appropriate because such costs are presumably already being recovered in full through the prices charged by the utility for its core services. Considerations of competitive equity would indicate that a contribution based on fully allocated costs would lead to a rental charge which is too high when the owner of the pole has already recovered the causally attributable costs.

Both the CRTC and the NSUARB rejected a fully distributed or fully allocated costing approach to the setting of support structure rental charges. The CRTC rejected it on the basis that cable operators do not have the rights of ownership of the pole. The NSUARB noted that a pole attachment service can hardly be characterized as a basic or core service provided by the utility, and found that a rental charge based on incremental or direct costs plus a contribution to common or indirect costs is preferable where the customers receiving the services do not enjoy the advantages that an ownership interest in the poles would convey.

A level of contribution based on a usage-based allocation of indirect costs was deemed appropriate by both the CRTC and the NSUARB. In effect, the FCC also adopts such an approach for determining the upper bound of the reasonable rental charge, although as noted earlier it does not provide for the recovery of direct costs in addition to the usage-based allocation of indirect costs. The difference between the two allocations is in the usage presumption. The FCC presumes one foot of space is used by a cable operator, while the CRTC and NSUARB consider that a cable operator also uses half of the separation space for a total cable usage of 2.6 feet. For a 40 foot pole with 16.75 feet of usable space, the FCC allocation would be 6.0%²², while the CRTC allocation is 15.5%. Implicit in the CRTC's allocation is the presumption of two users in the communications space.

A contribution level based on a usage-based allocation of indirect costs satisfies the considerations noted above of fairness, competitive equity and the public interest. It would achieve a reasonable sharing of the benefits between support structure owners and their customers on the one hand, and support structure tenants and their customers on the other. It would remove the possibility of the lack of an open market in support structures leading to unduly high rental charges. It would reflect the fact that tenants do not have the rights, privileges and advantages of ownership. Finally, it would provide a financial incentive for owners to share support structures with cable operators.

RECOMMENDED PRICING APPROACH

Based on these considerations, a support structure rental charge that is based on the full recovery of direct costs, plus a usage-based contribution towards indirect support structure costs determined on an embedded basis, is recommended.

²² The FCC's allocation of 7.4% referenced earlier is based on a presumption that half the poles are 35 feet in length with the balance being 40 feet in length.

It is also recommended that one-time or non-recurring direct costs be recovered through a one-time charge, while recurring direct costs be recovered through their inclusion in the annual rental charge.

With respect to the level of the usage-based contribution, a space allocation factor of 15.5%, assuming two users of the communications space, is recommended. The assumption of only two users of the communications space, which leads to the 15.5% allocation, is considered conservative and leads to an annual rental charge at the high end of the reasonable range.

DEVELOPMENT OF AN ESTIMATED POLE RENTAL CHARGE

This section develops an estimate of the appropriate support structure recurring annual rental charge using the costing and pricing methodology recommended in the previous chapter.

Current cost data is not available for any of the inputs required to apply the methodology. In order to remedy that shortage of current data, data has been gathered from a number of prior proceedings and, where appropriate, is brought up to date (October 2003) using Statistics Canada's Consumer Price Index (CPI) in order to obtain current estimates of the required inputs.

DIRECT COSTS

The direct costs required to apply the recommended methodology are administration costs and costs due to loss in productivity.

The most recent available measure of administration costs is from NSPI in the 2001 proceeding before the NSUARB. Based on 2000 data, their estimate of the annual cost of support structure administration attributable to cable operators was \$0.51 per pole. In Telecom Decision CRTC 99-13, the Commission arrived at an estimate of \$0.62 per pole. Using the latter figure along with the increase in the CPI from 1999 to 2003 provides an estimate of the annual administration cost per pole of \$0.69.

With respect to the cost due to loss in productivity, in the proceeding leading up to Telecom Decision 99-13, the MEA provided data in support of an annual figure of \$3.31 for 1997 based on a figure of \$3.08 for 1991. However, this figure was not specific to cable operators, and should be apportioned between users of the communications space causing this loss in productivity. Assuming two users on average and inflating this figure to 2003 provides an estimate of the annual cost due to loss in productivity of \$1.92.

On the basis of these estimates, the annual direct costs attributable to the occupancy of support structures by cable operators is estimated at \$2.61.

FIXED OR INDIRECT COSTS

The indirect costs required to apply the recommended methodology are net embedded pole costs, annual depreciation costs, annual maintenance costs and annual capital carrying costs.

In the proceeding leading up to Telecom Decision CRTC 99-13, the only actual data on pole costs was provided by Milton Hydro. The net embedded cost per pole in 1995 was \$478. In the NSUARB proceeding, NSPI provided a net embedded cost figure of \$342 as at the end of 2000. In spite of the fact that the data for Milton Hydro is a small sample for estimating the embedded cost of poles in Ontario, this figure is more representative of a typical Ontario-based utility than estimates based on the NSPI figure. Estimating a representative current value for the net embedded cost of poles is not simply a matter of applying a price inflator to the Milton Hydro figure of \$478. If the utility is expanding rapidly, the average net embedded cost of poles would increase as new, higher-cost poles are added to the distribution system. However, if the utility is stable in terms of the territory served but not yet at the point of replacing poles, then the net embedded cost of poles would decrease each year by the average amount of depreciation charged against the embedded cost of poles. For utilities whose situations are between these two extremes, the average net embedded cost of poles could increase, decrease or remain almost unchanged. As the rate and direction of change in the net embedded cost of poles is therefore highly system-specific, and in the absence of any better current information, the Milton Hydro figure of \$478 is held constant in this estimating process.

Milton Hydro provided an annual depreciation expense for poles of \$31.11 in 1995, while the figure provided by NSPI was \$23.55 in 2000. As with the average net embedded cost, the annual amount of depreciation charged against the embedded cost of poles could increase, decrease or remain almost the same for the same reasons – it depends on the specific situation of each distribution system. Using the Milton Hydro figure, in spite of the limited sample size, and in the absence of any better current information, provides an estimate of the annual depreciation of \$31.11.

Milton Hydro provided an estimate of annual pole maintenance expenses, net of tree trimming costs, of \$6.47 for 1995. NSPI provided a figure of \$11.55 including tree trimming costs of \$6.49, for 2000. In the case of this indirect cost, it is appropriate to apply a price inflator because maintenance costs are a current operating expense and are based only on costs incurred in the current year. Using the Milton Hydro figure updated to 2003 by applying the CPI provides an estimate of \$7.61 for annual pole maintenance expenses.

The capital carrying cost is composed of annual interest charges and the pre-tax return on equity costs. The interest rate is determined as the weighted average interest rate on the embedded debt carried by the utility. The pre-tax return on equity is determined as the allowed or achieved return on equity plus taxes or payments in lieu of taxes (PIL) payable on that return. The proportion of each is determined by the actual or deemed mix of debt and equity in the capital structure of the utility. The deemed capital structure and interest rate on debt are dependent on the size of the rate base of the utility. For purposes of estimating an appropriate support structure rental charge, the deemed capital structure and interest rate for a utility with a rate base in the range of \$500 million to \$1 billion have been used. Those numbers are 60% debt and an interest rate of 6.90%. An allowed rate of return on equity of 8.5% as was used by the CRTC in Telecom Decision CRTC 99-13 is used in preparing this estimated rental charge. In addition, a combined federal and provincial income tax rate of 36.6%²³ is used as an estimate of the level of PIL associated with that return on equity. These numbers yield a pre-tax weighted average cost of capital of 9.50%. Applying this pre-tax weighted average cost of capital to the estimated net embedded cost of \$478 yields an annual capital carrying cost of \$45.41.

Using these estimates, the annual fixed or indirect costs of a pole, inclusive of depreciation, maintenance and capital carrying costs are estimated to be \$84.13.

SPACE ALLOCATION FACTOR AND LEVEL OF CONTRIBUTION

A space allocation factor of 15.5%, which is consistent with that used by the CRTC in Telecom Decision CRTC 99-13, is applied to the annual indirect costs of \$84.13 to arrive at an annual contribution level for cable operator pole attachments of \$13.04. As noted in the previous chapter, this space allocation factor is based on the cable usage of 2.6 feet of 16.75 feet of total usable space approved in Telecom Decision CRTC 99-13 which allocates half the separation space to cable and presumes only two users of the communications space. It should be noted that, for a 40 foot pole, the FCC employs a substantially lower space allocation factor of 6.0% based on allocating one foot in 16.75 of usable pole space. The use of the 15.5% space allocation factor would provide Ontario utilities with a much higher contribution per pole than their compatriots in the U.S.

²³This is the combined Ontario and federal income tax rate for non-manufacturing entities in 2003.

ESTIMATED ANNUAL POLE RENTAL CHARGE

Using these estimates, the estimated annual pole rental charge is determined as the sum of the direct costs of \$2.61 plus a contribution towards annual indirect costs of \$13.04, for a total annual pole rental charge of \$15.65. A summary of the cost and price components is shown in the table below.

It should be emphasized that this estimate is based on several individual estimates which in turn are based primarily on a very small sample - namely a single Ontario electric distribution utility - dating back to 1995. It is expected that current direct, embedded and net embedded cost information from a much wider sample of Ontario electric distribution utilities will be available to enable the Board to determine a rental charge based on more current and representative actual cost data.

	Price Component – Per Pole	\$	Explanation
	DIRECT COST		
A	Administration Costs	\$0.69	CRTC estimate 1999 \$0.62, plus inflation
B	Loss in Productivity	\$1.92	MEA estimate 1991 = \$3.08, plus inflation, and divided between two pole attachers
C	Total Direct Costs	\$2.61	A + B
	INDIRECT COST		
D	Net Embedded Cost per pole	\$478.00	Milton Hydro 1995 = \$478
E	Depreciation Expense	\$31.11	Milton Hydro 1995 = \$31.11
F	Pole Maintenance Expense	\$7.61	Milton Hydro 1995 = \$6.47, plus inflation
G	Capital Carrying Cost	\$45.41	Pre-tax weighted average cost of capital 9.5% applied to net embedded cost per pole (D)
H	Total Indirect Costs per Pole	\$84.13	E + F + G
I	Allocation Factor	15.5%	CRTC allocation
J	Indirect Costs Allocated	\$13.04	H x I
K	Annual Pole Rental Charge	\$15.65	C + J

APPENDIX I

CURRICULUM VITAE – DONALD A. FORD

CURRICULUM VITAE DONALD A. FORD

Donald A. Ford is the Managing Partner of D.A. Ford and Associates Ltd., a management consulting firm specializing in the financial, regulatory and policy aspects of the communications industry. Mr. Ford has Bachelor and Master of Science Degrees from Carleton University and a Master of Business Administration Degree from the Ivey School of Business at the University of Western Ontario. During his 10 years with the federal government, Mr. Ford was a Financial Analyst with the National Energy Board and Chief and then Director of Regulatory Policy with the then federal Department of Communications. In 1981, Mr. Ford joined the consulting firm now known as KPMG as a Senior Manager in the Regulated Industries Practice.

Since its formation in 1983, D.A. Ford and Associates Ltd. has participated in well over 200 major projects and studies regarding the Canadian and international communications industries. Mr. Ford has prepared evidence for and testified before the New Brunswick Public Utilities Commission, the Ontario Telephone Service Commission, the National Energy Board, the Bermuda Telecommunications Commission, the Nova Scotia Utilities and Review Board and on numerous occasions before the Canadian Radio-television and Telecommunications Commission.

Mr. Ford has assisted various parties in their participation in regulatory proceedings and the exercise of statutory responsibilities regarding the development and implementation of CATV support structure rates, terms and conditions, including the following:

- Assistance to the Canadian Cable Television Association, CCTA Pacific Region and Cable Atlantic before the Canadian Radio-television and Telecommunications Commission regarding various support structure tariff filings by Bell Canada, BC TEL and Newfoundland Telephone prior to the release of Telecom Public Notice CRTC 93-50.

- Assistance to the Canadian Cable Television Association before the Canadian Radio-television and Telecommunications Commission in the extensive proceeding initiated by Telecom Public Notice CRTC 93-50 which led to Telecom Decision CRTC 95-13. Continued assistance with the subsequent tariff filings by the Stentor members.
- Assistance to Regional Cablesystems and Cable Atlantic before the Public Utilities Commission of Newfoundland and Labrador regarding support structure rates of Newfoundland Light and Power.
- Assistance to the Director of Investigation and Research, Bureau of Competition Policy, on two occasions in dealing with complaints filed in regard to support structure rates, terms and conditions in New Brunswick and in Newfoundland and Labrador.
- Assistance to the Manitoba Cable Television Association in negotiating new support structure agreements with Manitoba Hydro and Manitoba Telephone System.
- Assistance to the Ontario Cable Telecommunications Association and the Canadian Cable Television Association in negotiating new support structure agreements with Ontario Hydro and the Municipal Electrical Association.
- Assistance to the Canadian Cable Television Association in its negotiations with the MEA and subsequently in the proceedings leading to Telecom Decision 99-13.
- Assistance to the Bureau of Competition Policy in the proceeding before the Nova Scotia Utilities and Review Board which led to Decision NSUARB - P-873.

APPENDIX II

SPACE ALLOCATION ON A TYPICAL 40 FOOT POLE

SPACE ALLOCATION ON A TYPICAL 40 FOOT POLE

