

GAZIFÈRE CORPORATE SERVICES COST ALLOCATION METHODOLOGY REVIEW



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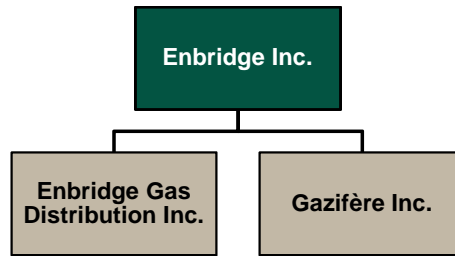
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INTRODUCTION AND BACKGROUND

Gazifère Inc. (“Gazifère”) is one of two natural gas distributors in Quebec serving more than 40,000 residential, commercial, institutional and industrial customers. Gazifère employs 92 staff and is based in Gatineau and is responsible for distribution services across the expanse of land between Fort-Coulonge, Montebello and Grand-Remous. The organization’s service territory currently includes the city of Gatineau, which includes the former municipalities of Hull, Alymer, Gatineau, Masson-Angers and Buckingham.

Enbridge Inc. (“Enbridge”) is the publicly-traded parent company of another natural gas distributor, Enbridge Gas Distribution Inc. (“EGD”) and Gazifère, which are both private corporations. The relationship between these entities is depicted in the diagram below.

Corporate Relationship between Gazifère, Enbridge and EGD



Under this organizational structure, Gazifère receives cost allocations for corporate shared services from both Enbridge and EGD. Both companies provide an array of corporate services to Gazifère, such as Information Technology, Human Resources and Operations & Engineering Support. The costs to provide these services are allocated by Enbridge and EGD to Gazifère using their own internal corporate cost allocation methodologies. The table below outlines the 2015 total budgeted corporate costs to be charged to Gazifère in 2015.

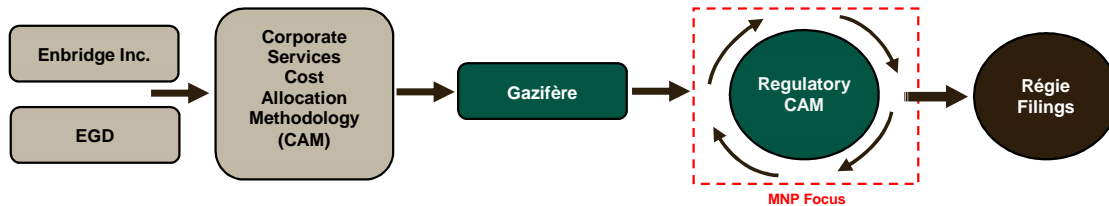
Breakdown of Corporate Services Costs Allocated to Gazifère

Entity	Total Allocated Costs (\$)	Total Allocated Costs (%)
Enbridge	\$2,081,490	62%
EGD	\$1,255,474	38%
TOTAL	\$3,336,964	100%

PURPOSE OF THIS REPORT

The figure below demonstrates the flow of information between Gazifère and its affiliates regarding the development and application of corporate shared service costs; and highlights the scope of our analysis.

Flow of Corporate Services Information between Enbridge, EGD and Gazifère



The purpose of this MNP's corporate services cost allocation methodology review for Gazifère is to:

1. Provide an independent assessment of Gazifère's received corporate services cost allocation against regulatory precedent and principles; and,
2. Support the development of a financial model for Gazifère to assess and treat Enbridge and EGD allocations for prudence and reasonability under the regulatory regime.

ENBRIDGE COST ALLOCATION METHODOLOGY

Enbridge's corporate office sets the strategy, policies and standards to allocate shared costs, while the business units (which include affiliate companies) operate in accordance with those policies and standards. The corporate office is a service provider to the various business units. Enbridge utilizes a well-developed and robust internal Cost Allocation Methodology ("CAM") to attribute all corporate shared services costs across the organization's various business units. The CAM includes relevant cost information for each business unit to further assess within their own context, considering external stakeholders and regulators. All allocations are measured using fully burdened costs. Fully burdened costs are defined as all direct and indirect costs related to providing a corporate shared service.

Enbridge's policy is to charge direct costs wherever possible. However, in many situations direct cost charge outs are not possible and corporate shared services costs must be allocated using appropriate drivers from Enbridge to Gazifère and other business units. Allocation is the process of assigning a single cost to more than one cost object. The Enbridge CAM principles of cost allocation require that the allocation:

- Must have a purpose and be relevant, meaning that the cost should be allocated;
- Should be equitable which means that a service was performed and the other party received a benefit from it and that the cost was reasonable;
- Should be identifiable or traceable; and,
- Should be supported by a methodology acceptable to the various regulators (an important consideration given that Enbridge's affiliates operate in many jurisdictions).

Three types of cost allocations exist within Enbridge's CAM. These are reproduced below.

1. **Direct Costs** – Costs that can be specifically attributed to a cost object.
2. **Indirect Costs** – Costs that are directly related or proportional to direct costs.
3. **General and Administrative Costs** – Costs that can be internal or external in nature, that support several or all business units, but do not relate to one specific business unit, and therefore must be allocated on a basis that relates the cost to the cost driver.

Enbridge's management objective for cost allocations is to have clear, fair, consistent and simple processes in place to recover corporate costs that should be shared. Each allocation is associated with a directly relevant cost allocator (also called a cost driver). The corporate services and allocators used to allocate costs between Enbridge and Gazifère are summarized below.

1. **Business Unit Full-Time Equivalent (FTE)** – Number of FTEs at each business unit.
2. **Enterprise FTE** – Percentage of FTEs at each business unit relative to total enterprise FTEs.
3. **Capital Employed** – Percentage of capital employed at each business unit relative to the total enterprise capital employed.
4. **Blended Pro-Rata** – Blended percentage based on the three other allocation drivers above.

As part of its annual business cycle, Enbridge runs a comprehensive excel-based financial model to allocate the budgeted CAM costs for the following fiscal year. The cost outputs are provided by Enbridge for

incorporation into the annual budgeting processes at the business unit level. For this assignment, MNP obtained the CAM output spreadsheet with total 2015 budgeted costs for the Gazifère business unit.

EGD COST ALLOCATION METHODOLOGY

EGD provides services directly to Gazifère on an as-needed basis, such as services related to regulatory support, sales, capital planning, operations and engineering support. Similar to Enbridge, all costs incurred by EGD are fully burdened costs. Since services are provided on an as-needed basis, these are direct charges from EGD to Gazifère and no cost allocation is required or conducted. An Inter-Corporate Services Agreement formally outlines the services provided by EGD to Gazifère and this has been filed with the Régie de l'énergie ("the Régie") in the past.

On an annual basis, EGD invoices Gazifère for actual costs incurred for support services provided in the previous fiscal year. These costs are generally individuals' time incurred, and detailed invoices are provided to Gazifère to support all costs billed by EGD. For this assignment, MNP obtained the total EGD costs spreadsheet, with total 2014 actual costs charged directly to Gazifère.

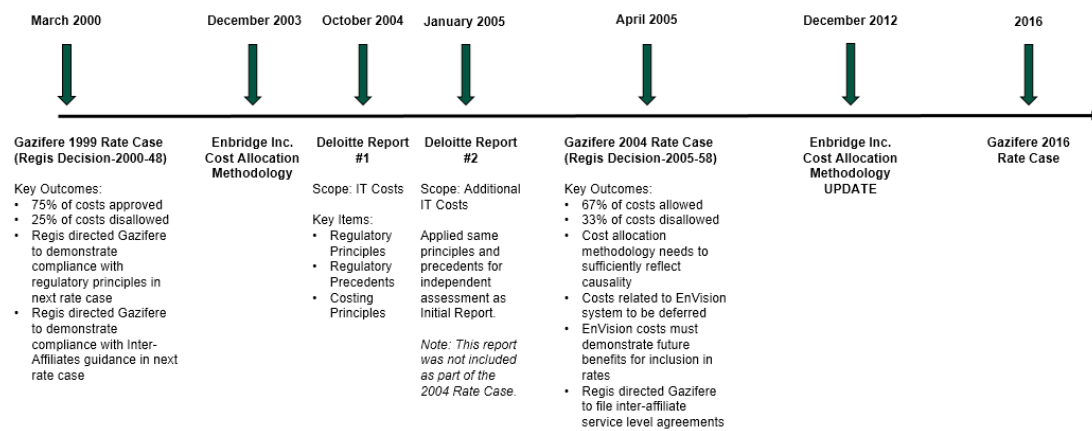
REGULATORY CONTEXT

During Phases 1 and 2 of this assignment, MNP reviewed the following relevant documents:

- Régie Decision D-2000-48 (dated March 30, 2000);
- Régie Decision D-2005-58 (dated April 12, 2005);
- Deloitte Report: Review of Inter-Affiliate Technology Cost Allocations (dated October 22, 2004);
- Deloitte Report: Review of Inter-Affiliate Technology Cost Allocations Related to EnVision (dated January 14, 2005);
- Enbridge Inc. Cost Allocation Methodology (dated December 1, 2003); and,
- Updated Enbridge Inc. Cost Allocation Methodology (dated December 1, 2012).

Based on our understanding of the documents reviewed, MNP developed the following timeline to summarize the high level regulatory events that Gazifère must consider in further developing its cost allocation request:

MNP Regulatory Events Timeline – Gazifere Corporate Services Cost Allocation Study



NEED FOR REGULATORY COST ALLOCATION METHODOLOGY (RCAM)

As noted in Régie Decision D-2000-48, Gazifère's previous transfer pricing methodology (cost allocation) was based on the concept of direct cost accounting. Moving forward, a review of market costs would be more appropriate to determine appropriate transfer pricing.

If transfer pricing is required, it must be at least equal to fair market value. When market prices cannot be determined, a total price allocation (based on fully allocated costs) must be determined. The Régie considers an approach for determining fair market value to be appropriate where data allows, as is accustomed in other regulatory jurisdictions. Fully allocated costs are required in cases where market prices for services do not exist.

As noted in Régie Decision D-2005-58, evidence presented by intervenors (ACEF de l'Outaouais) highlighted that the Gazifère's corporate services costs included within its rate application were premised on Enbridge's CAM. At the time of Gazifère's 2005 rate case, there had been no further treatment of the CAM costs by Gazifère to adjust cost allocations to fully align with regulatory principles of the Régie. EGD experienced a similar outcome in the Ontario Energy Board ("OEB") decision on EGD's 2003 rate case. This approach was rejected by the OEB (in the case of EGD) and the Régie (in the case of Gazifère). The OEB and the Régie asked EGD and Gazifère, respectively, to adapt their respective methodologies for regulatory considerations.

Enbridge recognizes that the objectives of their CAM, as established for internal management and performance measurement purposes, may differ from the objectives of a cost allocation methodology established to meet the needs of a regulator, mandated to protect the interests of rate payers. In recognition of the needs of the regulator, EGD developed an internal Regulatory Cost Allocation Methodology ("RCAM") with the objective of meeting the regulatory requirements of the OEB (as set out in the Affiliates Relationships Code ("ARC") OEB decisions). EGD's RCAM was approved by the OEB in its 2007 rate case.

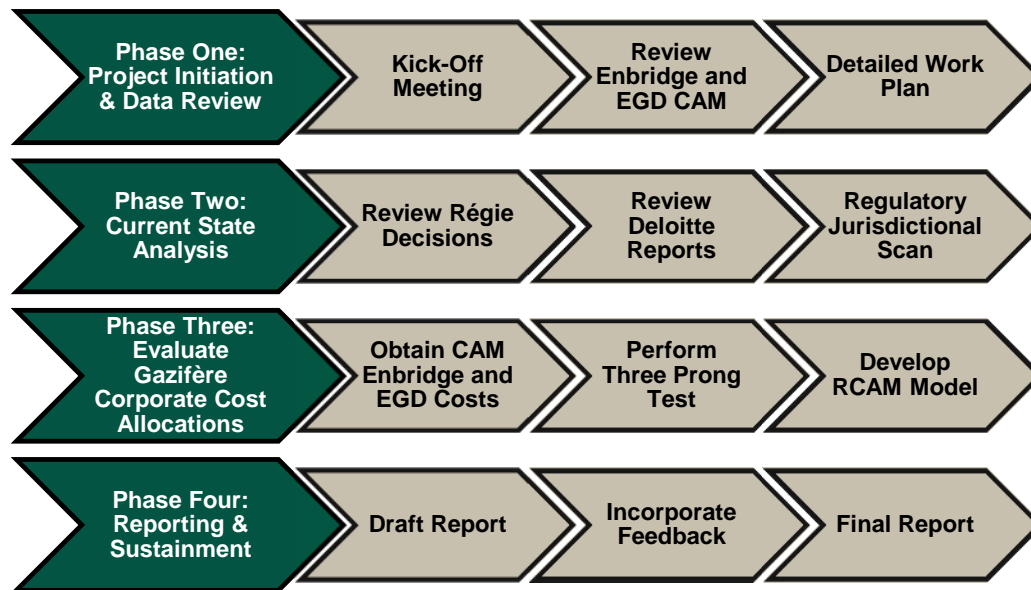
As noted above, Gazifère has been instructed by the Régie to develop its own RCAM for rate case purposes. At the outset of this assignment, Gazifère did not have a formal RCAM established to further refine CAM allocated costs before applying for cost recovery in its 2016 rate application. Therefore, Gazifère must establish a formalized RCAM that is repeatable and scalable over time. The RCAM will also require the development of a financial model to treat CAM allocated costs from Enbridge and EGD for approval in the current and future rate cases.

MNP SCOPE OF WORK

MNP was engaged by Gazifère to act as an independent third-party advisor for the development of Gazifère's approach to recover corporate cost allocations, and a financial model to incorporate regulatory principles that facilitate the assessment and recovery of cost allocations. The objective of designing a tailored RCAM is to better align Gazifère with Canadian regulatory best practice and to meet the requests of the Régie in Decision 2005-58. The remainder of this report encompasses the methodology and findings of MNP's evaluation.

MNP PHASED APPROACH

Our approach to this assignment included 4 Phases, as outlined in the diagram below.



A more detailed overview of the review methodology employed by MNP in completing this assignment is provided in Appendix A.

MNP EXPERIENCE AND OPINION

MNP is Canada's leading mid-market professional services firm, with over 3,000 employees. MNP maintains a team dedicated to the Energy and Utilities sector and has significant experience in operations and consulting for regulated and unregulated energy and utilities companies. The MNP team appointed for this assessment includes MNP's Regional and National Practice Leader for Energy & Utilities Consulting, bringing substantial experience with utility and affiliate cost allocation assessments to bear. We have performed cost allocation and transfer pricing work for both electric and natural gas utilities and their affiliates and have a strategic and detailed understanding of approved methodologies from several Canadian jurisdictions. Our team also holds considerable direct regulatory support experience, having provided testimony before the Alberta Utilities Commission, the British Columbia Utilities Commission, the Manitoba Public Utilities Board and the Ontario Energy Board. More specifically, MNP was retained by Enbridge in 2006 and 2012 to conduct independent evaluations of the RCAM results for EGD's 2007 and 2013 filings, respectively.

MNP has provided its expert opinion throughout this report. Opinions have been developed based on the engagement team's experience and are supported by primary and secondary independent research. This report was developed by **Craig Sabine**, Senior Manager, Energy and Utilities Lead, with all research and analysis being performed under his direction and review. Mr. Sabine will provide direct testimony to the Régie when called and was supported by two core team members in developing the report and findings:

1. Jason Hails, Partner, National Energy and Utilities Lead
2. Sarah Keyes, Senior Consultant, Energy and Utilities

Full CVs of each team member are included in Appendix C.

LIMITATIONS OF THE MNP REVIEW

MNP's review consisted of enquiry, analytical procedures, and discussions related to information supplied to us by Enbridge, EGD and Gazifère. Given these circumstances, MNP notes the following limitations:

1. Information Reliance on Enbridge, EGD and Gazifère

MNP relied primarily on information provided by Enbridge, EGD and Gazifère in assessing financial results and cost data. MNP also relied on the representation of the staff, management, and executives of Enbridge, EGD and Gazifère. These entities therefore retain responsibility for the accuracy and completeness of the data provided to MNP.

MNP did not:

- Audit any of the data received; or,
- Perform a detailed examination of underlying transactions or validate source records.

2. Not a Benchmarking Study

MNP did not conduct a benchmark study for the cost/benefit component of the Three Prong Test. By definition, a benchmark study compares very specifically defined and acquired data from a similar sample of willing participants. For this review, the cost/benefit analysis was based on comparative market data and MNP's expert opinion about the costs of internal and external provision of services.

FINDINGS & RESULTS

This section of the report outlines the assessment principles applied by MNP in developing Gazifère's RCAM model. The results of our Three Prong Assessment on corporate services costs allocated to Gazifère are based on the application of core regulatory principles.

REGULATORY ASSESSMENT PRINCIPLES

During Phase 2, MNP performed desktop research to clearly identify the precedents set by previous regulatory decisions on corporate cost allocation methodologies. We have identified the key requirements necessary for the approval of corporate cost allocation methodology by the Régie, the OEB and the Alberta Utilities Commission ("AUC"). In examining Gazifère's corporate cost allocations against the OEB and AUC requirements and leading regulatory practices, we can align Gazifère's RCAM to meet or exceed the requirements of the Régie. Similarities across the provincial energy board's cost allocation methodologies are illustrated in Table 2.

Table 2: Overview of Regulatory Similarities and RCAM Principles

Regulatory Similarities	Ontario Energy Board	Alberta Utilities Commission	Régie de l'énergie
1. Cost Prudence Costs are necessary and reasonably assigned.	<ul style="list-style-type: none"> Are the charges prudently incurred by the companies for the provision of a service required by ratepayers? 	<ul style="list-style-type: none"> Subsidiaries receive costs that are representative of the support their businesses receive. 	<ul style="list-style-type: none"> Services must be rendered at a price deemed to be just and reasonable. Customers should be charged only for costs which are prudently incurred.
2. Cost Allocation Costs are appropriately allocated based on causation and formula supported by the principles and cost drivers.	<ul style="list-style-type: none"> Are the proposed corporate centre charges allocated appropriately to the companies? 	<ul style="list-style-type: none"> Costs should be directly assigned to the subsidiary where clearly identifiable. Where costs cannot be assigned to specific subsidiaries, cost causation drivers or formulas are used for allocation purposes. 	<ul style="list-style-type: none"> Costs should be allocated to affiliates that cause the costs to be incurred, to the extent that a direct causal relationship can be established.
3. Cost Benefit Cost/benefit to the ratepayers.	<ul style="list-style-type: none"> Do the benefits to ratepayers equal or exceed the costs? 	<ul style="list-style-type: none"> Is it a reasonable amount in those conditions to charge ratepayers? 	<ul style="list-style-type: none"> Are the costs fair and reasonable?

In performing this regulatory review, MNP notes that the OEB establishes the most clearly defined RCAM principles and assessment tools. While the Régie has less explicit guidance, the core principles are often defined and contained within previous decisions. Principles are very similar across jurisdictions. As such, MNP applied rigorous assessment principles to Gazifère's corporate services cost allocations to ensure alignment with Canadian regulatory best practice.

In Phase 3 of the assignment, MNP developed a fundamental RCAM model on Gazifère's behalf and applied the Three Prong Test to all corporate services costs allocated to Gazifère with the objective of ensuring that all RCAM model outputs are aligned with regulatory principles.

The Three Prong Test is a method defined in the OEB Decision with Reasons dated March 20, 1997 (EBRO 493/494)¹ to help with cost allocation decisions. Each prong is assessed only in the event of a 'passing' grade for the previous prong. An overview of the Three Prong Test applied by MNP is provided below.

Prong	Principle	Guidance
Prong One: Cost Incurrence	Are the proposed charges prudently incurred by, or on behalf of, the companies for the provision of a service required by ratepayers?	In the Board's view, costs will not pass this test if they relate to activities which: <ul style="list-style-type: none"> • Go beyond the scope required for a utility; • Are associated with overall governance from a shareholder perspective or "minding the investment"; or • Represent additional and superfluous management layers.²
Prong Two: Cost Allocation	If properly incurred, are the proposed corporate centre charges allocated appropriately to the companies, based on the application of cost drivers/allocation factors supported by principles of cost causality?	No additional guidance is provided by the Board on this test. MNP notes that causality is premised upon a direct causal relationship between the costs incurred and the cost driver used to allocate these costs.
Prong Three: Cost Benefit	Do the benefits to the company's ratepayers equal or exceed the costs?	For the third test, Cost/Benefit, the Board has accepted the [following] four categories ... as a basis for assessing quantifiable benefits: <ol style="list-style-type: none"> 1. Replacement benefits – the services provided replace an equivalent service at equal or lower cost; 2. Synergistic or linkage benefits – the services allow the Companies to reduce costs by means of being part of the larger ... group and operating in concert for the procurement of products and services; 3. Revenue enhancement or cost recovery benefits – the Companies' activities and capabilities provide value to other affiliates for which payment in cash or kind is received; and, 4. Stand-alone benefits – strategic actions and activities instituted by the Corporate Centre that produce direct value to the Companies.

¹ Paragraph 5.5.14 and 5.5.17 EBRO 493/494 Decision with Reasons dated March 20, 1997.

² Paragraph 10.9.1 EB-2005-0001 Decision with Reasons dated February 9, 2006.

RESULTS OF TEST #1: COST INCURRENCE

MNP received the costs allocated to Gazifère from Enbridge and EGD by cost centre or service line item in order to conduct a thorough review of cost incurrence for each service.

In total, 59 cost centres were charged by Enbridge to Gazifère for services provided to the organization. MNP used the guidelines of Prong One: Cost Incurrence as detailed above to analyze whether these charges should be incurred by, or on behalf of, Gazifère ratepayers. Through this analysis 10 of the 59 cost centre items totalling \$152,409 were determined not prudent.

A similar methodology was carried out to analyze the costs incurred by Gazifère from EGD. In order to better assess the prudence of these line items, a preliminary grouping of the costs was developed prior to applying the Prong One test. In utilizing the Prong One methodology for cost incurrence, MNP concluded that all services charged by EGD to Gazifère were prudent.

Following the prudence test of both Enbridge and EGD allocated costs, MNP consolidated all cost centre line items into higher level Service Categories for use throughout the remaining tests of the cost allocation model. For practical modelling purposes, alike cost items are organized into manageable Service Categories for analysis and comparison.

MNP Cost Incurrence Finding:

MNP found that 95% of all costs allocated to Gazifère from EI and EGD were prudent for the provision of service required by Gazifère's ratepayers.

SERVICE CATEGORIES

A total of 15 Service Categories were developed by strategically grouping similar line items of the Enbridge and EGD cost centres or service line items. The purpose of developing Service Categories was to create overarching classifications of cost centres within similar organizational departments. MNP developed working definitions for each of the derived Service Categories in order to outline what that category entails.

The following is a list of the Service Categories, with the full definitions listed in Appendix B:

- Enterprise IT Systems & Support.
- Operations & Engineering.
- Compensation & Benefits.
- Insurance.
- Human Resources.
- Regulatory Support.
- Audit.
- Common Stock-Based Compensation.
- Direct Stock-Based Compensation.
- Rent & Leases.
- Executive Management.
- Corporate Services.
- Treasury & Accounting.
- Legal Services.
- Discretionary (Adjustment).

RESULTS OF TEST #2: COST CAUSALITY

Following the completion of Test #1, the costs that passed this primary test were carried forward into Test #2 – Allocation Causality. A total of \$3,184,555 was passed from Test #1 to Test #2, representing 95% of the total costs allocated by Enbridge and EGD.

The objective of Test #2 was to ensure that the costs passed through Test #1 had a direct causal relationship to Gazifère's operations, and that the appropriate cost drivers were used by Enbridge and EGD in order to derive their final allocated cost figure to Gazifère.

In this test, all line items comprising each Service Category were analyzed against their associated cost centre type and allocation basis. MNP assessed whether each line item in each Service Category was allocated using an appropriate cost driver that established a direct causal relationship.

MNP believes that five service line items were allocated with an inappropriate allocation basis. The allocation drivers used by Enbridge for these line items were not suitable, as a direct causality between the allocation basis and the costs incurred could not be established.

Despite the lack of alignment between the cost and the driver, MNP did not adjust the allocation driver because the change in allocation driver would increase the amount of costs to be incurred within the RCAM. Any changes resulting in a net gain to Gazifère were not implemented, as Gazifère pays Enbridge and EGD for the total costs allocated only. MNP has developed a recommendation for Gazifère to specifically address this issue in the future (refer to Recommendation #1 within this report).

The final output of Test #2 was \$3,184,555. Since no cost allocation drivers were changed, there were no changes to the final costs of the Service Categories and associated cost centre line items between Test #1 and Test #2.

MNP Cost Causality Finding:

MNP found that nine cost centre line items were not allocated appropriately based on cost causality. However, no adjustments to the drivers were made, as the change in drivers would result in an increase in the amount of costs to be claimed within the RCAM.

RESULTS OF TEST #3: COST BENEFIT

The final test of the cost allocation review and RCAM Model was Cost Benefit. The purpose of this test is to assess if the benefits to Gazifère's ratepayers equal or exceed the costs of the services they receive. Specifically, MNP analyzed if the services provided and charged for by Enbridge and EGD to Gazifère were provided at reasonable market prices when compared to similar utilities operating in the industry.

In order to identify which of the 15 Service Categories would be tested under the Prong Three: Cost Benefit methodology, MNP established a materiality threshold of \$100,000; should a Service Category include costs of \$100,000 allocated by Enbridge and EGD or above, that category was tested against comparable utilities. A total of \$2,780,395 or 87% of the costs that passed Test #2 were considered material and underwent a quantitative assessment for Test #3. This covers 7 of the 15 Service Categories in the RCAM.

Though the remaining non-material Service Categories were not put through the same rigorous quantitative testing as the material Service Categories, they were considered with a qualitative review process to assess for Cost Benefit utilizing the four principles of Prong Three as outlined above. Each of the non-material Service Categories passed the Cost Benefit test, as per the rationale per Service Category outlined below.

Non-Material Service Category	Cost Benefit	Test Result
Audit	Gazifère's costs are reduced by leveraging audit services through Enbridge and/or EGD at a significantly reduced rate than having audit expertise on staff.	Pass
Direct Stock-Based Compensation	This figure represents the costs of stock-based compensation awarded for Gazifère employees by Enbridge, incentivizing staff manager level and above on a long-term basis. These costs are directly correlated, and if Gazifère were a standalone entity, would	Pass

	require comparable compensation to be considered a competitive employer and attract qualified staff.	
Rent & Leases	The FTEs of Enbridge require office space in order to conduct work associated with Gazifère. Currently, Gazifère pays approximately \$7,000 per FTE at their own office, translating to just over \$660,000 in office rent per year. Given the allocated cost of approximately \$65,000 charged by Enbridge to Gazifère, the same ratio would translate to roughly 9 FTEs; a figure much lower than the estimated 25-30 employees that work on Gazifère related matters at Enbridge.	Pass
Executive Management	Gazifère does not require a full suite of executive management personnel on staff, and can leverage the expertise of the executive management of Enbridge/EGD when appropriate, reducing the costs of having these personnel on permanent Gazifère payroll.	Pass
Corporate Services	Gazifère's costs are reduced by leveraging corporate services through Enbridge and/or EGD, as it is more cost effective than having staff at Gazifère fulfill these roles and responsibilities.	Pass
Treasury & Accounting	Gazifère's costs are reduced by leveraging treasury and accounting services through Enbridge and/or EGD at a significantly reduced rate than having this specialized expertise on staff, or by hiring professionals in treasury and accounting through Gazifère's own procurement practices.	Pass
Legal Services	Gazifère's costs are reduced by leveraging legal services through Enbridge and/or EGD at a significantly reduced rate than having legal expertise on staff, or hiring legal services through Gazifère's own procurement practices.	Pass
Discretionary (Adjustment)	Refer to Appendix B for details.	Pass

In order to accurately assess the Cost Benefit of the material Service Categories, comparability measures were developed for each of the categories. These measures varied across categories, as measures were deemed appropriate based upon the specific service and how costs are typically derived. The comparability measures for each of the Service Categories are listed below.

Material Service Category	Comparability Measure
Enterprise IT Systems & Support	Annual IT Spend per FTE
Operations & Engineering	Annual Operations & Engineering Spend per FTE
Compensation & Benefits	FTEs Cost Build-Up
Insurance	Annual Insurance Spend
Common Stock-Based Compensation	FTEs Cost Build-Up
Human Resources	Annual HR Spend per FTE
Regulatory Support	Annual Regulatory Spend per FTE

Similar utilities were selected for Test #3 from the OEB's Utility Yearbooks on the basis of comparability of customer base and employee size to that of Gazifère, as well as from the utilities used in the EGD's RCAM from its 2013 rates proceeding. Once the utilities were selected, the annual reports, audited financial

statements, and previous rate applications were analyzed in order to harvest relevant information that was to be used in Test #3 for the appropriate material Service Category comparisons.

Calculations for each of the comparability measures were carried out for the comparative utilities. A low, high, and average price range for each of the utilities was derived based on the comparability measure, which was then used for the analysis of whether the costs incurred by Gazifère fall within the low and high range of industry comparable utilities. Gazifère fell within or below range, and therefore passed Test #3, on five of the six material categories.

Service Category	Gazifère Test #3 Values	Market Prices			Comparable Rates Test Result
		Low	Average	High	
Enterprise IT Systems & Support	\$ 14,279	\$ 9,676	\$ 31,532	\$ 46,728	Within Range
Operations & Engineering	\$ 4,803	\$ 5,330	\$ 6,629	\$ 8,329	Below Range
Compensation & Benefits	\$ 296,518	\$ 250,880	\$ 391,431	\$ 531,981	Within Range
Insurance	\$ 286,536	\$ 69,105	\$ 135,266	\$ 231,959	Outside of Range
Common Stock- Based Compensation	\$ 187,341	\$ 78,994	\$ 118,491	\$ 157,988	Outside of Range
Human Resources	\$ 2,454	\$ 1,664	\$ 8,384	\$ 14,673	Within Range
Regulatory Support	\$ 9	\$ 4	\$ 14	\$ 27	Within Range

INSURANCE

Given that Gazifère was outside of the range established by the comparable utilities analysis for the Insurance category, further examination of the contributing costs allocated to Gazifère was required to identify why the total allocation cost was considerably higher than that of comparable utilities. Upon review of the cost line items that were included in the total Insurance cost allocated to Gazifère from Enbridge, we noted that this included Consolidated D&O, a line item for directors and officer's liability insurance. MNP performed further research and analysis to substantiate the amount of D&O insurance premiums that would be paid if Gazifère were a standalone entity. Our findings and corresponding adjustment are explained in the table below.

Service Category	Gazifère Test #3 Values	Market Prices			MNP Adjustment
		Low	Average	High	
D&O Insurance (a line item in the Insurance Service Category noted above)	\$ 157,975	\$ 7,000	\$ 43,500	\$ 80,000	(\$ 114,475)

Upon making this adjustment for the D&O insurance line item within the Insurance Service Category, MNP found that Gazifère's total Insurance costs are aligned with comparably sized utilities (i.e. within range).

COMMON STOCK-BASED COMPENSATION

Similar to Direct Stock-Based Compensation (“SBC”), in principle, MNP determined that Common Stock-Based Compensation costs could be considered prudent in the case of Gazifère since Enbridge provides executive management, senior leadership and Board of Directors support to Gazifère. If Gazifère were a stand-alone entity, it would require its own executive management team, senior leadership and Board of Directors. SBC is part of total compensation for these individuals. In the absence of SBC compensation, these individuals would be compensated through higher salaries.

SBC is commonly accepted by various Canadian regulators as an acceptable direct cost. As such, MNP has passed Common SBC costs through the Gazifère RCAM on the basis of these principles. However, MNP was unable to identify comparably sized utilities that include Common SBC costs within their regulatory filings. As such, MNP performed an FTE cost build up analysis to determine a reasonable range of Common SBC costs if Gazifère were a stand-alone entity with its own executive management team, senior leadership and Board of Directors. We have included Recommendation #3 below, which will increase the overall precision of the Common SBC amounts to be included in future regulatory filings using Gazifère’s RCAM approach.

Service Category	Gazifère Test #3 Values	Market Prices			MNP Adjustment
		Low	Average	High	
Common Stock-Based Compensation	\$ 187,341	\$ 78,994	\$ 118,491	\$ 157,988	(\$ 68,850)

Upon making this adjustment to the Common Stock-Based Compensation Service Category, MNP found that Gazifère’s total Common Stock-Based Compensation costs are reasonable (i.e. within range).

MNP Cost Benefit Findings:

1. All Non-Material Service Categories met the replacement test and are deemed to pass Test #3.
2. Upon first review, 5 of the 7 Material Service Categories fell between the MNP range developed through analyzing comparable utilities, and therefore passed Test #3.
3. The Insurance Service Category that fell outside of the range was adjusted downward by \$114,475, resulting in a pass of Test #3.
4. The Common Stock-Based Compensation Service Category that fell outside of the range was adjusted downward by \$68,850, resulting in a pass of Test #3.

RECOMMENDATIONS

In this section, we offer a number of recommendations for Gazifère's consideration in future regulatory filings. Each time Gazifère files a rate application with the Régie, the RCAM model will need to be updated and re-run to determine the total corporate costs to be included for recovery. Our recommendations are based on continuous improvement to ensure compliance with Canadian regulatory best practice over time.

RECOMMENDATION #1: DEVELOP INTERNAL COST ALLOCATION DRIVERS

We recommend that Gazifère develops a set of specified internal cost allocation drivers for inclusion in the RCAM. This is similar practice to EGD's RCAM, which involves a number of internal studies to establish reliable cost drivers that clearly demonstrate the principle of causality where it is not already clear. Adjustments to cost allocation drivers would be made in Test #2. Overall, the use of specified internal cost allocation drivers within the RCAM model will enhance the robustness of the overall methodology and ensure greater precision in the RCAM model cost outputs over time. Some examples of cost allocation drivers that may be developed internally by Gazifère include:

- **Service Specific Salary Weighting** – Salary grade mid-point for individual time study participant from a specific department divided by the sum of all employee salary grade mid-points for a specific service and a specific department.
- **Salary Weighted Time** – General salary weighting for a specific individual multiplied by the individual's time estimate to each service provided.
- **Gazifère % of Salary-Weighted Direct Time** – Value of direct salary-weighted time-based allocation to Gazifère divided by the value of direct salary-weighted time-based allocation to all business units of Enbridge.
- **Adjusted Capital Employed Ratio** – Gazifère's capital employed without the purchase premium.

The above allocation drivers were taken from EGD's RCAM as examples of relevant allocation drivers that may be used by Gazifère in the future. To establish these specified allocation drivers, further study and analysis would be required as noted below:

Estimated Level of Effort – 48 FTE hours, **\$12,000 to \$18,000**

RECOMMENDATION #2: SERVICE-LEVEL AGREEMENT WITH ENBRIDGE

We recommend that Gazifère develops a formal Service-Level Agreement (SLA) with Enbridge. The SLA should outline the nature of the corporate services provided by Enbridge to Gazifère and the policies for allocating costs under this arrangement. The SLA should be submitted to the Régie for regulatory approval as part of Gazifère's future rate applications.

RECOMMENDATION #3: INTERNAL STUDIES ON COMMON STOCK-BASED COMPENSATION

MNP recommends that Gazifère work with Enbridge to implement an alternative mechanism to allocate costs appropriately and in alignment with the principles of cost allocation established through regulatory proceeding. Greater precision in the allocation of these costs will enhance the value of Enbridge's shared services to Gazifère. To more clearly align causality, an analysis may involve internal study that assesses the level of effort (FTE Hours) spent by Common SBC recipients at Enbridge on the Gazifère business unit or further study of fair market value regarding comparable total compensation. This will serve to enhance the precision of Common SBC costs incurred within in Gazifère's RCAM model in the future. In addition, this serves to substantiate that common SBC costs incurred relate directly to the level of effort for Gazifère support services by Enbridge employees. Further study and analysis would be required:

Estimated Level of Effort - 64 FTE hours, **\$15,000 to \$20,000**

RCAM OUTPUTS SUMMARY

The following table provides a high level summary of Gazifère's RCAM model outputs at each stage of MNP's Three Prong Test.

Service Category	Total Allocated Costs	MNP Adjustment for Test #1	Total Costs Passing Test #1	MNP Adjustment for Test #2	Total Costs Passing Test #2	MNP Adjustment for Test #3	Total Costs Passing Test #3
Audit	\$ 105,213	(\$ 5,960)	\$ 99,253	\$ 0	\$ 99,253	\$ 0	\$ 99,253
Compensation & Benefits	\$ 296,518	\$ 0	\$ 296,518	\$ 0	\$ 296,518	\$ 0	\$ 296,518
Corporate Services	\$ 173,583	(\$ 77,513)	\$ 96,070	\$ 0	\$ 96,070	\$ 0	\$ 96,070
Common Stock-Based Compensation (See Recommendation #3)	\$ 187,341	\$ 0	\$ 187,341	\$ 0	\$ 187,341	(\$ 68,850)	\$ 118,491
Discretionary (Adjustment)	(\$ 43,000)	\$ 0	(\$ 43,000)	\$ 0	(\$ 43,000)	\$ 0	(\$ 43,000)
Enterprise IT Systems & Support	\$ 1,380,587	(\$ 66,946)	\$ 1,313,641	\$ 0	\$ 1,313,641	\$ 0	\$ 1,313,641
Executive Management	\$ 51,727	\$ 0	\$ 51,727	\$ 0	\$ 51,727	\$ 0	\$ 51,727
Human Resources	\$ 137,919	(\$ 1,990)	\$ 135,929	\$ 0	\$ 135,929	\$ 0	\$ 135,929
Insurance	\$ 281,236	\$ 0	\$ 281,236	\$ 0	\$ 281,236	(\$ 114,475)	\$ 141,761
Legal Services	\$ 9,222	\$ 0	\$ 9,222	\$ 0	\$ 9,222	\$ 0	\$ 9,222
Operations & Engineering	\$ 441,839	\$ 0	\$ 441,839	\$ 0	\$ 441,839	\$ 0	\$ 441,839
Regulatory Support	\$ 123,892	\$ 0	\$ 123,892	\$ 0	\$ 123,892	\$ 0	\$ 123,892
Rent & Leases	\$ 64,986	\$ 0	\$ 64,986	\$ 0	\$ 64,986	\$ 0	\$ 64,986
Direct Stock-Based Compensation	\$ 94,443	\$ 0	\$ 94,443	\$ 0	\$ 94,443	\$ 0	\$ 94,443

CORPORATE SERVICES COST ALLOCATION METHODOLOGY



Treasury & Accounting	\$ 31,458	\$ 0	\$ 31,458	\$ 0	\$ 31,458	\$ 0	\$ 31,458
TOTAL	\$ 3,336,964	(\$ 152,409)	\$ 3,184,555	\$ 0	\$ 3,184,555	(\$ 183,325)	\$ 3,001,230

The table below outlines the individual line items by Service Category that were assessed as not prudent in Test #1. The MNP adjustments made in Tests #2 and #3 are outlined in the Findings and Results section of this report.

Service Category	Line Items Assessed as Not Prudent
Audit	<ul style="list-style-type: none"> Audit Fees for Enbridge
Corporate Services	<ul style="list-style-type: none"> Corporate Aviation Enterprise Communications & Community Partners Enterprise Travel Procurement Card Program Public, Government & Aboriginal Affairs
Enterprise IT Systems & Support	<ul style="list-style-type: none"> IT Liquids Pipeline Application Operations IT Shared Services from Business Units (EEP, EGD)
Human Resources	<ul style="list-style-type: none"> Severance Costs for Enbridge Employees

MNP CONCLUSION & OPINION

Based on our study, MNP concludes that the output costs resulting from the Gazifère RCAM model of \$3,001,230 pass the Three-Prong test. MNP is of the opinion that the RCAM output costs are considered prudent, reflective of cost causality and the benefits to Gazifère and its ratepayers outweigh the costs. MNP concludes that \$3,001,230, or 90% of total corporate services costs charged by Enbridge and EGD are reasonable shared service costs to be incurred by a utility the size and complexity of Gazifère.

MNP Conclusion:

Overall, the total corporate services costs that Gazifère will submit to the Régie de l'énergie for regulatory approval is \$3,001,230. This represents approximately 90% of the total allocated costs from Enbridge and EGD.

APPENDIX A: REVIEW METHODOLOGY

PHASE 1 – PROJECT INITIATION AND DATA REVIEW

1. MNP hosted a project kickoff meeting to establish a common understanding of the objectives of the assignment and strategic direction of Gazifère as it related to the needs of the Régie.
2. MNP reviewed the corporate cost allocation methodologies used by Enbridge and EGD to allocate shared services costs to Gazifère.
3. MNP developed a detailed work plan and scoping document.

PHASE 2 – CURRENT STATE ANALYSIS

1. MNP reviewed previous Régie decisions related to corporate cost allocations within Gazifère's rate applications. An understanding of the regulatory requirements for corporate cost allocations was obtained to set the fundamentals of our review.
2. MNP reviewed previous cost model review reports developed by Deloitte.
3. MNP conducted a high level jurisdictional review of other utilities and regulator treatments of corporate shared services costs to determine best practice for Gazifère's RCAM model development, including the methodologies used by:
 - Enbridge (Cost Allocation Methodology (CAM));
 - EGD (Regulatory Cost Allocation Methodology (RCAM));
 - Previous OEB decisions; and,
 - Previous AUC decisions.

PHASE 3 – EVALUATE GAZIFÈRE CORPORATE COST ALLOCATIONS

1. MNP reviewed 2015 budgeted corporate cost allocations from Enbridge to Gazifère.
2. MNP reviewed 2014 actual corporate cost allocations from EGD to Gazifère.
3. MNP established the core regulatory principles to be applied for corporate cost allocations from Enbridge and EGD in alignment with Régie, OEB and AUC regulatory precedents and defined requirements.
4. Using our RCAM methodology and the core regulatory principles established in the previous step, MNP applied a Three Prong Test to the total corporate costs allocated to Gazifère, including:
 - **Prong 1 – Cost Prudence** – Are costs prudently incurred?
 - **Prong 2 – Cost Allocation** – Are costs allocated appropriately based on cost causality?
 - Where appropriate, MNP recommended new allocation drivers for Gazifère's RCAM purposes, leveraging industry best practice and adherence to the regulatory obligations of the Régie as previously identified.
 - **Prong 3 – Cost Benefit** – Do benefits to ratepayers exceed the costs?
 - All corporate charges must be assessed at no more than fully-allocated costs.
 - All corporate charges must be incurred at no more than fair market value.
5. MNP developed a scalable and sustainable Regulatory Cost Allocation Model (excel-based financial model) to calculate allocations based on the appropriate Gazifère allocation drivers.

PHASE 4 – REPORTING AND SUSTAINMENT

1. MNP developed a draft report summarizing the principles and functionality of the model to the Gazifère project team.
2. As appropriate and based on our independence, MNP incorporated feedback from Gazifère's project team into the final report to ensure the model's compatibility with Gazifère and Enbridge data, systems and processes.
3. MNP will provide all application, submission and hearing support necessary through the approvals process. Our support includes information requests and addressing intervenors interaction, as well as providing direct presentation or oral testimony to the Régie.

APPENDIX B: SERVICE CATEGORIES

Service Category	Service Description
Audit	The Audit Service Category represents the costs of internal and external audits of Gazifère's business operations. Annually, an external audit is performed at the Enbridge Inc. level, which covers all of its subsidiaries, including Gazifère. The external audit fees are a direct charge to each business unit (i.e. Gazifère's component of the external audit fees is a direct pass through of costs from Enbridge Inc.). The internal audit function at Enbridge Inc. performs financial, compliance, information technology, internal controls and operational audits of its subsidiaries, including Gazifère. The internal audit costs are charged to business units based on capital employed, which is reflective of the materiality of the business unit to Enbridge Inc.'s overall business operations.
Corporate Services	The Corporate Services Service Category represents the costs of enterprise-wide investor relations (such as issuing press releases, responding to media inquiries, organizing annual shareholder meetings), strategic development and corporate development management (such as senior leadership and advice regarding the strategic affairs of the company, oversight of activities related to corporate strategy, and investment review of the various businesses, including Gazifère) performed by EI on behalf of Gazifère. In addition, this Service Category includes EGD costs related to risk management assessments and mitigation strategies, as well as security services provided to Gazifère.
Discretionary (Adjustment)	The Discretionary (Adjustment) Service Category represents an adjustment made by EI after the final 2015 CAM budget was completed. The adjustment made by EI was for the number of FTEs at Gazifère, which is a core allocation driver used in EI's CAM model to allocated corporate costs. The initial number of FTEs was overstated and the final number of FTEs was lowered. In order not to have this minor change affect the 2015 budgeted amounts that were already distributed to all of the other business units, a discretionary credit was provided in Gazifère's final 2015 budgeted amounts. This discretionary credit applies to the total costs allocated by EI to Gazifère. Since this is a negative number (i.e. the adjustment serves to decrease the total CAM costs allocated to Gazifère), this is a separate Service Category as it impacts all Service Category costs for RCAM purposes.
Enterprise IT Systems & Support	The Enterprise IT Systems & Support Service Category represents the costs of enterprise-wide IT systems used by Gazifère employees, including the overall coordination and monitoring of major enterprise-wide IT projects, as well as governance over enterprise-wide IT strategies, policies and standards for information technologies. The IT Planning and Governance department at EI supports this service by assuming project management responsibilities for major projects, including implementation and budget management. The People and Partners department at EI supports this service by providing senior leadership and advice regarding the corporate information technology strategy. This Service Category includes the costs related to the CIO of EI in supporting senior leadership services for the IT function.

Executive Management	<p>The Executive Management Service Category represents the costs of Enbridge Inc.'s senior management and other executives that provide management oversight and leadership services. In the absence of its own executive management, Gazifère benefits from receiving these services from Enbridge Inc. The costs allocated to Gazifère are comprised of the following members of executive management, which provide the following services on behalf of Gazifère:</p> <ul style="list-style-type: none"> - CEO - The CEO provides senior leadership and strategic counsel to Gazifère. The CEO provides senior executive advisory services and oversight in the areas of corporate governance, ongoing contact with the major energy customers or suppliers, and liaison with other companies in the energy industry to assist Gazifère with anticipating and responding to current and future needs of customers in the marketplace. - CFO - The CFO provides senior leadership and advice regarding the financial affairs of Gazifère. The CFO oversees the activities of investor relations, treasury, corporate controller, audit, pension administration, supplier management and the finance/accounting activities of Gazifère. - Corporate VPs - The Corporate VPs provide senior leadership, oversight and advance to the human resources, information technology, corporate secretarial and corporate administration services functional areas for Gazifère. - Board of Directors - The Board of Directors provides corporate governance services and oversight of financial, regulatory and business operations. The Directors' fees and expenses comprises all fees paid to Directors of Enbridge Inc.'s Board, including conducting Board activities and liaison with members of Enbridge Inc.'s senior management.
Human Resources	<p>The Human Resources Service Category represents costs incurred to provide research, expertise and support to internal initiatives. This Service Category includes support related to policy and systems development, personnel management and adherence to regulatory and legislative requirements. EI provides human resources support to Gazifère for enterprise-wide change management and organizational effectiveness initiatives, as well as HR business solutions services. Gazifère has a first line in-house HR function (portion of the work of DG administrative coordinator) which is entirely dependent to EI. Large parts of the services are completely outsourced to EI.</p>
Insurance	<p>The Insurance Service Category represents the costs of insurance premiums for liability, crime, property, automobile, and fiduciary policies held for Enbridge Inc. and its subsidiaries. Insurance is purchased at the parent-company level (i.e. Enbridge Inc.) for each individual subsidiary (i.e. Gazifère). Insurance premiums are a direct charge to each business unit (i.e. Gazifère's specific insurance premium costs are a direct pass through of costs from Enbridge Inc.).</p>
Legal Services	<p>The Legal Services Service Category represents the costs of records management law, corporate law fees and corporate secretarial fees. Gazifère does not have an in-house legal counsel and relies on Enbridge Inc. to provide all legal services for their business operations. Records management law provides Gazifère with legal support on its records management to ensure compliance with applicable laws and regulations. Corporate law services provided by Enbridge Inc. includes the coordination and provision of enterprise-wide legal counsel and consultation to business units, as well as to specific corporate projects on legal matters. Corporate secretarial services provided by Enbridge Inc. includes legal counsel and advice on corporate secretarial related matters.</p>

Operations & Engineering	The Operations & Engineering Service Category represents the costs incurred by EI and EGD to provide Gazifère with capital planning, sales, infrastructure and maintenance, enterprise safety and operational reliability support services. This includes the development and ongoing maintenance of a GIS system on behalf of Gazifère, which includes records plotting, records scanning and distribution planning. EGD also provides Gazifère with systems measurement support services, including processing meter data and handling meter history records.
Regulatory Support	The Regulatory Support Service Category represents direct costs billed to Gazifère by EGD for regulatory support services, such as regulatory proceedings and rate setting matters. EGD provides regulatory support services to Gazifère throughout the fiscal year. These costs are summarized on individual Service Statements from EGD to Gazifère, which outline EGD employees and their direct time spent supporting Gazifère's regulatory matters. In addition, EGD performs regulatory economics and market assessments, energy supply and policy analyses, and investment review and CP&P analyses, on behalf of Gazifère upon their request.
Rent & Leases	The Rent & Leases service category represents a portion of EI's rent and leases costs, which was allocated to Gazifère. This is allocated to Gazifère because EI FTEs work in the corporate head office and provide these corporate shared services to Gazifère. If Gazifère were a stand-alone entity, it would require a larger office space to accommodate a larger number of FTEs in-house and therefore this allocated cost is reflective of the incremental spend that Gazifère would incur on rent and leases if they hired the additional FTEs to perform functions in-house rather than receiving these functions from the corporate shared services mechanism under the current organizational structure.
Direct Stock-Based Compensation	The Direct Stock-Based Compensation Service Category represents the costs of stock-based compensation awarded for Gazifère employees by EI. These expenses consist of the value of granting long-term incentives to Manager-level and above staff within Gazifère. Long-term incentives are also granted to certain lower level staff on a discretionary basis. These costs are directly correlated with the SBC benefits received by Gazifère FTEs. SBC is a standard industry practice for attracting, motivating and retaining senior employees. As a stand-alone entity, Gazifère would be required to offer comparable compensation to be considered a competitive employer.
Common Stock-Based Compensation	The Common Stock-Based Compensation Service Category represents the costs of stock-based compensation awarded to EI employees that provide services on behalf of Gazifère. These expenses consist of the value of granting long-term incentives to Manager-level and above staff within EI. Long-term incentives are also granted to certain lower level staff on a discretionary basis. These costs are directly correlated with the SBC benefits received by EI employees that provide services to Gazifère. SBC is a standard industry practice for attracting, motivating and retaining senior employees. As a stand-alone entity, Gazifère would be required to offer comparable compensation to be considered a competitive employer.
Compensation & Benefits	The Total Compensation & Benefits Service Category represents the costs of Enbridge Inc. developing and executing on an enterprise-wide total compensation strategy in support of the overall business direction of the Enbridge group of companies. This is accomplished through managing the analysis, design, implementation, communication and automation of pay systems, prerequisites, benefits and retirement programs for all business units. Gazifère does not have an in-house compensation and benefits function and Gazifère relies on Enbridge Inc. to provide these services on its behalf.

Treasury & Accounting	<p>The Treasury Service Category represents the costs of cash management and banking services that are performed by Enbridge Inc. to assist Gazifère in determining the optimal short-term cash requirements and execution of the supporting daily banking transactions. This Service Category includes responsibility for managing short-term liquidity and cash holdings. Enbridge Inc. has a designed Treasury Department that supports this service by assuming responsibility for all operational support required to ensure short-term liquidity requirements are met. In addition, this Service Category includes the Corporate Controller services provided to Gazifère, which includes setting accounting policies and practices, preparation and dissemination of consolidated financial results, managing the budgets and forecasts process, and preparing or reviewing all external financial reporting.</p>
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APPENDIX C: CURRICULUM VITAE

Craig Sabine
 Senior Manager, Energy & Utilities
 416-515-3866
 craig.sabine@mnp.ca

PROFILE	<p>Craig Sabine joined MNP in 2012 and is a Senior Manager and Eastern Region Lead of the Energy and Utilities practice. Craig is a seasoned expert in the analysis of Canadian energy markets, supporting regulatory affairs, policy development, corporate planning initiatives and investment strategies.</p> <p>Providing advisory services and analytic expertise, Craig supports generators, utilities, government agencies and regulators in a number of key business areas, including portfolio assessment, cost-benefit analysis, business planning, regulatory economics and regulatory policy design, due diligence, generation procurement and divestiture and sustainability strategy.</p> <p>For over 12 years, Craig has built a practice that focuses on the economic evaluation of public policy options, supporting government and private sector decision-making, as well as business strategy. Craig's work has concentrated on evaluating the opportunities and risks presented by energy policy and market design alternatives in the natural gas and electricity markets, as well as climate change policy, emissions trading mechanisms, criteria air contaminant regulations and conservation initiatives. Recently, Craig's work has supported development decisions for new renewable energy and conventional fossil fuel-fired generation projects, transmission and pipeline infrastructure in Ontario, Manitoba, Alberta and Newfoundland and Labrador.</p> <p>For large-scale generators, IPPs and renewable energy developers, Craig's analyses have supported portfolio due diligence efforts, M&A activity and power purchase arrangements. Craig's assignments have supported clients such as the Manitoba Public Utilities Board, Ontario Energy Board, Ontario Power Authority, IESO, AESO, TransCanada, ATCO, Bruce Power, JP Morgan, Environment Canada, NRCan, Alberta Environment, OMOE and Capital Power. Prior to MNP, Craig worked with ICF International and Environment Canada.</p>
SERVICE LINE	Management Consulting
INDUSTRY FOCUS	Energy & Utilities, Public Sector
OFFICE	Toronto, Ontario

SELECTED ASSIGNMENTS:

INDUSTRY	SERVICE LINE	PROJECT DESCRIPTION
Energy and Utilities	Regulatory	OEB Regulatory Reporting Review and Enhancement – Currently, Craig is managing the first stage of a change initiative at the OEB, to review and perform and gap analysis of the processes, procedures and systems in place at the Board to execute its reporting and entity performance management needs. In support of the new Renewed Regulatory Framework and scorecard performance management approach, the OEB is ensuring its data and reporting structures are aligned with industry best practice to realize the full potential of information coming into its systems.

Energy and Utilities	Regulatory	ENMAX Affiliates Review – Craig recently testified during ENMAX's 2015 rates application before the AUC. Craig managed the third party review and fair market value assessment of ENMAX's 2011 and 2012 affiliate transactions in support of the firm's cost of service rate filing and forward approach for determining affiliate transactions. The goal of the assignment was to provide assurance of compliance with the AUC's Affiliates Code of Conduct and to provide opinion on the fair market value of affiliate transactions between ENMAX and for profit entities. Craig provided IR support and testimony before an AUC panel.
Energy and Utilities	Regulatory	Manitoba Public Utilities Board Expert Witness - Craig recently concluded acting as an independent expert on behalf of the Manitoba PUB, evaluating the costs and benefits of Manitoba Hydro's current capital development strategy. Craig and a team of other experts provided key insight and analysis to the PUB to support their evaluation of the potential benefits of the preferred plan and set of alternatives in the Needs for and Alternatives to process. The hearing will ultimately result in recommendations for approvals of the Keeyask and Conawapa large hydro projects and determine their risk-adjusted net present value to the rate payers of Manitoba. An assessment of the key risks was considered to support the 20 year capital plan totaling over \$25 billion. Craig provided expert testimony before the Board.
Energy and Utilities	Process Improvement	Greater Sudbury Hydro Business Process Improvement – Craig is a member of MNP's broad-spectrum utilities' process improvement team assigned to support a complete BPI of all of Sudbury Hydro's processes. The assignment will result in full current state and future state process maps, with key recommendations and change management, as well as training for Sudbury Hydro employees. This improvement project was approved for cost recovery by the Ontario Energy Board.
Energy and Utilities	Valuations	Koskie Minsky Expert Witness Support – For a law firm representing plaintiffs in a class action case vs. Atlantic Power Corporation, Craig provided expert witness testimony regarding economic and market-based activities' impacts on the financial position of the power producer. Craig's testimony included evaluation of the Florida and Ontario electricity markets and the impacts of PPA negotiations on Atlantic's share value and ability to service dividends.
Energy and Utilities	Regulatory	ENMAX Fibre Optics Business Valuation – In support of the potential for regulatory actions associated with the sale of a non-regulated business, Craig managed the development of a valuation model of fibre optics assets for a Canadian utility. The assignment developed a full model of equipment, construction, labour and operating costs associated with an urban fibre optic network, to provide substantiation for its sale price and the impact of subcontracting the service between the private sector and the utility.
Energy Markets	Regulatory	OEB Natural Gas Supply Study – 2010/14 Natural Gas Supply Markets Review - For the OEB, Craig and a team of gas markets experts developed a review and forecast of the changing nature of natural gas supplies in North America and the impacts on the Ontario utility market. Evidence was presented before the Board and stakeholders in a quasi-hearing/consultation setting.
Energy and Utilities	Strategic Planning	IESO Corporate Strategy Review – Craig was recently the project manager on an assignment aimed to review and evaluate the processes and procedures with which the IESO develops strategic direction. The assignment developed current statement documentation and re-engineered the strategic planning process to include new elements and greater effectiveness in timing. Results and recommendations were presented and approved by the Board of Directors. Consultation and stakeholder engagement was key throughout the project to ensure the change initiative was accepted with broad buy-in.

Energy and Utilities	Audit and Compliance	OPA Process Audit and Re-design - Craig recently supported the OPA in efforts to reconstruct the review and assurance process of regulated price plan claims submitted by Ontario electricity distributors as part of their settlement activities. Craig provided technical expertise on two field audits of the settlement claims and has been managing the development of a compliance and risk-based oriented certification program to replace annual audit.
Energy and Utilities	Internal Controls	OEB Internal Controls Review – Craig participated as subject matter expert and reviewer on an assignment to evaluate the design and compliance of internal controls within the OEB's procurement, finance and IT departments. Subsequently the MNP evaluated and recommended on the need for and design of an internal audit function within the organization.
Energy and Utilities	Regulatory	Alternative Service Delivery Model – For a number of Ontario LDCs, Craig is currently leading the development of a shared services collaboration to enhance the cost efficiencies and customer service for ratepayers. The collaborative model is an alternative design toward efficiency from traditional consolidation and merger.
Energy and Utilities	Regulatory	Distribution Sector Panel – Craig recently led an MNP team to support a consortium of 4 Ontario LDCs (Greater Sudbury Hydro, North Bay Hydro, Northern Ontario Wires, Chapleau Public Utilities Corp) in the development and presentation of their position on LDC consolidation for the Ministry of Energy and the Panel. The position included analysis of the economic, operational, and community-based implications of various options to drive efficiencies in the sector.
Energy and Utilities	Regulatory	Kinder Morgan General Rate Application – Currently, Craig is working closely with an internal team of operations, project management and finance experts at a major Canadian pipelines company to prepare the rate base for their 2013 rates application to the National Energy Board. Craig is managing all aspects of development and verification of the rate base and capital project accounts to develop one of three key sections of the GRA cost of service.
Energy and Utilities	Finance and Risk	Pipeline Abandonment Trust Development – Pursuant to the current land matters consultation policy process being carried out by the National Energy Board, Craig is working with a team to manage the development of a pipeline abandonment mechanism for a major Canadian pipeline in the form of a trust fund (ongoing).
Energy and Utilities	Regulatory	Enbridge Shared Services Allocation Model - Recently at MNP, Craig participated on a team who assessed the shared services cost model of one of Ontario's largest natural gas distribution utilities, whose parent company provides shared services support in a number of operational functions. To approve the natural gas rates charged to Ontario consumers, Enbridge Gas Distribution must have its shared services cost allocation approved by the OEB after third party assessment. The analysis included benchmarking the shared costs of several functions to other cost of service and ratemaking submissions of gas and electric utilities.
NERC Standards Compliance	Reliability Standards	ATCO NERC Audit - Craig and an expert team completed a gap analysis of ATCO's procedures to comply with AESO reliability standards, which are largely based upon NERC standards. ATCO will complete an audit with the AESO to achieve compliance with 9 GOP reliability standards and provided recommendations for improvement of evidence packaging, format and adherence to each requirement and sub-requirement. Craig, led management of the project, supported assessment of the standards and reviewed the resulting gap analysis report.
NERC Standards Compliance	Reliability Standards	TransAlta NERC Compliance - Mr. Sabine worked with a team of reliability, compliance and NERC standards experts to support TransAlta's development of a corporate internal compliance program that will enable the firm to build and support

		evidence of compliance with NERC and provincial reliability standards programs, in all of its operating jurisdictions. The project will position TransAlta as a premier Canadian utility in the reliability space and ensure internally consistent procedures are met within day to day operations and compliance efforts.
Energy Markets	Finance	Environment Canada Production Cost Model - Mr. Sabine managed the development of a capital project costing model for Environment Canada to support their policy modeling efforts in the electricity generation sector. The tool will be used to set the basis for capital and lifetime costs of power plant options, including financing and IDC costs, which can be fed into simulation and optimization models supporting policy and market analysis.
Energy Markets	Forecasting	Capital Power California Market Review - Mr. Sabine led an analytic assignment completed for Capital Power identifying and reviewing the key drivers in the California power markets. The analysis aimed to evaluate the attractiveness of the California market for investment in acquisition opportunities or greenfield projects, based on the current market and price direction, market rules, air emissions, climate and water policies and overall robustness of the energy markets in the western United States. The project culminated in a market price forecast and policy risk evaluation report.
Energy Markets	Regulatory	SolarRay PJM Due Diligence - For an investment firm specializing in deploying capital for large-scale solar energy projects, Mr. Sabine completed due diligence on the interconnection process for 100 MW of solar.
Energy Markets	Forecasting	Ontario Electricity Market Modeling - In August of 2008, Craig and his team were employed by the multinational integrated steel maker, Arcelor-Mittal Dofasco, to provide electricity market intelligence for Ontario
Energy Markets	Forecasting	Lehman Brothers Alberta Electricity Market Review - For a large investment bank, a detailed assessment of the Alberta power market, including 20 year wholesale electricity price forecast was provided.
Energy Markets	Environmental	Canadian Hydro Power Association Policy Modeling - Mr. Sabine directed a study for the CHA designed to assess the impacts of different GHG regulation frameworks on the Canadian power sector.
Energy Markets	Environmental	Canadian Electricity Association Market Modelling - Mr. Sabine led a team employed by the CEA and its members, including all major generating utilities across Canada, to aggregate and analyse electricity sector futures outlooks.
Energy Markets	Market Forecasting, Environmental	Bruce Power Market Forecasts - Craig collaborated with Bruce Power using IPM® to develop power market analyses and assessments of potential environmental markets for non-emitting generation. Analysis included changes to capacity mix, dispatch, emissions patterns and interregional transmission for Ontario, New Brunswick, Saskatchewan and Alberta. The work identified the potential return new nuclear projects might receive, assuming participation in greenhouse gas and air pollutant markets.
Energy Markets	Natural Gas and LNG	Husky Oil New Market Demand Study - In April of 2007, Craig's ICF team released a follow-up on its December 2000 report to the Newfoundland Offshore Industries Association. The study investigated the commercialization of natural gas in Newfoundland from offshore (Whiterose) gas plays in the northeast Atlantic. Craig led the assessment and examined the potential markets for offshore gas in Newfoundland and the potential for shipment by pipeline or LNG to the greater North American marketplace. The analysis was key in determining the scale of residential, commercial, power and industrial demand in Newfoundland. The industrial demand focused on the potential feasibility of a GTL facility and various petrochemicals plants on the island of Newfoundland.

Natural Gas	Liquefied Natural Gas. Environmental	Environment Canada LNG Impacts Study - Craig and team of natural gas market experts authored a technology paper for Environment Canada to support their understanding of the LNG value chain, infrastructure and potential environmental impacts of growth in the LNG market in Canada. The paper outlined the technologies and operations at liquefaction, transport, gasification and other LNG facilities and each of their studied environmental impacts and emissions releases.
EDUCATION		<ul style="list-style-type: none"> • 2011 MBA Executive Program, Queens School of Business, Kingston Ontario • 2004 B.E.S. Environment and Resource Studies. Minor, Biology University of Waterloo. Ontario
PUBLICATIONS		<ul style="list-style-type: none"> • Adaptable Electric Utilities: The Future Ain't What it Used to Be! Blog Post September 2014. • Sabine, Craig. "The 21st Century Electricity Grid: The Right Time to Catch Up". Whitepaper. September 2009. • Sabine, C., Gilmore, A., Gibbons, W. and V. Young. 2002. "Environmental Education & the Ontario Elementary School Curriculum". <u>Interactions: The Journal of the Ontario Society of Environmental Education</u>. Spring 2002, Vol 14: 3.
TESTIMONY		<ul style="list-style-type: none"> • Coffin and Lowry v. Atlantic Power Corporation. March, 2015 • ENMAX General Rate Application Hearing, AUC. July, 2014 • Manitoba Hydro NFAT Hearing, MPUB. April, 2014 • Natural Gas Markets Review Consultative Hearing, OEB. 2010

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SERVICE LINE	Consulting	
INDUSTRY FOCUS	Energy and Utilities, Public Sector	
OFFICE	Toronto, Ontario and Calgary, Alberta	
SELECTED ASSIGNMENTS:		
INDUSTRY	SERVICE TYPE	DESCRIPTION
• Energy and Utilities	• Operations	Business Performance Improvement Jason is currently leading a long-term company-wide business process and systems improvement project for a mid-sized local distribution company (LDC). The review includes all facets of the utility's operations, and will drive implementation of prioritized initiatives to improve efficiency and financial performance and increase levels of customer and employee satisfaction.
Energy and Utilities	Transaction Support	Financial and Commercial Due Diligence Jason is currently supporting a Municipal client with the acquisition of several hydro projects (8 MW) nearing the notice-to-proceed stage of development.
• Energy and Utilities	• Macro-Environmental Assessment	Assessment of Environmental Impact of Electric Infrastructure Development Jason is currently supporting MNP's Expert Advisor assess the macro-environmental effects of Manitoba Hydro's long-term plans to build the Keeyask and Conawapa generating stations and all associated infrastructure. Assessment includes potential impacts to Air, Water, Flora and Fauna. MNP's assessment will be defended in Manitoba Public Utility Board hearings.
• Energy and Utilities	• Regulatory Finance	Underground Residential Distribution (URD) Lead by Jason, the MNP Energy team is currently undertaking a fair market value study of URD, including a market-based rate comparison and a cost build-up of URD inputs (labour, equipment, materials). The study will be defensible before the AUC, with MNP providing expert witness testimony in the hearing.
• Energy and Utilities	• Internal Audit	Communications Process Review Jason recently provided quality assurance and engagement leadership for a review of the OPA's communications processes and internal controls, focusing on reputational risks, mitigation strategies and process improvements.
• Energy and Utilities	• Strategy	Strategy Development Process Review Jason is recently led a project with the IESO, its Senior Leadership Team and Board to review its strategic planning process, conduct a jurisdictional leading practice review and recommend improvements to the process. This project will enable the IESO to evolve with the changing structure and priorities of the Ontario electric system.

Energy and Utilities	Internal Audit and Process Improvement, Stakeholder Facilitation	<p>Internal Audit and Internal Controls</p> <p>Jason recently led a team providing project management and stakeholder facilitation and consultation designed to evaluate the state of finance, procurement and IT internal controls at the OEB and the regulator's requirement for an internal audit function. The assignment included interviews and surveys administered to over ten OEB personnel, from the Chair, COO and Managing Directors, to the operations management team, as well as market benchmarking of several similar agencies.</p>
Energy and Utilities	Community Energy Planning	<p>Conservation and Demand Management</p> <p>Jason is leading a project with a progressive Ontario Municipality to evaluate achievement of CDM objectives related to their community energy plan, and forecast likely CDM scenarios over the next two decades to drive policy and program development.</p>
Energy and Utilities	Market Development	<p>LDC Efficiencies</p> <p>Jason is the QA Partner for two projects with two different consortiums of LDCs to evaluate and present options for alternative efficiencies to consolidation to drive costs out of the LDC sector.</p>
Energy and Utilities	Internal Audit	<p>LDC Audits</p> <p>Jason is providing Quality Assurance support for MNP auditing team tasked to audit regulated price plan (RPP) claims made by Ontario local distribution companies (LDCs). The processes and calculations of large and small LDCs were reviewed, with results of the assignment being presented before the OPA Audit Committee.</p>
Energy and Utilities	Customer Service	<p>Call Centre and Customer Service</p> <p>Jason is leading an engagement to optimize the organization structure and operating model for a call centre and dispatch organization (Ontario1Call) that coordinates excavation locate requests for Ontario.</p>
Energy and Utilities	Cost Consulting, Regulatory	<p>Fair Market Value Assessment for Power Services</p> <p>Jason is currently leading the development of a Fair Market Value assessment of inter-affiliate transactions for an integrated electric utility in Alberta. The assessment for power services includes a Code of Conduct review, contract and project review and witness support.</p>
Energy and Utilities	Market Development	<p>Distribution Sector Panel</p> <p>MNP recently supported a consortium of 4 Ontario LDCs in the development and presentation of their position on LDC consolidation for the Ministry of Energy and the Panel. The position includes analysis of the economic, operational, and community-based implications of various options to drive efficiencies in the sector.</p>
Energy, Pipelines	Financial Advisory, Project Management	<p>Pipeline Abandonment Trust Development</p> <p>Pursuant to the land matters consultation initiative of the National Energy Board, currently working with a team to manage the development of a pipeline abandonment trust for a major Canadian pipeline company. This project includes project management, financial and process advisory and collaboration with other service groups including valuation, actuarial, regulatory, finance and asset management (ongoing).</p>
Energy and Utilities	Engineering, Procurement, Construction, Transmission	<p>Process Development</p> <p>Jason is currently leading an MNP team in the development of processes and procedures for a large transmission EPC in Alberta. Pursuant to the execution of new long-term development contract, MNP is augmenting the</p>

		project delivery model with upgraded project management, estimating, change management, QA/QC, risk/reward processes.
Energy and Utilities	Cost Consulting	Cost Allocation Review For a large gas distribution company in Ontario, Jason is conducting an independent review of the allocation of shared services costs from a corporate parent to its subsidiary. The review is being undertaken for submission and defense before the Ontario Energy Board (ongoing).
Energy and Utilities	Process Improvement, Customer Service	Business Process Quality Assurance Review Led a team of consultants conduct a review for a large electric and natural gas distribution company. The client is implementing SAP CRB (Customer Relationship & Billing for Utilities) concurrently with the development of a greenfield customer service organization to serve over one million customers. The engagement includes review of future state business processes and a risk- based approach to identify and evaluate potential process gaps at go-live (ongoing).
Energy and Utilities	Regulatory Finance, Pipelines	Regulatory Tariff Application For the third year, leading a team in the development of key components of a General Rate Application for a North American pipeline company. The current application will form the basis for a negotiated settlement, with anticipated submission to the National Energy Board. The applications include development of throughput volume/ toll calculations, and development, analysis and reporting of rate base, rate of return and cost of service filings (ongoing - 6 months over a two year period).
Energy and Utilities	Regulatory, Transmission	Economic Study Worked with an intervenor to review the financial assumptions and output relating to the facility application to build a transmission line in Alberta. His team also presented financial scenarios for consideration based upon alternative assumptions, costs and design, and Jason provided Witness Support in AUC Board hearings (4 months).
Energy & Utilities, Public Sector	Economic Analysis for Infrastructure Growth	Financial Analysis and Forecasting For the Oil Sands Secretariat (Alberta Treasury Board), led a team in the development of several extensive financial models (linear regression and forecast) and a report to assist the secretariat plan for infrastructure growth based on a number of key economic, community and population-based indicators (4 months).
Public Sector	Economic Development	ICT Sector Supply Chain Assessment – For the Economic Development Lethbridge, led an assessment of the Information, Communications and Technology sector in Lethbridge. They assessment included a current state assessment, including interviews with over 20 ICT companies, a supply chain gap analysis and recommendations to evolve the sector and close priority gaps (2 months).
Energy & Utilities	Regulatory, Valuations, Distribution and Transmission	Benchmark Study (Affiliate Transactions) Led the development of benchmark study to assess the relative value of services provided by an unregulated entity of the large regulated utility. The project includes a fair market value assessment, a benchmark study for comparison purposes, and the development of a cost-build-up to value of internal service provision at the regulated entity (4 months - ongoing).
Energy, Public	Regulatory,	Department of Energy Oil & Gas Regulatory Framework

Sector	Process Improvement, Oil & Gas	The Government of Alberta announced a competitiveness report "Energizing Investment: A Framework to Improve Alberta's Natural Gas and Conventional Oil Competitiveness". The report introduced a new Royalty framework and a high-profile initiative to enhance and streamline the Oil & Gas regulatory system. Led by Jason, MNP acted as the Project Manager for the Regulatory Enhancement Project and helped guide the development of system-wide recommendations for implementation of a streamlined, one-window approach to policy assurance. The Project involved multiple Alberta Government Ministries and a significant group of stakeholders (9 months).
Energy & Utilities, Public Sector	Internal Controls, Reporting	National Energy Board Provided subject matter expertise in conjunction with MNP's Enterprise Risk group in performing a review of operational and financial controls. The focus of the Project is on the Procure-to-Pay, Financial Reporting, Payroll and Revenue processes, and will improve reporting standards for the Auditor General and other stakeholders (3 months).
Public Sector	Process Improvement	Alberta Pensions Services (APS) Provided subject matter expertise and quality assurance for an engagement with APS to streamline customer service and operational functions for pension estimates and annual statements for over 500 participating employers and about 300,000 members and pensioners. The project result was for APS to improve effectiveness and efficiency in meeting its mandate (4 months).
Energy and Utilities	Markets and Tax	Valuations Opinion – Supported the MNP valuations team conduct a review and assessment of a large electric industry infrastructure sale for the Canada Revenue Agency. The review specifically focused on the valuation methodology recorded by the seller for accounting and tax purposes. The review included an assessment of previous similar transactions in the industry and commonly accepted accounting treatment(s) (1 month).
Energy and Utilities	Performance Measurement & Management	Alberta Utilities Commission Led a team to review and make recommendations to improve business plan objectives and performance measures, developed and implemented a performance measure tracking system, and reviewed alignment between corporate performance measures and executive contracts and compensation (7 months over 3 years).
Energy and Utilities	Revenue Management	Functional Advisor Worked with a large integrated provincial utility to provide functional quality assurance for several business transformation project teams. The projects incorporate improvements to systems, processes and performance management related to Customer Services, Billing, Collections, Metering, with a focus on billing systems, telephony and key performance indicators (scorecards) (5 months).
Public Sector	Revenue Management, Process & Controls	Alberta Sustainable Resource Development (ASRD) MNP completed a project in early 2009 to assess and make recommendations for improvement to ASRD revenue management processes and controls. The project included identification of key revenue streams, mapping revenue processes and documenting current and proposed controls. Led a large project to implement these recommendations to improve efficiency, embed a robust control

		environment and meet requirements of the Alberta Auditor General (12 months).
Energy and Utilities	Regulatory, Finance, Generation	Electric Utilities Act (Section 95 – Independent Assessment) MNP is appointed by the Alberta Department of Energy as an Independent Assessor to assess the relative benefits derived by a municipality (or its subsidiary) through ownership of an interest in a generating unit. Jason and his MNP colleagues have conducted about a dozen assessments for the last 10 years (2-year appointment period – ongoing).
Energy and Utilities	Business Development	Business Case Development for a proposed Wind Generation Project MNP developed a business case to support the capital investment requirements for a 250MW+ wind farm. The business case included technical feasibility, detailed phased economics, risk assessment, regulatory and other key project considerations (3 months).
Energy and Utilities	Supply Chain Optimization	Procurement and Vendor Management Led an MNP team to evaluate and make recommendations to improve the procurement and vendor management practices for a large integrated provincial utility. The review includes an assessment of current state, visioning for future state, identification of gaps in procurement practices and recommendations to fill these gaps with industry best practices (3 months).
Public Sector	Sustainability and Land Use	Recreation Management Strategy Led a project with ASRD to assist in the development of a Recreation Management Strategy for public lands in Alberta. The strategy involved consultation with numerous stakeholder groups and includes multiple dimensions for analysis, including environmental sustainability, recreation land uses and land types; all supported by a cohesive vision and guiding principles (3 months).
Public Sector	Sustainability & Land Reclamation	ASRD Led a project with ASRD to review current land reclamation requirements and develop viable options for non-legislated reclamation incentives for industry. Project includes a multi-jurisdictional review, stakeholder consultation, and development of criteria for evaluating incentive options (3 months).
Energy and Utilities	Municipal Finance	Municipal Tax & Utility Cost Compariso Led the development of a report for a Municipality that compares the cost of doing business among 10 Alberta municipalities, including municipal tax and utilities costs. The report will be used to generate economic (1 month).
Energy and Utilities	Regulatory, Finance	Shared Services Cost Allocation Review MNP deconstructed and documented the shared services allocation model for an integrated Alberta electric utility. The deliverable report will be defensible before the Alberta Utilities Commission to support a cost recovery application (1 month).
Energy	Systems Implementation, Finance & Manufacturing	Systems Implementation For a highly successful downhole tools manufacturer based in Alberta, conducted a fit/gap assessment for a full-scale ERP implementation with a focus on Finance and Manufacturing. The assessment resulted in a 'go' decision for the client, and MNP provided project management and quality assurance support for the 10-month implementation (12 months).

Construction	Finance, Business Development	<p>Business Case Development</p> <p>Worked with a major industrial, commercial and residential construction company based in Fort McMurray to develop a business case to support their request for financing to build a large-scale multi-unit residential project. The business case includes a financial model, capacity and vendor analysis, market analysis and financing terms and conditions (3 months).</p>
Energy/ Pipelines	Funding, Finance	<p>Funding Evaluation</p> <p>Recently led a funding evaluation project for INAC to support continued Federal government agency operational funding to a pipeline company so that it may continue representing its large-scale interest in the Mackenzie Valley Gas Project (3 months).</p>
Utilities	Regulatory, Finance	<p>Regulatory Cost Allocation</p> <p>Developed a cost allocation model and framework for the newly-formed Alberta Utilities Commission to recover its costs from industry participants (2 months).</p>
Public Sector & Energy	Process & Controls, Performance Management and Reporting	<p>Alberta Royalties – Process and Controls</p> <p>Working with the Alberta Department of Energy, project manager for advisory services related to the processes and controls currently in use to collect data, calculate and report on the performance of Alberta's Royalty Regime for oil and gas revenues. Project included an assessment of current practices and recommendations to improve process, controls and reporting for the New Royalty Framework (announced October 25, 2007) (Consulting - 3 months).</p>
Public Sector & Healthcare	Supply Chain, Policy and Process	<p>Supply Chain - For a major GoA department, conducted a review of contracting and expenditures practices for one of its Commissions, including a review of Finance and Administration policies, the control environment and processes in place for efficient and effective purchasing (Consulting - 3 months).</p>
Utilities	Finance Function Effectiveness	<p>Finance Function Effectiveness</p> <p>Conducted a Finance Function Effectiveness diagnostic for an Alberta electric utility. Engagement included an extensive survey of Finance leaders, and evaluation of current practices, and recommendations for improvement. Findings led to reorganization of the department (1 month).</p>
Utilities	Process and Controls, Finance	<p>SOX – Top-Down Risk-Based Approach</p> <p>For several large U.S. utilities, managed and executed client programs to implement a top-down risk-based approach to SOX 404 compliance, including evaluation of financial statement line item and assertion risk, identification of entity-level controls (ELC) and relevant business controls, and an assessment of the degree to which ELCs mitigated risk. Managed control upgrades to further improve sustainment requirements. Efforts resulted in client savings in the \$Millions (5 months).</p>
Energy	Capital Projects, Project Management	<p>Capital Project Lifecycle Management</p> <p>For a pre-IPO Alberta venture building an Upgrader, led a team in doing an assessment of capital project lifecycle management with the company's EPCM, focusing on high risk areas within the cycle and making recommendations to improve the project management office and control environment (3 months).</p>
Energy	Supply Chain	<p>Inventory Management/Supply Chain</p>

		For an integrated supplier of wellbore products and services to the oil & gas industry, completed an assessment of the company's full-cycle inventory management processes within a decentralized manufacturing and sales/service environment. The evaluation included touch points with Purchasing, Finance and IT, resulting in client selection of scalable ERP software (1 month).
Utilities	Business Intelligence, Performance Reporting	Business Intelligence For a BC electric transmission company, co-managed the implementation of a Cognos business intelligence software solution to enhance managerial decision-making, financial reporting and regulatory scenario analysis (3 months).
Utilities	Revenue Assurance, IT Customer Service	Revenue Assurance For a large integrated Alberta electric utility, led a team of analysts and developers with several projects to evaluate and implement process and system (UIS, CRM) upgrades for the Customer Services division, resulting in a direct and indirect NPV benefit to the client in excess of \$12Million (11 months).
Energy & Transportation	Merger Integration, Process Improvement	Merger Integration As a member of the core integration team for the Superior Propane/ICG merger, provided advice and support for the integration of over 2,000 people across all business functions and regions in Canada. Individual responsibility to developed and fully implement a progressive sales and field customer service organization in alignment with the integrated Company's new business model (Superior Propane - 1 year). Prior to the merger, responsible for collection, coordination and delivery of undertakings related to Tribunal hearings before the Competition Bureau to facilitate approval of the pending merger.
Energy	M&A, Finance, Business Development	Financial Due Diligence (M&A) Actively actively participated in numerous (10+) financial due diligence projects for private equity, energy trusts and operating entities to support acquisitions in the oil & gas and other industries. Due diligence focused on quality assessments of earnings and assets, identifying and quantifying transaction issues and evaluating closing/post-closing adjustments. This work systematically resulted in favourable acquisition price adjustments for clients (Throughout an 18 month period).
Utilities	Business Development	Service Level Agreements For a large integrated Alberta electric utility, led a team in the development of inter-company and external service level agreements to better structure the provision of customer-related services. In addition, created a Master Service Agreement and related schedules to facilitate and add value to the sale of a retail book of assets (2 months).
Utilities	Business Development and Analysis	Business Development Leadership Responsible for the development and evaluation of business growth opportunities, including acquisitions, partnerships, and service level agreements for both regulated and unregulated business. Supervised a team of 4 technical staff in developing and presenting business cases and analysis to senior management on the economic and operational viability of transactions (ENMAX).
Utilities	M&A, Business Development	Acquisition Management - Performed and managed a variety of intensive transaction, due diligence and integration planning activities for a

		\$1.3Billion acquisition process, including synergy valuation and development of key provisions of the Purchase and Sale Agreement, resulting in a competitive bid that presented a rate of return and risk profile within desired limits (ENMAX).
Utilities	Business Development, Capital Projects	Development Projects Negotiated and supported a variety of electric utility initiatives, including municipal operating agreements, EPCM projects, infrastructure investment and distributed generation projects. Projects included wind generation, landfill gas, district heating in downtown Calgary, and a detailed Northern Lights generation and transmission assessment (ENMAX).
Energy, Utilities	Process and Control, Regulatory, Finance, IT	CSOx For 3 Canadian companies, managed and executed client programs for compliance with Multilateral Instrument 52-109 requirements, focusing on high-risk processes and efficient sustainment (Consulting – 8 months). Governance, disclosure controls and procedures and entity-level controls. Business process, ITGC and application controls. Prioritization of control remediation and optimization activities.
Utilities	Regulatory, Project Management	Regulatory Project Management Worked in an advisory and project management capacity with a consortium of Alberta electricity wires owners to initiate the impact assessment phase for the implementation of a Uniform System of Accounts to meet pending regulated Minimum Filing Requirements (Consulting – 2 months).
Utilities	Regulatory, Finance	Regulatory Analysis Financial analysis and valuation of a telecommunications network and network services for an Alberta-based electric utility to support a rate case application with the EUB (Consulting – 2 months).
EDUCATION AND PROFESSIONAL DESIGNATIONS	<ul style="list-style-type: none"> • B.A. (Hons) – Economics and Political Science – York University – 1991 • M.B.A. – University of British Columbia – 1993 • Course Completion: Electric System Operation for the Non-Engineer – 2003 (Northwest Public Power Association) 	

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PROFILE	<p>Sarah Keyes has over 5 years of diverse work experience in a variety of industries, including energy, mining, oil & gas and manufacturing. Prior to joining MNP, Sarah worked for over 2 and half years at PricewaterhouseCoopers in Toronto in the mining practice working toward her CPA designation.</p> <p>Upon receiving her CPA designation in 2013, she joined the Energy & Utilities Consulting team at MNP. Over the past 2 years, Sarah has worked on a number of projects for various clients within the Energy & Utilities team, such as the Ontario Power Authority, the Ontario Energy Board, the Manitoba Public Utilities Board, Suncor Energy, Greater Sudbury Hydro, ENMAX Power Corp. and Oakville Hydro.</p> <p>Sarah has a depth of experience working across Canada's energy sector. She has a strong working knowledge of the OPA's Feed-In-Tariff (FIT), microFIT and Conservation and Demand Management (CDM) programs through her involvement as the Lead Auditor on the former OPA's Contract Management Review. Sarah is a trusted financial advisor to her clients, as demonstrated through the development of two financial models to support a \$37M hydroelectric generating facility M&A transaction between two Ontario utilities.</p> <p>Sarah is an analytical problem solver who is adept at developing recommendations to help her clients achieve their goals and objectives. She is a strategic thinker with a keen ability to synthesize large amounts of information into meaningful concepts that are easily consumable for a broad audience. She brings a critical alignment of skills and knowledge to our team as a professional accountant with deep energy sector experience, allowing her create substantial value on this important assignment.</p> <p>Sarah also holds an Environmental Professional in-Training (EPt) designation from ECO Canada. In 2013, she completed a 3-day training course held by CSA Group on ISO 14064-3 (Greenhouse Gas Verifications).</p>
SERVICE LINE	Consulting
INDUSTRY FOCUS	Energy & Utilities
OFFICE	Toronto, Ontario

SELECTED ASSIGNMENTS:

INDUSTRY	SERVICE TYPE	DESCRIPTION
Energy & Utilities	Internal Audit	<p>Ontario Power Authority Bruce Power Audits</p> <p>MNP is currently engaged by the OPA to perform three sets of audits focusing on their long-term contract with Bruce Power – the Bruce Power Refurbishment Implementation Agreement (BPRIA). The three audits include: (1) Compliance audit of fuel supply arrangements from 2006 to 2013; (2) CAS 805 audit of Bruce A operating costs for 2013; and (3) CAS 805 audit of the Bruce A refurbishment costs incurred from 2005 to 2012. These audits include an assessment of expenditures incurred relative to the terms of the BPRIA. Sarah is the lead auditor on this engagement and responsible for planning, execution and completion of the three audits.</p>

		During these audits, Sarah has gained a deep understanding of the BPRIA and the nuclear energy industry in Ontario.
Energy & Utilities	Business Process Improvement	<p>Greater Sudbury Hydro Business Process Improvement and Systems Integration</p> <p>MNP was engaged by Greater Sudbury Hydro to perform a 3-year transformational business process improvement project. Sarah's role is the Project Manager for the implementation of initiatives, as well as the Finance & Accounting Subject Matter Expert. Sarah developed all workshop facilitation materials and led two full day sessions on regulatory reporting (RRR) and financial reporting (IFRS). The outcomes of the workshop were an identification of opportunities for operating efficiencies and the development of recommendations to optimize the reporting process. Sarah will be responsible for all project management activities during Phase 3, which is focused on the implementation of improvement opportunities identified during Phases 1 and 2.</p>
Energy & Utilities	Regulatory Support	<p>ENMAX Encompass Cost Allocation Study</p> <p>MNP was engaged by ENMAX Encompass to perform a study on the allocation method applied to allocate Billing & Customer Care (B&CC) costs. This study included a comprehensive review of the current allocation method by service categories, including developing an understanding of key underlying reports and cost allocation drivers. MNP then developed a new allocation method based on customer categories, which included the development of new allocation drivers, an assessment of cost impacts to the regulated vs. unregulated business and cost impacts to customer classes. MNP's final report outlined the various business process and regulatory considerations for ENMAX Encompass in determining whether to proceed with the new allocation method.</p>
Energy & Utilities	Regulatory Benchmarking	<p>Ontario Energy Board Regulatory Benchmarking</p> <p>MNP was engaged by the OEB to perform a review of policy practices, systems, processes and procedures related to regulatory reporting requirements, regulatory record-keeping and regulatory monitoring mechanisms. The principal area of focus for this review was to identify regulatory best practices and recommend fit-for-purpose options to the OEB. Sarah's role on the team involved project management, desktop research, conducting a current state workshop with the OEB, conducting comparator interviews, identifying best practices and analyzing trends, understanding challenges and lessons learned from comparators and developing recommendations for the OEB's continuous improvement.</p>
Energy & Utilities	Internal Audit	<p>Ontario Power Authority Contract Management Review</p> <p>MNP was engaged by the OPA to perform a contract management review for FIT, microFIT and Conservation contracts post-execution. Sarah's role on the team involved interviewing a number of key individuals across the Electricity Resources and Conservation Operations departments, developing a process narrative and risk matrix, performing all sample testing, developing the maturity model and drafting the findings report. In performing this review, Sarah has gained an in-depth understanding of FIT, microFIT and Conservation contracts and their key project milestones.</p>
Energy & Utilities	Regulatory Support	<p>ENMAX Power Corporation Review of Construction Management Fees</p> <p>MNP was engaged by ENMAX Power Corporation (EPC) to perform a review of construction management fees charged for residential</p>

		<p>construction services. Our analysis included desktop research on industry guidelines, academic studies and specific examples of fees charged across Canada. Our final report included an assessment of the reasonable ranges of construction management fees, including a determination of the reasonability of the fees being charged by EPC's affiliate, ENMAX Power Services Corporation (EPSC).</p>
Energy & Utilities	Regulatory Support	<p>CustomerFirst Business Planning MNP was engaged by a collaborative of 7 LDCs across the province to develop a comprehensive business plan for CustomerFirst, a for-profit corporation designed to enhance the efficiency and effectiveness of the traditional utility business model. The business plan had a core focus in understanding and assessing the regulatory ramifications for a shared service collaborative in specific service offerings, such as CDM and Asset Management. MNP was also tasked with developing a set of options for various transactions between LDCs and the for-profit entity and determining implications of these transactions on ratepayers and shareholders. Sarah's role on this engagement is to develop consultation materials, facilitate workshops, perform quantitative and qualitative analyses and develop the formal business plan to be present to the Boards.</p>
Energy & Utilities	Expert Testimony & Support	<p>Manitoba Public Utilities Board Independent Expert Consultant MNP was engaged by the Manitoba Public Utilities Board (MPUB) as an independent expert advisor on the macro-environmental issues within the Manitoba Hydro proposed \$20B hydro projects development. This engagement is a part of the Needs For and Alternatives To (NFAT) regulatory process in the province of Manitoba. Sarah's role on the team was to review of Manitoba Hydro's proposed hydro projects filing with MPUB; develop information requests to assist in completing the final analysis and report; correspond with Manitoba Hydro staff and other independent expert advisors; perform a critical analysis of materials provided by Manitoba Hydro, specifically as it relates to climate change and GHG emissions; perform a macro-environmental policy review; and prepare a comprehensive impact analysis of the proposed projects. The final deliverable will be a report outlining the policies applicable, overall climate change analysis, overall socio-environmental factors analysis, and conclusions on the reasonableness of Manitoba Hydro's proposed plans to identify and mitigate adverse effects to the macro-environment.</p>
Energy & Utilities	Supply Chain	<p>Suncor Energy Sustainable Supply Chain Industry Scan MNP was engaged by Suncor Energy to perform a comprehensive industry scan across the mining & metals and oil & gas industries to identify sustainable supply chain best practices and provide recommendations for Suncor's supply chain management. Sarah's role was to perform in-depth research on over ten companies, assist in the development of the maturity model and write the final deliverable. The final report submitted to Suncor included the company research performed, best practices and trends identified, metrics for measuring success and outcomes of initiatives, a 5 year implementation plan and the maturity model, which provides a visual overview of the companies relative to one another in terms of supply chain sustainability.</p>
Energy & Utilities	Financial Advisory	<p>Oakville Hydro Energy Services Inc. Renewable Energy Projects M&A Transaction MNP was engaged by Oakville Hydro Energy Services Inc. (OHESI) to assist in the acquisition of 2 renewable energy (hydro) projects from Horizon</p>

		Utilities. Sarah's role on this project involved preparing financial models for both hydro projects (included forecasted cash flows, KPIs, capital plan, balance sheet, income statement for 40 years duration of the hydro projects); assist in the structure and wording of the indicative offer presented to the seller; and a full assessment of the seller's forecasts for 2 hydro projects. The financial models resulted in an M&A transaction for a combined value over \$37M.
Energy & Utilities	Expert Testimony & Support	<p>Koskie Minsky LLP Due Diligence Review</p> <p>MNP was engaged by Koskie Minsky LLP (Toronto-based law firm) as an independent expert consultant for a large class action lawsuit against a publicly-traded independent power producer. Sarah's role on the team was to perform in-depth analytical research; benchmark disclosure practices and trends in financial results against comparative companies; perform a full review of the corporation's disclosure and reporting practices; and perform extensive research on analyst reports. Sarah contributed heavily in writing the final independent expert report, which was used by Koskie Minsky LLP as evidence in the class action lawsuit against the corporation.</p>
Energy & Utilities	White Paper	<p>Consensus Accord</p> <p>MNP was engaged by a consortium of 40 LDCs (led by Sudbury Hydro) to prepare a response to the Ontario Distribution Sector Panel Review Report: <i>Ontario's Distribution Sector – Putting the Customer First</i>. Sarah's role on the team was to perform in-depth analytical research of the sector; prepare multiple financial analyses using the LDC financial statements from the Ontario Energy Board (OEB) website; perform a full cost-benefit analysis of consolidating the Ontario distribution sector; develop a qualitative case for the value of the local utility; use of research and historical benchmarking to develop a case for voluntary consolidation rather than mandatory consolidation; and prepare ultimate recommendations for the 40 utilities and the overall sector. The final deliverable was the Consensus Accord Paper (written and released publicly) on behalf of 40 local distribution companies, which is a response and critique to the Ontario Distribution Sector Panel Review Report.</p>
Energy & Utilities	Regulatory Support	<p>ENMAX Power Corp. Underground Residential Distribution Fair Market Value Assessment</p> <p>MNP was engaged by EPC to perform a FMV assessment study for single phase multis and single family detached homes (100 amp and 200 amp) Underground Residential Distribution (URD) services in Calgary. Sarah led this project from start to finish and performed all supporting analyses behind the final report. Sarah's analyses included significant regulatory research of the URD-related Alberta Utilities Commission (AUC) regulatory applications and decisions; peer utility cost research; developing a cost build-up for a typical URD lot; and assessing alignment of FMV rates and cost build-ups with AUC regulatory requirements for affiliate transactions. The final deliverable was a comprehensive report outlining the fair market value assessment ranges for single phase multis and single family detached homes URD services in Calgary, Alberta for inclusion in the regulatory rate application to the AUC.</p>
Public Companies	Audit & Assurance	<p>MNP Audit & Assurance</p> <ul style="list-style-type: none"> Assurance engagements for public companies across various industries including mining, manufacturing, insurance and long-term residential housing and care services

		<ul style="list-style-type: none"> • Experience with IFRS and US GAAP reporting • Experience with US SEC registrants • Involvement in responding to requests for proposals, including calculation of proposed audit fees and presenting to the Audit Committee of the prospective client
Various	Internal Audit	<p>MNP Enterprise Risk Services</p> <ul style="list-style-type: none"> • NI 52-109 CEO/CFO certification projects for Infrastructure Ontario and Sherritt International Corporation • Interviewing key personnel and documentation of process narratives • Identification of controls within process narratives • Development of risk and control matrices for each process, including identification and assessment of risks • Identification of key controls and mitigation of identified risks • Development of test scripts to test the design and operating effectiveness of key controls identified in the risk and control matrices • Execution of test scripts to conclude on the design and operating effectiveness of key controls • Reporting to management on the results of test scripts • Recommendations for improvements on controls and processes for management • Presenting findings and recommendations to management
Mining & Resource Extraction	Audit Assurance &	<p>PricewaterhouseCoopers (PwC) Audit & Assurance</p> <ul style="list-style-type: none"> • Audit and review engagements for clients in mining and other extractive industries and clients in oil and gas industries • Experience in consumer products, pension and insurance audit engagements • Three years of continuity on client engagement requiring travel to United States (Chicago) • Exposure to complex accounting issues such as asset impairment analyses, goodwill assessments, stock-based compensation expense and going concern assessments • Planning audit approach and performing risk assessment on financial statements • Planning and holding kick-off meetings with the engagement team and partners • Performing planning and completion procedures • Determining materiality levels for a group audit with significant subsidiaries • Project management and engagement team management • Coaching engagement team to complete their assigned tasks • Communication with client to obtain an understanding of the business and any significant changes or transactions during the year for audit planning and testing • Evaluating clients' internal control procedures using narratives and walkthroughs and designing and executing internal controls testing and substantive audit testing • Identifying weaknesses in internal control systems, assessing the impact on the entity, and proposing required improvements to the client employees

		<ul style="list-style-type: none"> • Communication with client to obtain explanations and evidence for procedures and discussing various issues pertaining to audited items with client top management • Ensuring that audited financial statement items respect Canadian ASPE and IFRS
<p>EDUCATION AND PROFESSIONAL DESIGNATIONS</p>	<ul style="list-style-type: none"> • Bachelor of Commerce, Major in Accounting (Distinction), McGill University (2010) • Chartered Professional Accountant, Chartered Accountant (CPA,CA) with the Chartered Professional Accountants of Ontario (2013) • Environmental Professional in-Training (EPt) designation with ECO Canada (2014) • ISO 14064-3 <i>Greenhouse Gas Verifier</i> Training Certificate with CSA Group (2013) • Certified Sustainability Professional (CSP) with the Canadian Professional Sustainability Institute (2011) 	