STUDY OF AFFILIATE SERVICE COSTS AND COST ALLOCATION

Prepared for
Canadian Niagara Power Inc.
April 11, 2016

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Table of Contents

1 Summary of Study and Findings

FortisOntario owns and operates four Ontario electricity distribution business units and a transmission business unit. Within the FortisOntario organization, management and specialist staff, and certain key systems and facilities are shared to maximize efficiencies of scale, avoid duplication, and provide the required skills and expertise to each business function. In order to prepare appropriate revenue requirements for the 2017 distribution rate application of its subsidiary, Canadian Niagara Power Inc., for rates in its service territories of Niagara and Gananoque, FortisOntario conducted a study to allocate the shared costs among its business units. If approved by the Ontario Energy Board ("OEB"), the costs allocated to the regulated distribution business units will become part of the revenue requirement for those business units in 2017.

CNPI requested BDR NorthAmerica Inc. ("BDR") to review the methodology in the study to allocate the shared costs, based on BDR's extensive experience in cost allocation for energy utilities.

Based on the information provided by CNPI, BDR has concluded that the approach is reasonable and consistent with acceptable methods of cost allocation for regulated utilities.

2 Introduction and Scope

FortisOntario is a holding company which owns and operates electricity transmission and distribution business units as well as generation assets in Ontario. Its subsidiary CNPI has distribution territories located in Fort Erie and Port Colborne (together "Niagara") and Gananoque, and transmission assets located in Fort Erie, all of which are licensed and regulated as to rates by the OEB. Its electricity distribution subsidiary Algoma Power Inc. ("Algoma" or "API") is also licensed and regulated as to rates by the OEB. Another subsidiary, Cornwall Street Railway Light and Power Company Limited ("Cornwall Electric"), operates an electricity distribution system in the City of Cornwall. The Cornwall Electric distribution business is licensed by the OEB.

CNPI is required to obtain the approval of the OEB for the 2017 distribution rates in the Niagara business unit and the Gananoque business unit, and as part of the process, to establish and submit to the OEB cost information in support of the revenue requirements of each business unit.

Within the FortisOntario organization, staff, systems and certain facilities are shared to maximize efficiencies of scale, avoid duplication, and provide the required skills and expertise to each business function. Examples of these shared functions are executive management, administrative support functions (finance, human resources, health, safety and environment and information technology) and asset management. These activities support and provide benefits to all of FortisOntario's regulated business units and to its unregulated business activities. Where permitted by considerations of location, customer service, engineering and operations staff, systems and equipment are also shared. The costs are shared by the business units based on allocation.

In order to recover the allocated portion of shared costs through the rates of the rate-regulated transmission and distribution business units, approval is required from the OEB. The allocated portion of shared costs must be supported by documentation of the costs involved, the services performed, and the methodology used for the allocation.

To support its application to the OEB for approval of 2013 rates in CNPI's service territories (EB-2012-0112), FortisOntario retained the services of BDR to review the methodology of the cost allocations and to provide an opinion as to the reasonableness of the overall approach and the specific allocation treatment of each cost function. Computations and background data were provided for BDR's review. The work resulted in a report dated May 8, 2012, titled "Study of Affiliate Service Costs and Cost Allocation" that was prepared by BDR and filed with the OEB in CNPI's application as Exhibit 4, Tab 5, Schedule 2, Appendix E, in EB-2012-0112 (the "2012 BDR report").

On acquiring API, FortisOntario integrated the operations of API with those of CNPI, so that by the time CNPI's cost of service application was filed, the revenue requirements of CNPI's service territories reflected cost reductions as a result of allocations to API, as API was fully brought into the shared services structure. The cost allocation methodology and results reviewed in the 2012 BDR report therefore reflected the allocations of costs to CNPI, Cornwall Electric and also API.

On April 3, 2014, FortisOntario requested BDR to provide a letter for filing in API's cost of service application for 2015 rates (EB-2014-0055), providing an opinion on the cost allocation methodology as applied specifically to API. The resulting letter, dated May 2, 2014, was filed with the OEB as an exhibit in the proceeding.

To support its application to the OEB for approval of 2017 rates in CNPI's service territories, FortisOntario has once again retained the services of BDR to review the methodology of the updated cost allocations and to provide an opinion as to the reasonableness of the overall approach and the specific allocation treatment of each cost function. Computations and background data were provided for BDR's review. BDR was not requested to comment on the overall level of the costs or on the degree to which operational synergies are or will be achieved by this arrangement.

3 Consultant Qualifications

BDR NorthAmerica Inc. is a Toronto-based consultancy specializing in services to energy sector participants who include governments, regulators, public and investor-owned utilities, generators, prospective investors and consumers. Our areas of specialization include:

Regulatory and Tariffs: BDR advises clients who are regulated entities in all aspects of dealing with regulators. This includes studies in support of rates and revenue requirements, such as rate designs, cost of capital, cost allocation and working capital analysis, as well as supporting applications for capital projects, mergers and acquisitions. Services include analysis and expert testimony where required.

Mergers and Acquisitions: A changing industry requires basic reassessments and decisions to merge and/or acquire businesses and to expand some businesses and exit others. BDR has managed the process of merger, divestment and acquisition of "wires" facilities, and also of generation and other unregulated businesses in the electricity industry. Key in these assignments is the development of a valuation for the enterprise, which ultimately involves an assessment of the condition of the assets and liabilities involved.

Business and Strategic Planning: BDR staff has completed strategic business plans and options analyses for well over 100 clients in the electricity sector. These plans include consideration of the strengths and weaknesses of the client in a range of business options, all of which are assessed in the context of the business and regulatory climate and current government policy.

This assignment was carried out by Paula Zarnett, Vice President of BDR. She is a Certified Management Accountant, and has an MBA (Finance) from the University of Calgary. Ms. Zarnett's three decades of cost allocation experience include:

- Customer class cost allocation studies for natural gas utilities in Manitoba and Alberta;
- leading an in-house team in a one-year cross functional project to perform Toronto Hydro's first cost allocation study (pre-restructuring);
- a cost allocation and rate design study for Enwave District Energy;
- three cost allocation studies for Saint John Energy, a municipal utility in New Brunswick;
- advice to the municipal utilities of New Brunswick in their interventions in NB Power's current application to the NBEUB for approval of a cost allocation methodology[1]; and

[1] Matter 271. Hearings have concluded, with the EUB's decision pending.

- for Toronto Hydro-Electric System, a study to allocate costs to a proposed new class of customers who are individually metered suites in multi-unit residential buildings.

She participated on behalf of a client in the OEB's stakeholder processes regarding cost allocation for electricity distribution service, and was an instructor in cost allocation and rate design (advanced) at CAMPUT's annual utility regulation course in 2006, 2007 and 2008. She has testified before the regulators in Ontario, New Brunswick, Québec and British Columbia.

A former Toronto Hydro employee, Paula is knowledgeable in the typical business processes of distribution utilities and their affiliates. In addition to having prepared evidence in support of FortisOntario's shared cost allocation and transfer pricing approach in successive cost of service applications, she also provided evidence to the OEB on shared cost allocation for:

- EnWin Utilities
- Kingston Hydro
- Oakville Hydro
- Greater Sudbury Hydro, and
- Bluewater Power.

She recently concluded an assignment for Gazifère Inc., a natural gas distributor serving about 40,000 customers in the Province of Québec, to allocate shared costs between the company's regulated services and its various unregulated activities. The assignment included preparation of a report for filing with the Régie de l'énergie and oral testimony before the Régie[2].

4 APPROACH TO THE ASSIGNMENT

The purpose of this study was to allocate to CNPI's service territories of Niagara and Gananoque the costs of shared staff and facilities. The costs involved are costs that *cannot be directly attributed to a single business unit*, and therefore must be allocated based on some fair and reasonable methodology.

The essence of the methodology is, for each type of cost, to attempt to identify an objectively measurable variable (or a combination of variables) that is (a) causally related to the incurrence of the cost, and/or (b) related to the value that is created by the incurrence of the cost; such a variable is generally termed a "cost driver". Each type of cost is then allocated to each business unit based on its share of the identified cost driver.

[2] Requête 3924-2015.

The selection of cost drivers is the key area for professional judgment since, once the cost drivers are selected, the related computations are straightforward.

Late in 2015, management of FortisOntario undertook the work of identifying and quantifying the cost of functions that are shared among its affiliates and gathering cost driver data to support allocations. Except as specifically set out in this report, the selection of cost drivers follows the precedent of previous allocations of FortisOntario and CNPI costs. FortisOntario then computed the cost responsibility of each affiliate company and/or service territory as appropriate. The data and computations were provided to BDR in January, 2016 for review. BDR did not make any independent audit either of financial information or of the data related to cost drivers.

The review focuses on the types of costs for which FortisOntario is proposing to make an allocation to be recovered in the revenue requirements of its Niagara and Gananoque business units. All of the cost types involved are cost types for which FortisOntario's subsidiary, CNPI, has previously received approval to include an allocation for the revenue requirement of its distribution service territories. Because of this, BDR has treated the issue of the appropriateness of sharing and allocating such costs within the FortisOntario group of business units as already determined to be acceptable.

5 Overview of Shared Functions and Allocation Methodology

The regulated businesses of FortisOntario have requirements for the same business functions, but operate in non-contiguous service territories. There is therefore both an opportunity for sharing of functions and a requirement for some employees to be based locally in each of the communities served.

Over time, FortisOntario has taken steps to realize available synergies in the work assignments of its employees, subject to the constraints of location. The following corporate services are based in Fort Erie and are shared by the FortisOntario business units:

- Executive
- Regulatory
- Finance
- Safety
- Human Resources
- Information Technology.

As well, in each of the service territories, there are employees who perform services for other service territories and/or Fortis/Ontario's unregulated business units.

- In Algoma, as a result of its more remote location from the rest of the FortisOntario service territories, most of the employees perform services only for the Algoma service territory; however, employees in the areas of finance, human resources, safety and information technology have had their work integrated with the FortisOntario corporate functional groups and have therefore become a shared resource on the same basis as the members of these functional groups located in Fort Erie. One employee devotes a small percentage of effort at the FortisOntario level.
- All of the distribution business units receive the benefit of services from CNPI's Fort Erie-based customer service staff, although each individual is different in terms of which of the business units they serve.
- Some members of the Fort-Erie based engineering and operations staff perform services for other distribution business units, and the transmission business unit.
- Members of functional management based in Fort Erie perform services for the other distribution service territories and the transmission business unit.

As a result of this sharing of almost all types of resources among the business units of FortisOntario, the approach taken to the allocation was to:

- first allocate the efforts of each employee in all functions other than human resources, safety and information technology,
- then allocate human resources, safety and information technology based on the allocation of the employees served by these functions,
- and finally, to allocate supporting resources, such as space in the Fort Erie building on the basis of the employees working from that building.

This approach required FortisOntario to review, on an employee by employee basis, the sharing of its resources among the business units. This is the approach that has been used in allocating shared costs for several years. Note that except for the specific sharing arrangements noted above, employees in Algoma Power are fully utilized in the Algoma service territory and not shared. Similarly there are six employees in Gananoque. Of these, 4 FTEs are fully dedicated to duties in the Gananoque service territory. These employees are therefore not part of the allocations, except for purposes of allocation of Human Resources, Safety and Information Technology.

BDR reviewed the results of this analysis, in the form of a spreadsheet, and considered the reasonableness of the allocation approach applied. BDR did not otherwise confirm the information received from FortisOntario management.

6 SPECIFIC ALLOCATIONS

6.1 *Customer Service and Billing*

Of the customer service employees based in Fort Erie, four individuals serve only the Niagara service territory. Others share their time with Gananoque, Cornwall Electric, and/or Algoma. These FTEs have been allocated in proportion to the number of customers in the territories they serve. Gananoque service territory receives customer service primarily out of Cornwall. The customer service FTEs located in Cornwall are allocated between Cornwall Electric and Gananoque on the basis of number of customers.

On review, BDR considers this approach reasonable and consistent with acceptable methods of distribution cost allocation. It is also consistent with the methodology previously applied by FortisOntario in its allocations.

6.2 *Operations Management and Field Staff*

Except for one person who has responsibilities for all of the business units, the employees based in Fort Erie are shared by the Niagara distribution business unit and the transmission business unit. Gananoque is served by Cornwall Electric staff. For these staff, time sheets are used to allocate the costs on an actual basis.

For purposes of the forecast test year, an allocation factor has been developed based on budgeted operations and field services plus capital expenditures where the employee is involved in both operations and maintenance work and capital work. A few staff have been identified as performing more than an average level of work for transmission, and they have been allocated in a higher proportion to transmission, based on management judgment.

On review, BDR considers the timesheet approach for sharing actual costs, and the estimation approach for purposes of forecasting the test year allocations, to be reasonable and consistent with acceptable methods of distribution cost allocation, as well as consistent with the methodology used in previous years.

6.3 *Engineering*

Of the 13 engineering staff based in Fort Erie, seven are shared only between the Niagara distribution unit and the transmission business unit. All others provide services to all of the business units.

Allocation of actual costs is based on the time sheets kept by the employees. For purposes of forecasting the allocated costs for the test year, capital expenditure levels were used as the allocation factor.

On review, BDR considers the timesheet approach for sharing actual costs, and the estimation approach for purposes of forecasting the test year allocations, to be reasonable and consistent with acceptable methods of distribution cost allocation, as well as consistent with the methodology used in previous years.

6.4 *Executive*

This function consists of four senior executives and an executive assistant. Each executive was interviewed to determine the percentage of time spent on each of the business units in a representative period. The resulting percentages were averaged and used to allocate the costs of the executive group including the executive assistant.

On review, BDR considers that time spent is a reasonable and appropriate cost driver, and that this approach is consistent with acceptable methods of cost allocation, and with the allocation methodology previously employed by FortisOntario for this function.

6.5 *Regulatory*

The allocation of the 2-FTE regulatory group is based on judgment. A small allocation is made to FortisOntario, as the holding company for the regulated businesses on a judgment basis. Each rate-regulated distribution service territory other than Cornwall Electric and CNPI Transmission has the same regulatory requirements, and has therefore received equal allocations. Cornwall Electric and CNPI transmission presently require a lower level of rate development and regulatory activity than a rate-regulated distribution business unit. They therefore received reduced allocations, as compared with the distribution service territories.

When BDR last reviewed these allocations, consideration was given to whether any synergies existed in the work of regulatory staff in providing services to the regulated distribution service territories. It was concluded that there are no appreciable synergies. Regulatory accounting matters such as PILs reconciliation, deferral and variance accounting continue to be maintained separately. In addition, the Regulatory function oversees separate monthly IESO and Hydro One cost of power true ups with form 1598, RRP true ups, and Global Adjustment settlements. A further consideration in the allocation is that FortisOntario's regulatory staff represents the regulated business units at regulatory stakeholder events and prepares required filings. This means that much of the effort applies to the benefit of all FortisOntario's regulated business units at once.

Therefore, each of the four service territories (Fort Erie, Port Colbourne, Gananoque, and Algoma) has therefore received an equal allocation.

On review, BDR considers this approach reasonable, consistent with acceptable methods of cost allocation, and consistent with the approach previously used by FortisOntario.

6.6 *Finance*

FortisOntario staff reviewed each of the sub-activities that comprise the finance function. The sub-activities are:

- Accounts Payable and Receivable;
- Payroll;
- Financial Reporting;
- Financial Analysis; and
- Supervision.

Each person's function was separately reviewed and allocated based on the work performed. While some of the functions such as regulatory accounting and financial reporting received a judgment-based allocation, others were based on measures of activity. For example, payroll was based on FTEs, and other accounting functions were allocated based on a combination of capital expenditure levels and operating expenses. This factor is a high-level proxy for the account activity in each of the business units.

BDR discussed with FortisOntario management the possibility of a time log system for finance employees to use as a basis of allocation, and was satisfied in this discussion that because of the corporate structure the same effort creates value that is shared, and cannot be specifically identified with one business unit.

BDR considers the approach used as reasonable and consistent with accepted methods of shared cost allocation, as well as with methods previously applied by FortisOntario.

6.7 *Fort Erie Warehousing and Procurement*

The warehousing and procurement function is carried out in Fort Erie on behalf of the Niagara distribution service territories and the transmission business unit, with some service also provided to the unregulated FortisOntario business unit. At present, some purchasing and warehousing is carried out in Cornwall for Cornwall and Gananoque. An inventory of parts for operations and maintenance purposes is maintained locally in each service territory. The costs are allocated based on capital expenditures, because the activity is concentrated on capital-related inventory.

On review, BDR considers the approach used as reasonable, and consistent with acceptable methods of shared cost allocation. The same method was applied in the previous cost allocation.

6.8 *Human Resources*

The approach taken to this shared cost is consistent with that taken for previous CNPI service territory revenue requirements. Human Resources is a function that supports employment, and the number of FTEs is therefore the most appropriate cost driver for allocation purposes.

To compute an allocation factor for Human Resources, the FTEs for all functions other than Human Resources, Information Technology and Safety were summed for each business unit. Included were the allocated portions of the FTEs in shared cost functions (such as executive, finance, etc.) plus the FTEs in functions that are 100% dedicated to that business unit. Information Technology and Safety were excluded to simplify the computation and avoid iteration, because the methodology uses FTEs for their allocation in a manner similar to Human Resources.

For each business unit, the allocation factor for Human resources was therefore the percentage which FTEs allocated to that business unit (excluding Human Resource, Safety and Information Technology) represent of all FTEs, including FTEs that are not shared resources (excluding Human Resources, Safety and Information Technology.

On review, BDR considers that this approach, as in previous reviews, is reasonable and consistent with acceptable methods of cost allocation.

6.9 *Employee Safety*

For allocation of this cost, the same approach was adopted as for Human Resources, making the FTE responsibility for the business unit the basis for its allocation of the Safety Function. Having reviewed the activities of the employees, management was of the view that no adjustments to the resulting allocations were appropriate.

On review, BDR considers that this approach is reasonable and consistent with acceptable methods of cost allocation. The approach and methodology are consistent with those used previously by FortisOntario.

6.10 *Information Technology*

Since the information technology ("IT") function supports the employees in their work, the allocation approach utilized by FortisOntario is based on use by the employees following the allocation of their efforts to the business units (i.e. allocated or direct FTEs), weighted to reflect usage of the various corporate systems.

A simple methodology was applied to reflect different levels of use in this shared cost allocation. Each employee's information technology use was assigned a weighting based on relative use of key corporate systems. Employees using primarily office suite and email services (word processing, spreadsheet, etc.), were assigned a weighting of 1. Employees making extensive use of the major corporate systems (such as call centre and billing staff using the customer information system, or finance staff generating reports from the financial system) were assigned a weighting of 2. Employees making some use of corporate systems, but not enough use to warrant a weight of 2, received a judgment-based weighting between 1 and 2.

For each shared function and non-shared function other than IT, the weighted number of FTEs was used to calculate a percentage allocation of IT services. The weighted allocator was used to allocate IT FTEs to each of the business units.

BDR considers that a weighting to reflect different levels of use of shared IT resources is reasonable, and represents an improvement over an unweighted allocation in reflecting the drivers of IT cost incurrence. BDR is aware that the weightings are judgment-based, but accepts Fortis management's concern that the value of improved accuracy in allocation of this cost does not justify incurring the expense of developing and analyzing system usage reports.

BDR therefore accepts the methodology used in allocation of IT resources as reasonable and consistent with accepted principles of cost allocation. This approach has been used by FortisOntario in the previous cost of service filing for CNPI and other business units.

6.11 *Service Centre Rent and Maintenance*

CNPI staff advised BDR that the Fort Erie service centre building is owned by FortisOntario and rented by CNPI Fort Erie. Appropriate total rent for the building was determined by an independent appraisal as an estimate of market value. Based on area utilized, the total rent was disaggregated into the office, warehouse and garage components. The warehouse and garage components serve the Niagara distribution and the CNPI transmission business units only, so only those business units received an allocation. The allocation was based on the combined capital and O&M budgets, since inventory in the warehouse and transportation equipment in the garage support capital construction, operating and maintenance activity.

Staff (FTEs) located in the office part of the Fort Erie service center, and their previously determined allocations (or direct assignment) to business units were used to allocate the related costs.

Maintenance costs were in proportion to the allocation of service centre rent.

On review, BDR considers this approach reasonable and consistent with acceptable methods of distribution cost allocation, and is the same methodology used previously by FortisOntario.

7 Authorship and Use

This report was written and submitted by me, Paula Zarnett, Vice President, BDR NorthAmerica Inc., following a review of information provided to me by FortisOntario, and is intended for use by FortisOntario's subsidiary CNPI in support of its application to the Ontario Energy Board for approval of 2017 rates and charges.

Dated at Toronto, Ontario, this 11th day of April, 2016.

Paula Zarnett

APPENDIX – ALLOCATION OF FULL-TIME EQUIVALENT STAFF TO BUSINESS UNITS

The following tables resulting from the application of the proposed cost allocation methodology were produced by CNPI and provided to BDR for purposes of this Study.

Department/Section	Business Unit - Full Time Equivalent Employee Distribution							CNPI Dx
	FortisOntario	CNPI Niagara	CNPI Gananoque	Cornwall Electric	Algoma Power	CNPI Transmission	Total	
Executive	0.91	0.93	0.28	1.15	1.09	0.63	5.00	1.21
Regulatory	0.05	0.75	0.38	0.20	0.38	0.25	2.00	1.13
Finance	0.49	2.93	0.78	2.79	4.36	0.66	12.00	3.70
Cornwall Region	0.00	0.00	7.38	39.62	0.00	0.00	47.00	7.38
Algoma Region	0.10	0.00	0.00	0.00	60.90	0.00	61.00	0.00
Gananoque	0.00	0.00	4.00	0.00	0.00	0.00	4.00	4.00
Engineering	0.00	8.59	0.43	1.32	1.34	1.31	13.00	9.02
T&D Operations	0.00	19.72	0.08	0.24	0.24	6.72	27.00	19.80
CNPI Stores and Property	0.06	4.10	0.00	0.00	0.00	0.84	5.00	4.10
Customer Service	0.00	8.91	0.65	0.46	0.49	0.00	10.50	9.55
Subtotal	1.61	45.92	13.97	45.78	68.80	10.41	186.50	59.89
Health & Safety	0.03	0.74	0.22	0.74	1.11	0.17	3.00	0.96
Information Technology	0.10	2.71	0.82	2.70	4.06	0.61	11.00	3.53
Human Resources	0.03	0.86	0.26	0.86	1.29	0.20	3.50	1.12
	1.76	50.23	15.28	50.08	75.26	11.39	204.00	65.51

Department/Section	Business Unit - Full Time Equivalent Employee Distribution							CNPI Dx
	FortisOntario	CNPI Niagara	CNPI Gananoque	Cornwall Electric	Algoma Power	CNPI Transmission	Total	
Executive	18.3%	18.6%	5.6%	23.1%	21.8%	12.7%	100.0%	24.3%
Regulatory	2.5%	37.5%	18.8%	10.0%	18.8%	12.5%	100.0%	56.3%
Finance	4.1%	24.4%	6.5%	23.2%	36.4%	5.5%	100.0%	30.9%
Cornwall Region	0.0%	0.0%	15.7%	84.3%	0.0%	0.0%	100.0%	15.7%
Algoma Region	0.2%	0.0%	0.0%	0.0%	99.8%	0.0%	100.0%	0.0%
Gananoque	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Engineering	0.0%	66.1%	3.3%	10.2%	10.3%	10.1%	100.0%	69.4%
T&D Operations	0.0%	73.0%	0.3%	0.9%	0.9%	24.9%	100.0%	73.3%
CNPI Stores and Property	1.2%	81.9%	0.0%	0.0%	0.0%	16.9%	100.0%	81.9%
Customer Service	0.0%	84.8%	6.2%	4.4%	4.6%	0.0%	100.0%	91.0%
Health & Safety	0.9%	24.6%	7.5%	24.5%	36.9%	5.6%	100.0%	32.1%
Information Technology	0.9%	26.9%	7.3%	24.5%	34.8%	5.6%	100.0%	34.2%
Human Resources	0.9%	24.6%	7.5%	24.5%	36.9%	5.6%	100.0%	32.1%