



LIBERTY UTILITIES 2018 & 2019 INDIRECT OVERHEAD CAPITALIZATION STUDY RESULTS

PA CONSULTING GROUP

April 8, 2019

CONTENTS

| | |
|--|----|
| CONTENTS | 2 |
| EXECUTIVE SUMMARY | 3 |
| CHAPTER 1: PA STUDY APPROACH, OBSERVATIONS AND RECOMMENDATIONS | 5 |
| OVERVIEW | 5 |
| PA APPROACH | 7 |
| SUMMARY OF FINDINGS AND RECOMMENDATIONS | 8 |
| CONCLUSION | 9 |
| CHAPTER 2: LIBERTY UTILITIES 2018 AND 2019 INDIRECT OVERHEAD (INDOH) STUDY PROCESS | 10 |
| STEPS IN THE APUC/LUC INDOH STUDY PROCESS | 10 |
| INDIRECT OVERHEAD CAPITALIZATION FORM | 10 |
| REVIEW AND VERIFICATION PROCESS | 12 |
| CHAPTER 3: 2018 AND 2019 INDOH STUDY RESULTS | 14 |



EXECUTIVE SUMMARY

Corporate services play an important role in a utility's capital program. The following administrative activities, among others, are all essential elements of a successful capital program.

- Attending a capital budget meeting or preparing a capital budget.
- Preparing financial statements for capital expenditures.
- Ordering materials for capital projects.
- Accounting duties performed on capital projects.
- Customer communications for capital projects.
- Attending capital project requirement, resource and vendor meetings.
- Preparing a business case for capital projects.

Further, active involvement in the capital program by executive management to provide leadership and oversight are also important elements of a successful capital program.

Fully accounting for the corporate services aspects of a capital project is important in that the complete cost of a project provides important information to all involved in the process. Further, including appropriate amounts of administrative and support services costs (referred to as indirect overheads in this report) as a component of the cost of long-lived utility plant assets contributes to intergenerational equity among customers.

Organizationally, employees providing administrative and support services to the regulated utilities of Liberty Utilities Co. ("Liberty Utilities") are primarily located in three business units: Algonquin Power & Utilities Corp. ("APUC"), Liberty Utilities (Canada) Corp. ("LUC" or the "Company"), and Liberty Utilities Service Corp. ("LUSC"). APUC and LUC employees are located in Oakville, Ontario and depending on the nature of the function, provide shared services to both Liberty Utilities and Liberty Power or individually to either Liberty Utilities or Liberty Power. Virtually all US-based employees of Liberty Utilities are LUSC employees.¹ LUSC shared services employees are organized similar to the Canadian employees in that some employees support both Liberty Utilities and Liberty Power while others support only Liberty Utilities. Among the employees supporting only Liberty Utilities, some are regional employees supporting multiple regulated utilities located in either the East, Central or West Regions. LUSC "non-shared" employees are dedicated to specific utilities.

PA Consulting Group (PA) was retained by the Company to review the reasonableness of the approach used by the Company for completing the 2018 and 2019 Indirect Overhead ("INDOH") Study ("Study") for APUC and LUC and the calculation of the 2018 and 2019 INDOH rates using the results of the study. This was accomplished by comparing the Company's current practices to common industry practices based on similar studies performed by PA and studies reviewed by PA. Industry practices to account for indirect capital overheads, typically referred to as "capitalized A&G", are guided by FERC and NARUC regulatory accounting standards.

¹ California employees working for CalPeco, Apple Valley, and Park utilities are employed by those utilities, not by LUSC.

The increase in APUC/LUC INDOH percentages from 21% based on the 2013 study to 32.55% and 32.08%% (2018 and 2019 rates respectively) based on the current Study in large part reflects increasing levels of capital spend; for example, in 2013, Liberty Utilities had \$98.5 million in additions to utility plants, while in 2017, this amount had increased to \$397.9 million. The Company forecasts capital expenditures to average \$1.0 billion annually for the period 2019 through 2022.

In our opinion, the approach used by the Company in completing the APUC/LUC indirect overhead study is reasonable and within common industry practices, and the calculated INDOH percentages for APUC/LUC (32.55% for 2018 and 32.08% for 2019) resulting from the study are reasonable.



CHAPTER 1: PA STUDY APPROACH, OBSERVATIONS AND RECOMMENDATIONS

OVERVIEW

PA Consulting Group (PA) was retained by the Company to review the reasonableness of the approach used by the Company for completing the 2018 and 2019 Indirect Overhead (“INDOH”) Study (“Study”) for APUC and LUC and the calculation of the INDOH rates using the results of that study. This was accomplished by comparing the Company’s current practices to common industry practices based on similar studies performed by PA and studies reviewed by PA.

Since 2010, PA has completed six A&G/indirect overhead capitalization studies on behalf of U.S. regulated utilities, has reviewed practices at several other North American utilities in connection with other regulatory accounting engagements, and has reviewed A&G capitalization studies at other regulated utilities as part of our research in this area. Our prior experience with industry practices as well as our familiarity with regulatory accounting guidance forms the basis for the conclusions reached in performing this review,

Industry practices to account for indirect capital overheads, typically referred to as “capitalized A&G”, are guided by FERC and NARUC regulatory accounting standards. In our opinion, an approach which assesses a cost’s eligibility to be capitalized based on whether that A&G work and/or cost would be eliminated over time if the construction program were eliminated is consistent with both the NARUC USoA and common industry practices. This is the approach taken by the Company in completing the 2018 and 2019 Study.

The Company recently completed its 2018 and 2019 indirect overhead study based on a survey of all cost center managers to identify the percentage of time cost center employees spend supporting capital projects. These survey results formed the basis of the calculation of the combined indirect overhead rate for APUC/LUC. The indirect overhead rate is used by Liberty Utilities’ regulated utilities operating in the United States to apportion allocations from APUC and LUC to specific capital projects.

Both FERC and NARUC provide guidance to U.S. regulated utilities related to the capitalization of the costs of services provided in support of capital activities as shown in the table below.

| Source | Guidance |
|--|--|
| Utility Plant Instruction No. 3 included in the FERC Uniform System of Accounts (Gas & Electric) | (12) General administration capitalized includes the portion of the pay and expenses of the general officers and administrative and general expenses applicable to construction work. |
| Utility Plant Instruction No. 4 included in the FERC Uniform System of Accounts (Gas & Electric) | A. All overhead construction costs, such as engineering, supervision, general office salaries and expenses, construction engineering and supervision by others than the accounting utility, law expenses, insurance, injuries and damages, relief and pensions, taxes and interest, shall be charged to particular jobs or units on the basis of the |

| | |
|---|--|
| | <p>amounts of such overheads reasonably applicable thereto, to the end that each job or unit shall bear its equitable proportion of such costs and that the entire cost of the unit, both direct and overhead, shall be deducted from the plant accounts at the time the property is retired.</p> <p>B. As far as practicable, the determination of pay roll charges includible in construction overheads shall be based on time card distributions thereof. Where this procedure is impractical, special studies shall be made periodically of the time of supervisory employees devoted to construction activities to the end that only such overhead costs as have a definite relation to construction shall be capitalized. The addition to direct construction costs of arbitrary percentages or amounts to cover assumed overhead costs is not permitted.</p> <p>C. For major utilities, the records supporting the entries for overhead construction costs shall be so kept as to show the total amount of each overhead for each year, the nature and amount of each overhead expenditure charged to each construction work order and to each electric plant account, and the bases of distribution of such costs.</p> |
| Interpretation No. 59 of the NARUC USoA ² (Gas & Electric) | <p>In general, it is believed that the incremental cost basis is the preferred method of determining amounts of administrative and general expenses which should be capitalized. Under this method only the costs specifically incurred for construction - costs which would not be incurred if construction were not undertaken - are chargeable to construction. The use of this plan will avoid the effect of showing greater net income merely because of increased construction work. Where the incremental cost basis is not employed, general and administrative expenses can properly be distributed to construction only if studies are made to determine the amounts thereof which relate to construction activities. In the case of compensation for personal services, such studies should be based upon time records or periodic surveys of the activities of employees. Where daily time reports are not in effect, periodic studies should be made at least once a year and more frequently if construction activities fluctuate considerably. Such studies should show each employee's activities and the proportion of his time which is includible in construction account. Where the expenditures relate to other than compensation for personal services, it must be shown (1) that the expenditure has a relationship to construction activities and (2) that a reasonable basis has been evolved for determining the amount of proportion properly capitalizable. In no event is it permissible to assign to construction a proportion or percentage of a particular class of expenditures without first having established the relationship of the expenditures in question to construction work.</p> <p>The records supporting allocations of administrative and general expenses to construction should; therefore, show (1) the relationship of the particular function to construction activities, (2) the proportion of each employee's time or each particular expenditure allocable to construction, and (3) the method of determining (2), that is time studies, daily time reports, etc.</p> |
| Uniform System of Accounts for Class A Water and Wastewater Utilities (NARUC, 1996) | <p>19. Utility Plant - Components of Construction Cost</p> <p>(12) "General administration capitalized" includes the portion of the pay and expenses of the general officers and administrative and general expenses applicable to construction work.</p> <p>20. Utility Plant - Overhead Construction Costs</p> |

² Source: Interpretations of Uniform System of Accounts for Electric and Gas Utilities, September 1988, National Association of Regulatory Utility Commissioners

| | |
|--|---|
| | <p>A. All overhead construction costs, such as engineering, supervision, general office salaries and expenses, construction engineering and supervision by others than the accounting utility, legal expenses, insurance, injuries and damages, relief and pensions, taxes and allowance for funds used during construction, shall be charged to particular jobs or units on the basis of the amounts of such overheads reasonably applicable thereto, so that each job or unit shall bear its equitable proportion of such costs and that the entire costs of the unit, both direct and overhead, shall be deducted from the plant accounts at the time the property is retired.</p> <p>B. As far as practicable, the determination of payroll charges includible in construction overheads shall be based on time card distributions thereof. Where this procedure is impractical, special studies shall be made periodically of the time of supervisory employees devoted to construction activities so that only such overhead costs as have a definite relation to construction shall be capitalized. The addition to direct construction costs of arbitrary percentages or amounts to cover assumed overhead costs is not permitted.</p> <p>C. The records supporting the entries for overhead construction costs shall be so kept as to show the total amount of each overhead for each year, the nature and amount of each overhead expenditure charged to each construction work order and to each utility plant account, and the basis of distribution of such costs.</p> |
|--|---|

In the following section we describe in detail the approach used to complete the requested work.

PA APPROACH

To complete the assessment of the Company's current practices for capitalizing indirect overheads for APUC/LUC, PA completed the following tasks.

- Identified those corporate organizations providing support services to the regulated utilities, both company and department.
- Identified current practices used to capitalize indirect overheads for the services provided by APUC and LUC.
- We reviewed the approach taken to complete the APUC/LUC 2018 and 2019 indirect overhead study and performed the following.
- Assessed the instructions provided to cost center managers when completing the survey to identify work performed in support of capital activities against NARUC and FERC USoA guidance and common industry practices. Based on previous studies completed by PA, these activities may include, but not be limited to, the following:³
 - ✓ Providing leadership regarding capital expenditure resource allocation decisions and spend levels (i.e., senior executives)
 - ✓ Developing long-term plans and forecasts of capital expenditures
 - ✓ Developing capital budgets
 - ✓ Processing, validating, correcting time cards with charges to construction projects
 - ✓ Processing, validating, correcting vouchers for charges to construction projects
 - ✓ All tasks associated with closing construction and retirement work orders
 - ✓ Monitoring actual expenditures compared to budget for capital expenditures and explaining budget variances
 - ✓ Recruiting and hiring employees performing construction activities
 - ✓ Labor negotiations for represented employees performing construction activities
 - ✓ Providing insurance coverage for construction activities
 - ✓ Auditing construction activities
 - ✓ Workers comp claims for field workers

³ For Liberty Utilities, some of the activities on this list are performed by LUSC employees rather than APUC/LUC employees.

- ✓ Time spent arranging financing for capital projects
 - ✓ Legal work for construction contracts
 - ✓ Manage IT infrastructure (e.g., networks, telecommunications, computer hardware, etc.) and information systems supporting construction
 - ✓ Time spent by Procurement on capital related projects
 - ✓ Time devoted to Resource Planning, Scheduling and Dispatching related to capital projects
 - ✓ Directing and supervising employees with responsibilities for any of the above.
- Reviewed survey responses for consistency with the above guidance.
 - Assessed whether the study process considered the use of statistical bases for the determination of capitalization percentages where appropriate.
 - Assessed whether the study process separately assessed non-labor expenses (e.g., external audit fees, hardware / software maintenance fees) where appropriate.
 - Reviewed the methodology used to develop the indirect overhead capitalization percentage based on the survey results.
 - Developed conclusions and recommendations based on the work performed.

Based on our review of current capitalization practices at Liberty Utilities, PA believes that current policies are reasonable while providing opportunities for enhancement as allowed for by the USoA to more fully align with common industry practices.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

1. The definition of capital related activities as described in the completed surveys are consistent with those activities considered to be capital-related as used by PA Consulting when completing similar A&G capitalization studies for U.S. regulated utilities. In our opinion, this definition of capital-related activities is consistent with FERC and NARUC guidance.
2. The calculated combined percentages for APUC/LUC appropriately reflect the relative cost of services provided by APUC and LUC.
3. The survey form does not currently ask cost center heads to identify the percentage of departmental labor which direct charges capital projects. This question should be asked with the calculation of the weighted average then adjusted to reflect only departmental labor which is expensed. As an example, see the IT discussion below. We expect that other administrative departments, for example, Legal, also direct charge specific capital projects.
4. For Human Resources (HR) and Information Technology (IT), PA has generally found when completing similar studies that the connection between services provided and how those services support capital activities is less direct and requires a statistical solution rather than a “survey” solution in developing the capitalization percentage.
 - a. Human Resources – The current study uses the overhead study’s overall capitalization percentage for the HR cost centers. While this is a statistical-type approach, PA suggests that a more theoretically-supportable approach is to develop a percentage based on the percentage of total employees (utility, regional and APUC/LUC) benefiting from the specific services provided who directly or indirectly charge construction projects. Based on a preliminary analysis, differences between the current study results and the recommended approach are not significant enough to warrant adjustment as part of the current study. PA recommends that the approach for these HR departments (as well as Training and EH&S) be re-visited in subsequent studies.
 - b. Information Technology – To complement survey responses, PA recommends a multi-step analytical / statistical approach such as the following to develop capitalization percentages for IT costs.⁴
 - i. Identify and categorize IT services. While this categorization can quickly become very granular, we recommend a higher-level categorization of no more than a half dozen or so cost pools. One suggested categorization is Applications, Operations and Infrastructure. In previous studies, we’ve found a need to breakdown the “Applications” cost pool as different groups of employees often benefit from different applications.

⁴ About 80% of IT non-labor costs are direct charged to the utilities and are excluded from the pool of dollars capitalized based on the results of this study. There are differing practices in place at the individual utilities regarding the capitalization of these, and other, direct charged costs.

- ii. Identify appropriate cost drivers by category. These cost drivers may be based on a survey approach depending on the nature of the services provided.
 - iii. Develop a capitalization percentage that properly weights both labor and non-labor spend.
- c. Information Technology – For certain IT cost centers, the survey responses were revised based on our review to more clearly describe the breakdown between labor direct charged to capital projects and labor expensed; and for expensed labor, to better reflect the percent of time spent supporting capital project.
- 5. To develop the final combined APUC/LUC INDOH rate for 2018, the Company adjusted the study results calculated prior to our review for the issues identified in 4.c. above and then weighted the 2018 individual APUC and LUC INDOH rates based on 2018 budgeted APUC and LUC allocated shared services dollars.
- 6. To develop the final combined APUC/LUC INDOH rate for 2019, the Company weighted the individual 2019 APUC and LUC INDOH rates based on 2019 budgeted APUC and LUC allocated shared services dollars.
- 7. During calendar 2018, the regulated utilities properly used the calculated percentage from the prior study (21%) to capitalized allocated APUC/LUC costs. Now that the 2018 study is complete, we recommend that the updated INDOH percentage be used in place of the prior study percentage.
- 8. Now that the 2019 study is complete, we recommend that the 2019 INDOH percentage should be used in place of the 2018 percentage going forward.

CONCLUSION

The increase in INDOH percentages from 21% (based on the 2013 study) to 32.55% and 32.08%, for 2018 and 2019 respectively, based on the current study in large part reflects increasing levels of capital spend; for example, in 2013, Liberty Utilities had \$98.5 million in additions to utility plants, while in 2017, this amount had increased to \$397.9 million. The Company forecasts capital expenditures to average \$1.0 billion annually for the period 2019 through 2022.

In our opinion, the approach used by the Company in completing its 2018 and 2019 APUC/LUC indirect overhead study is reasonable and within common industry practices and the calculated INDOH percentages for APUC/LUC resulting from the study (32.55% for 2018 and 32.08% for 2019) are reasonable.



CHAPTER 2: LIBERTY UTILITIES 2018 AND 2019 INDIRECT OVERHEAD (INDOH) STUDY PROCESS

STEPS IN THE APUC/LUC INDOH STUDY PROCESS

In late 2018, the Company completed an indirect overhead study for the Canadian employees of Liberty Utilities (Canada) Corp. (LUC) and Algonquin Power & Utilities Corp. (APUC). The previous study was completed in 2013. A survey process was used to identify the time spent indirectly supporting capital projects by department.

The design of the survey form was based on the collaborative efforts of the Corporate Accounting and Regulatory teams.

The study was kicked-off in mid-July with a WebEx meeting to explain the new INDOH survey form and provide guidance to the department heads (or their representatives) on how the form should be completed. Completed surveys were required for each APUC/LUC department. A supporting presentation along with a completed survey example was provided and then later emailed to the teams.

It is the Company's intention that these surveys will be refreshed periodically (between every 3-5 years based on standard rate case cycle).

INDIRECT OVERHEAD CAPITALIZATION FORM

The blank survey form sent to department heads at the start of the study process is provided below.



LIBERTY UTILITIES INDIRECT OVERHEAD CAPITALIZATION FORM

BACKGROUND: A capital project is defined as a fixed asset that is used to provide utility services to customers; such as land, buildings, equipment, plant, computer hardware and software, and other similar projects. Capital expenses consist of two components: direct costs (time/expenses coded to a specific budgeted capital project) and indirect overhead that supports capital projects excluding acquisition projects (percentage of indirect costs).

PURPOSE OF FORM: To be completed by Liberty Utilities (Canada) Corp and Algonquin Power & Utilities Corp., departments to help determine and support the derived indirect overhead percentage.

INSTRUCTIONS: Review your department's duties applicable to regulated utilities and time spent on tasks related to capital projects during the past year and provide the average percentage of time spent on such activities, along with a few responsibilities that are performed for time spent on capital projects.

The following are some examples of capital project related activities:

- Attending a capital budget meeting or preparing a capital budget.
- Preparing financial statements for capital expenditures.
- Ordering materials for capital projects.
- Accounting duties performed on capital projects.
- Customer communications for capital projects.
- Attending capital project requirement, resource and vendor meetings.
- Preparing a business case for capital projects.



LIBERTY UTILITIES INDIRECT OVERHEAD CAPITALIZATION FORM

Department: _____

Company Code & Cost Code: _____

Number of Oakville employees: _____

Department Description:

| |
|--|
| |
|--|

Capital Activities:

How much of your group's time is spent on capital projects or supporting capital projects?
List a few responsibilities that are performed if you have any time spent on capital projects.

| |
|--|
| |
| |
| |
| |
| |
| |
| |

Department Staff –Canadian Employees Only

List the names, job titles, and percentage of time spent indirectly on capital related projects of all employees for Liberty Utilities

| First Name | Last Name | Job Title | % |
|------------|-----------|-----------|---|
| | | | |
| | | | |
| | | Total % | |

On average, our Department spends about ____% (Total employee % /Number of employees) of our time indirectly on capital related projects for Liberty Utilities

 Department Manager Company Name (LUC or APUC)

 Signature (PRINT INITIALS) Date

By indicating my initials above, I confirm the above percentage has been reviewed and agreed with by my manager.

REVIEW AND VERIFICATION PROCESS

Upon receipt of the completed surveys, Regulatory personnel entered the survey data into a spreadsheet and performed the following tasks.

- Confirmed that all required responses were received. Followed-up with departments for whom responses were not received.
- Reviewed responses for completeness.
- Reconciled the total number of employees reported to data provided from HRIS.
- Adjusted the reported data for employees dedicated to Liberty Power or whose time was direct charged to capital projects.
- Calculated the overall percentage for LUC for all departments except HR, Training, Facilities and Rent, and EH&S.
- Used the LUC percentage for the remaining departments and calculated a 2018 and 2019 total percentage for LUC.
- Calculated the indirect overhead percentage for APUC.
- Calculated a combined INDOH rate for both 2018 and 2019 for APUC/LUC by weighting the indirect overhead percentages for APUC and LUC individually with their respective allocated shared services 2018 and 2019 budget amounts as provided by Corporate Accounting.
- Activities related to business development and utility acquisitions were not included in the survey.

Following the work completed by Regulatory to develop the overall 2018 and 2019 weighted INDOH %, Corporate Finance performed the following first level review:

- Ensured departmental submissions reconciled to '2018 capitalization survey' tab and the '2019' tab
- Reconciled department and employee lists to HRIS Excel extract to ensure completeness

- Reviewed department submissions greater than 50% (threshold is based on collective experience as anything >50% seems high and should be investigated)
- Confirmed accuracy of average department calculations
- Reviewed average calculation in column K on '2018 Capitalization survey' tab and '2019' tab

The Director, Regulatory Accounting performed a following second level review:

- Ensured departmental submissions reconciled to '2018 capitalization survey' tab and '2019' tab
- Liaised with department with submissions greater than 50%
- Reviewed average calculation in column K on '2018 Capitalization survey' tab and '2019' tab
- Reviewed department listing to ensure it was complete

CHAPTER 3: 2018 AND 2019 INDOH STUDY RESULTS

The combined APUC/LUC indirect overhead percentage for 2018 (based on 2018 budgeted APUC and LUC allocated shared services costs) resulting from the study process described in the preceding section is 32.55% as shown in the following table.⁵

| | 2018 Budget (\$) | % of 2018 Budget | Calculated INDOH % | Weighted INDOH % |
|--------------|------------------|------------------|--------------------|------------------|
| LUC | 38,891,360 | 78% | 29.55% | 23.12% |
| APUC | 10,807,854 | 22% | 43.33% | 9.42% |
| Total | 49,699,214 | 100% | NA | 32.55% |

The combined APUC/LUC indirect overhead percentage for 2019 resulting from the study process described in the preceding section is 32.08% as shown in the following table.

| | 2019 Budget (\$) | % of 2019 Budget | Calculated INDOH % | Weighted INDOH % |
|--------------|------------------|------------------|--------------------|------------------|
| LUC | 38,371,335 | 82% | 29.58% | 24.21% |
| APUC | 8,520,063 | 12% | 43.33% | 7.87% |
| Total | 46,891,398 | 100% | NA | 32.08% |



PA Consulting Group.
Make the Difference.

An independent firm of over 2,600 people, we operate globally from offices across the Americas, Europe, the Nordics, the Gulf and Asia Pacific.

We are experts in consumer, defence and security, energy and utilities, financial services, government, healthcare, life sciences, manufacturing, and transport, travel and logistics.

Our deep industry knowledge together with skills in management consulting, technology and innovation allows us to challenge conventional thinking and deliver exceptional results that have a lasting impact on businesses, governments and communities worldwide.

Our clients choose us because we challenge convention to find the solutions that really work in practice, not just on paper. Then we roll up our sleeves and get the job done.

PA. Make the Difference.

New York Office

PA Consulting Group Inc.
45th Floor
The Chrysler Building
405 Lexington Avenue

New York
NY 10174
USA
+1 212 973 5900

paconsulting.com

This report has been prepared by PA Consulting Group on the basis of information supplied by the client, third parties (if appropriate) and that which is available in the public domain. No representation or warranty is given as to the achievability or reasonableness of future projections or the assumptions underlying them, targets, valuations, opinions, prospects or returns, if any, which have not been independently verified. Except where otherwise indicated, the report speaks as at the date indicated within the report.

All rights reserved
© PA Knowledge Limited 2019

This report is confidential to the organisation named herein and may not be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical or otherwise, without the prior written permission of PA Consulting Group. In the event that you receive this document in error, you should return it to PA Consulting Group, PA Consulting Group Inc., 45th Floor, The Chrysler Building, 405 Lexington Avenue, New York, NY 10174, USA. PA Consulting Group accepts no liability whatsoever should an unauthorised recipient of this report act on its contents.