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British Columbia Utilities Commission
Sixth Floor, 900 Howe Street
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Attention: Mr. Patrick Wruck, Commission Secretary

Dear Sirs/Mesdames:

**Re: British Columbia Hydro and Power Authority (BC Hydro) Supply Chain
Applications Project Phase Two - Reply Argument**

We enclose for filing in the above proceeding BC Hydro's Reply Argument, dated February 21, 2019.

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

for


Christopher Bystrom
Personal Law Corporation

CRB/gvm
Encl.

BRITISH COLUMBIA UTILITIES COMMISSION
IN THE MATTER OF THE UTILITIES COMMISSION ACT
R.S.B.C. 1996, CHAPTER 473
and
BRITISH COLUMBIA HYDRO AND POWER AUTHORITY
SUPPLY CHAIN APPLICATIONS PROJECT PHASE TWO

Reply Submissions of
British Columbia Hydro and Power Authority

February 21, 2019

TABLE OF CONTENTS

PART ONE: INTRODUCTION	1
PART TWO: PROJECT COST IS ROBUST AND REASONABLE	1
PART THREE: PROJECT BENEFITS REMAIN CREDIBLE AND SUFFICIENT	2
A. INTRODUCTION	2
B. REPLY TO CEC ON BENEFITS ANALYSIS.....	3
(a) CEC’s Characterization of Evidence is Inaccurate	3
(b) Estimate of Benefit ID No. 5 is Reasonable.....	5
(c) Quality Assurance Advisor Clearly Endorsed Benefits Assessment Process	10
(d) SCA Project is Required to Realize Benefits	12
(e) PwC’s Evidence is Credible and Should be Accepted.....	16
(f) Non-Monetized Benefits have Significant Value.....	18
(g) Net Present Value Analysis is Reasonable	19
C. CONCLUSION AND REQUESTED FINDINGS.....	19
PART FOUR: PROJECT RISK AND SCHEDULE	19
PART FIVE: PROCEEDING WITH SCA PROJECT DOES NOT IMPACT COMMISSION DECISION	20
PART SIX: REPORTING	21
PART SEVEN: CONCLUSION AND ORDER SOUGHT.....	22

PART ONE: INTRODUCTION

1. In this Reply Submission, BC Hydro responds to the submissions of the Commercial Energy Consumers Association of British Columbia (“CEC”) and British Columbia Old Age Pensioners’ Organization et al. (“BCOAPO”) on BC Hydro’s Supply Chain Applications Project (“SCA Project”) Phase Two Verification Report (the “Verification Report”). BCOAPO supports the Commission’s acceptance of the Implementation Phase capital expenditures for the SCA Project, while the CEC remains opposed to the SCA Project. While the CEC does take issue with the cost, schedule or risk of the SCA Project, the CEC is of the opinion that BC Hydro’s estimate of the benefits from Benefit ID No. 5 is not supported. The CEC, however, has not fairly characterized or accurately assessed the evidence in support of Benefit ID No. 5. A fair consideration of the evidence shows that BC Hydro and PriceWaterhouseCoopers (“PwC”) have reasonably estimated the benefits of the SCA Project based on detailed analysis and supporting information. The benefits analysis process followed by BC Hydro was reviewed and endorsed by the Quality Assurance (“QA”) Advisor, KPMG. BC Hydro submits that the proposed expenditure schedule for the SCA Project Implementation Phase funding should be accepted by the Commission.

PART TWO: PROJECT COST IS ROBUST AND REASONABLE

2. Both BCOAPO and CEC accept BC Hydro’s cost estimate for the project. BCOAPO states that it “has no issues with BC Hydro’s Authorized Cost Estimate for the SCA Project.”¹ CEC recommends that the BCUC use BC Hydro’s estimated cost range for the SCA Project, stating: “the evidence on the record is that the range of cost is expected to be between \$71.3 million and \$79.3 million. The CEC recommends that the Commission utilize these figures in their analysis of the Project.”²

¹ BCOAPO Submission, p. 8.

² CEC Submission, p. 12, paras. 74-75.

3. As noted by BCOAPO, over the past three years, BC Hydro came within 4 per cent of “First Full Funding” approval for completed technology projects.³ BCOAPO states that “BC Hydro should clarify in its Reply the basis for the First Full Funding approval used in the comparison.”⁴ As requested, and to be helpful, BC Hydro clarifies that from fiscal 2016 to fiscal 2018 there were no completed Technology projects with a reserve amount and, therefore, the First Funding Approval referred to in Exhibit B-4, CEC IR 1.5.2 is the expected cost. The fact that the percentage of projects completed within the expected cost has been increasing, including 91% of projects in 2018, should provide comfort that BC Hydro’s estimating practices for technology projects are performing well.

4. Consistent with the evidence in these proceedings and the submissions of BCOAPO and CEC, the Commission should accept BC Hydro’s cost estimate range for the SCA Project, from the Expected Cost of \$71.3 million to the Authorized Cost of \$79.3 million.

PART THREE: PROJECT BENEFITS REMAIN CREDIBLE AND SUFFICIENT

A. INTRODUCTION

5. BCOAPO generally takes no issue with BC Hydro’s benefits analysis and accepts BC Hydro’s analysis of Benefit ID No. 5, stating: “BCOAPO considers the choice of 1.5% cost leakage reduction factor in conjunction with a 50% realization rate to be reasonable.”⁵ CEC, however, takes the view that the benefits estimate for Benefit ID No. 5 is not supported. As set out in the subsections below, BC Hydro’s assessment of Benefit ID No. 5 is reasonable, supported by the expertise and experience of PwC, and endorsed by the QA Advisor, KPMG.

³ Exhibit B-4, CEC IR 1.5.2.

⁴ BCOAPO Submission, p. 7.

⁵ BCOAPO Submission, p. 13.

B. REPLY TO CEC ON BENEFITS ANALYSIS

(a) CEC's Characterization of Evidence is Inaccurate

6. The CEC mischaracterizes BC Hydro's evidence in numerous ways in its final argument. While not responding to every comment of this nature, BC Hydro notes the following inaccuracies or mischaracterizations.

7. The benefits assigned to Benefit ID No. 5 are not "inflated",⁶ but have increased due to a wider scope: negotiating lower prices in the Phase One Application versus negotiating lower prices and mitigating contract leakage through active contract management in the Verification Report. The rationale for this change is discussed further below.

8. BC Hydro's recognition that it will be difficult to monetize effort reduction benefits does not represent "a significant admission by BC Hydro of a lack of confidence in its benefit evaluation."⁷ In fact, BC Hydro has more confidence in its benefits analysis now than in the Phase One Application due to the completed Definition Phase work and more rigorous benefits analysis undertaken in preparing the Verification Report. There were over 40 SCA Project working team members involved in validating the benefits and assumptions.⁸ As stated by PwC: "As a result of this comprehensive review, the benefits were refined with higher level of confidence within the range of benefits submitted in the Phase One Application (low, mid, and high scenarios) and better estimated into Expected Quantified Benefit and Expected Monetized Benefit for the purpose of validating the business case for the SCA Project."⁹

9. BC Hydro has not reduced "its effort-related benefits by \$12 million".¹⁰ BC Hydro's effort-reduction benefits have decreased by only \$300,000. The \$12.1 million dollars is the difference between the Expected and Monetized effort-reduction benefits.¹¹

⁶ CEC Argument, p. 1, paras. 2 and 3.

⁷ CEC Argument, p. 17, para. 101.

⁸ Exhibit B-1, Appendix H, p. 64.

⁹ Exhibit B-3, BCUC IR 1.10.3.1.

¹⁰ CEC Argument, p. 17, para. 104.

¹¹ Exhibit B-1, Verification Report, Table 3-4.

10. It is misleading to say that BC Hydro “switched its justification focus for benefits from time and effort benefits to contract management benefits”.¹² BC Hydro has updated its benefits analysis based on the additional project definition work completed since the Phase One Application. BC Hydro’s Expected Benefits include a similar level of effort-reduction benefits as in the Phase One Application, although BC Hydro has incorporated into the analysis the difficulty in monetizing effort-reduction benefits.¹³

11. CEC appears to confuse the realization ratio applied to all benefits with the monetization analysis, mistakenly coming to the conclusion that BC Hydro did not apply a realization ratio in the Verification Report.¹⁴ BC Hydro in fact applied a realization ratio to all benefits, including a 50 per cent realization ratio to Benefit ID No. 5. In addition, BC Hydro considered what percentage of these already discounted benefits could be monetized. Thus, in reply to the CEC’s submission that the benefits of Benefit ID No. 5 “would need to be discounted by 50%”,¹⁵ BC Hydro has already applied a 50 per cent realization ratio to its estimated benefits for Benefit ID No. 5. This is presented on page 20 of Appendix H of the Verification Report.¹⁶

12. BC Hydro does not have an “inability to attribute the source of the headcount reductions”.¹⁷ BC Hydro’s evidence is that, other than for Benefit ID No. 16, it is not possible to specifically identify the headcount reduction attributable to individual effort benefits in isolation.¹⁸ However, BC Hydro has in fact identified areas of its business where the reductions will occur, and has listed them on a confidential basis.¹⁹ These are the parts of BC Hydro that have a concentrated number of FTEs performing functions that will have a high reduction in time resulting from a combination of identified benefits. The specific positions impacted will be

¹² CEC Argument, p. 3, para 17.

¹³ Exhibit B-1, Verification Report, Table 3-4.

¹⁴ CEC Argument, pp. 12-13, para. 79 and p. 27, para. 175.

¹⁵ CEC Argument, p. 27, para. 175.

¹⁶ Exhibit B-1, Verification Report.

¹⁷ CEC Argument, p. 17, para. 105.

¹⁸ Exhibit B-3, BCUC IR 1.13.2.

¹⁹ Exhibit B-3-1, Confidential BCUC IR 1.13.1.

identified later in the Implementation Phase of the SCA Project when additional process details and plans are developed for how the work will be reorganized.²⁰

13. Contrary to the CEC's assertion, the approach to Benefit ID No. 5 is in fact "consistent with the Commission's acceptance of BC Hydro's 'bottom-up approach' and reliance on 'actual, quantified values.'"²¹ The calculation methodology for Benefit ID No. 5 is the same in the Verification Report as it was in the Phase One Application (i.e. addressable spend multiplied by the per cent of estimated savings). The difference is that the targeted benefit has expanded from being limited to negotiating lower prices to negotiating lower prices and reducing value leakage by performing active contract and supplier management.

14. BC Hydro addresses other errors in CEC's argument below.

(b) Estimate of Benefit ID No. 5 is Reasonable

15. Benefit ID No. 5 quantifies BC Hydro's increased ability to manage contracts and suppliers to ensure anticipated contract benefits are fully realized, do not erode, and are increased over time.²² Contrary to the CEC submissions, the analysis supporting the estimated benefits of Benefit ID No. 5 is logical, well-supported, and reasonable. The logic of the benefits analysis is summarized below:

(a) **Benefit ID No. 5 Expanded to Include Mitigation of Value Leakage:** The increase in Benefit ID No. 5 compared to the Phase One Application flows from PwC's advice to quantify the benefits of active contract and supplier management to mitigate value leakage. In the Phase One Application, BC Hydro forecasted the value of this benefit as a reduction of 0.5 per cent of overall spend based on its improved ability to negotiate commercial terms with better data and visibility to demand. PwC advised taking a broader focus to quantify the benefits from active

²⁰ Exhibit B-3, BCUC IR 1.13.1.

²¹ CEC Argument, p. 26, para 169.

²² Exhibit B-1, Verification Report, p. 3-11. For a fuller discussion of Benefit ID No. 5, please see Appendix H, p. 20. Further detailed information on Benefit ID. No. 5 is in Row 8 of Tab F1 of Appendix F.

contract and supplier management not only to negotiate better terms, but also to mitigate value leakage due to non-compliance with contract terms.²³ As discussed below, PwC's previous experience indicated that savings in the range of 0.5 to 3.0 per cent of overall spend could be achieved by this broader focus.

- (b) **SCA Project Provides Capabilities to Mitigate Value Leakage:** BC Hydro's current systems have limited functionality to capture contract details for Business Groups across the company to enable active contract and supplier management.²⁴ The SCA Project will enable active contract and supplier management by implementing capabilities that provide more visibility, management and control over spend, contract terms and supplier performance. Examples of SCA capabilities include: "conformance to contract terms through outline agreements with 'locked pricing', management of milestone payments, better visibility of contract spend to ensure compliance to appropriate contracts, more efficient and reliable access to the signed contracts and amendments, matching of service and material acceptance with invoice information to ensure payment only of work and materials delivered, ERS that allows to pay without invoice while still supporting early payment discounts, ability to track discounts and rebates, ability to monitor and measure contract fulfillment and supplier performance, reports that provide data-based knowledge for decisions and actions."²⁵ Additionally, through further analysis and design sessions, it was clarified that the use of outline agreements to capture contracts as well as the use of service masters to capture itemized services will enable BC Hydro to track progress on work and contract compliance. The use of SCA elements will enable

²³ Exhibit B-1, Verification Report, p. 3-11, Appendix F, Tab F1, Row 8; Appendix H, p. 20; Appendix I-1, pp. 3-6

²⁴ Exhibit B-1, Verification Report, Appendix H, p. 20.

²⁵ Exhibit B-1, Verification Report, Appendix H, p. 20.

electronic tracking of contracted terms to mitigate leakage through non-compliance.²⁶

- (c) **Range of Benefits due to Mitigating Value Leakage from Wide Range of Organizations and Supply Chains:** The importance of mitigating contract value leakage is the subject of PwC's report 'A Holistic Approach to Third Party Contracts'.²⁷ Many of the CEC's criticisms of the report (such as the number of pages devoted to the cover and end pages) are irrelevant, while others are in error. For example, the report does in fact define and describe what is meant by a holistic approach.²⁸ The significance of the report is that it indicates that contract management can generate between 0.5 per cent and 3 per cent in contract specific savings from mitigating cost leakage from contract non-compliance. While this was a generic PwC report applied across a wide-range of organizations and supply chains, many of the organizations were comparable in terms of size, scale and technological maturity (or advanced in technological maturity) to BC Hydro.²⁹ PwC corroborated and tested the range of benefits as described below.

²⁶ As also indicated in Exhibit B-1, Appendix H, p. 20.: "SCA Project will deliver a number of operational reports such as Contract Expiration, Measure of Non-Compliance with Contract Terms, Measure of Missed Discount Terms, Measure Number of Change Order that Exceeds Contract Price and Spend by Outline Agreement along with a Supplier Relationship Management dashboard that will provide timely and quality information for more active management."

²⁷ Exhibit B-4, Attachment 1 to BC Hydro's response to CEC IR 1.23.1.

²⁸ Contrary to the CEC's claim that a "holistic" approach is not defined, this approach is described on pages 2 of 9 as one "that looks both internally across the various constituents of a company's contract to determine whether contract is delivering what was intended, and externally at the third party to make sure the company is getting what it's paying for." Pages 4 of 9 provide a more detailed discussion of the holistic approach. PwC explains: "The internal review includes contract management and vendor governance and involves interviewing stakeholders and determining what processes they have in place to manage contracts. Meanwhile, the external aspect focuses more on contract compliance based on transactional testing and data analysis. This involves validating that the third party billings are accurate and correct, the work is supported appropriately, and that the third party is in compliance with the contract. The goal is to answer the company's questions as to whether they're getting what they paid for: is there proof of service performance, did the third party comply with the terms and conditions of the contract, and do the terms of the contract still make sense."

²⁹ Exhibit B-3, CEC IR 1.23.2.

- (d) **Range of Benefits was Tested and Corroborated by Reference to Utilities and Similar Projects:** The benefit range in the report was tested against other available market intelligence and PwC's experience at industry peers.³⁰ Specifically, PwC's recent experience working with utility and other organizations on similar projects indicates implementing SAP ECC shows savings through active supplier management, contract management and contract value leakage in the range of 1.5 per cent to 3 per cent. The 1.5 per cent mark used for the SCA Project benefits analysis is at the low end of this range, and is therefore reasonable and achievable for BC Hydro.³¹
- (e) **Success of BC Hydro Relative to the Range of Benefits:** PwC also considered the potential for success for BC Hydro relative to the range of data in the report.³² The factors in this analysis included the following:
- **Higher Service-to-goods Ratio:** The potential for leakage or non-compliance is higher with organizations with a higher service-to-goods procurement ratio like BC Hydro. BC Hydro's procurement ratio typically exceeds 70 per cent services procurement to 30 per cent goods procurement, and is managed with highly manual processes creating an increased risk of leakage.³³
 - **Wide Variety of Products, Services, and Vendors:** BC Hydro also procures a very wide variety of products and services from a significant number of vendors, across a variety of business verticals with a high variation in complexity of transaction. Managing the procurement of this

³⁰ Exhibit B-3, BCUC IR 1.12.4.

³¹ Exhibit B-3, BCUC IR 1.12.5.

³² Exhibit B-4, CEC IR 1.26.1.

³³ Exhibit B-3, BCUC IR 1.12.4.

wide variety of products and services creates an increased risk of leakage, thus increasing the potential benefits of active contract management.³⁴

- **Lower Level of Supply Chain Technological Maturity:** BC Hydro has a lower level of supply chain technology maturity as indicated by the fact that it is implementing SAP ECC with some Ariba functionality, which is a level of complexity that most comparable companies implemented 5 to 15 years ago.³⁵ A lower level of supply chain technological maturity requires a dependency on manual processes to minimize contract leakage versus a reliance on data, reporting and automation.³⁶ This again shows a high potential for benefits from active contract management using more advanced supply chain technology.

- (f) **Estimated Percentage of Spend is Reasonable:** The targeted reduction of 1.5 per cent of overall spend is below the middle (1.75 per cent) of the range of savings achieved by the wide range of organizations in the PwC report, and based on PwC's experience, is at the low end of the range of savings (1.5 per cent to 3.0 per cent) achieved by utilities and similar projects implementing SAP ECC. The targeted reduction of 1.5 per cent of overall spend is a realistic and achievable savings rate given the above factors showing that BC Hydro has increased risk of contract leakage compared to similar organizations.³⁷

16. BC Hydro submits that the above evidence and reasoning provides a sound and reasonable basis for the estimate of savings from Benefit ID No. 5.

³⁴ Exhibit B-3, BCUC IR 1.12.4.

³⁵ Exhibit B-3, BCUC IR 1.12.4.

³⁶ Exhibit B-3, BCUC IR 1.12.4.

³⁷ The actual savings percentage will vary from contract to contract, but the overall average of 1.5 per cent is considered realistic and achievable (Exhibit B-3, BCUC IR 1.12.6).

(c) Quality Assurance Advisor Clearly Endorsed Benefits Assessment Process

17. CEC submits “that while KPMG appears to endorse the process followed by PwC, there is no significant comfort to be gained from the generic nature of the comments”.³⁸ Contrary to the CEC’s submission, the robust methodology applied by KPMG in its QA Advisor role, as described in KPMG’s detailed Design Review Report,³⁹ should provide significant comfort to the Commission that the benefits assessment process was reasonable.

18. KPMG was retained to provide independent QA services throughout the project lifecycle. As stated in its Design Review Report: “The role of KPMG as the Quality Assurance service provider has been, and will continue to be, to provide an independent external assessment of the SCA Project for reporting to the project’s Steering Committee as well as BC Hydro’s Executive and Board of Directors as required.”⁴⁰ KPMG’s assessment was based on detailed knowledge of the SCA Project. KPMG states:

Throughout the course of this assessment, KPMG attended 6 Steering Committee Meetings, 9 Working Group Meetings, 35 Design Phase workshops, interviewed all Steering Committee members, Working Group members, and conducted regular interviews with the SCA Project Directors, SCA Project Managers and SCA Project Stream Leads along with other subject matter experts and stakeholders as required. Participation in the workshops, meetings and interviews provided a more complete view of Design completion and readiness for Realization through the perspective of key stakeholders.⁴¹

19. KPMG’s assessment of the SCA Project’s benefits assessment process was detailed and specific, and was a clear endorsement of the process undertaken by PwC and BC Hydro. KPMG states:

... To assess the benefit assessment approach, KPMG reviewed the ‘SCA Benefit Assessment Report’ and interviewed the SCA Project Directors, Key Working Group members and members of the Benefit Assessment teams.

³⁸ CEC Argument, p. 16, para. 91.

³⁹ Exhibit B-1, Verification Report, Appendix K-1.

⁴⁰ Exhibit B-1, Verification Report, Appendix K-1, p. 11.

⁴¹ Exhibit B-1, Verification Report, Appendix K-1, p. 11.

KPMG's assessment focused on 3 areas:

- the appropriateness of the benefits assessment approach;
- the inclusion of Design findings in the benefits report;
- and the completion of a suitable action plan to realize and capture the benefits.

Based on KPMG's observation, the SCA Project followed a suitable approach for identifying and validating benefits. During Design, the SCA Project team engaged an SI team separate from the core SI project delivery team (i.e. the Benefit Assessment Team) to assess and validate the benefits. Based on interviews with the Benefit Assessment Team, the scope of the benefit assessment activities included:

- Incorporating new information that was uncovered during the Design Phase
- Validating, updating, and refining existing benefit assumptions
- Referencing industry benchmarks, and incorporating benefits realized from comparable projects delivered by the SI to refine assessment findings⁴²

20. KPMG further commented on the approach to estimated cost reduction benefits (including Benefit ID No. 5) as follows:

To estimate cost reduction benefits, the SCA Project team applied benchmarks for savings captured from similar projects, to BC Hydro's current state performance. The Benefits Assessment Team considered both industry benchmarks and findings from past project delivered by the SI. To validate the suitability of benchmarks, the Benefits Assessment Team considered BC Hydro's current state supply chain maturity relative to the state of maturity for the benchmark organization. The assessment team also considered benchmarks validated by several sources. Based on interviews with the members of the Benefit Assessment Team, KPMG observed that certain members of the team had previously worked on preparing BC Hydro's Supply Chain Business Model in

⁴² Exhibit B-1, Verification Report, Appendix K-1, pp. 30-31. Emphasis added.

2013 and therefore have a suitable reference point for the performance maturity of BC Hydro's supply chain organization.

KPMG observed that the Benefits Assessment Team suitably incorporated findings identified during Design into the benefits assessment. KPMG observed that throughout the Design Phase, the Benefit Assessment Team:

- Incorporated new design findings in the benefit identification and validation process, by reviewing documents, interviewing key stakeholders and attending Design Playback sessions;
- Validated and updated the benefits and the underlying assumptions that were documented in the previous report;
- Identified and quantified new benefits;
- Updated key variables, such as industry benchmarks, ranges, the detail of stabilization and ramp-up period.⁴³

21. BC Hydro's approach to analyzing benefits of the SCA Project has therefore been reviewed in detail and endorsed by an independent third party.

22. The benefits, and the process in which these benefits are validated, have been confirmed by two reputable firms that have experience in implementing similar projects. This should provide significant comfort to the Commission.

(d) SCA Project is Required to Realize Benefits

23. There is no evidence to support the CEC's assertion that a new supply chain system is not required for BC Hydro to achieve the benefits of Benefit ID No. 5, or that the benefits "should be largely achievable with various policy changes accompanied by dedicated staff members and supporting process at significantly lower cost than [sic] the proposed IT system."⁴⁴ The CEC's assertions are contradicted by the evidence on the record from both BC Hydro and PwC personnel who have specific expertise in supply chain management.

⁴³ Exhibit B-1, Verification Report, Appendix K-1, p. 31.

⁴⁴ CEC Argument, p. 20, para. 122.

24. As BC Hydro has explained in its Phase One Application and the Verification Report, the SCA Project is designed to close the 13 capability gaps in BC Hydro's existing supply chain IT system so that BC Hydro can address 150 identified technology-related supply chain business requirements.⁴⁵ This need for the SCA Project has been accepted by the Commission in the Phase One proceeding. Due to the integration between IT systems and business processes, BC Hydro could not achieve the benefits of the SCA Project without a new IT system. In this regard, it is essential to recognize that the SCA Project will not only implement an IT system, but new business processes as well. BC Hydro commented on the integration between IT systems and business processes in the Phase One Application, as follows:

IT systems and the business processes they support are often highly integrated, and there is generally little room to improve business processes without improving or upgrading the IT systems. Since 2011, BC Hydro has sought to support the improvements in its supply chain by making a number of relatively moderate IT investments as discussed in section 4.2 of the Application. However, to continue the improvements and close the capability gaps of the existing IT system, significant supply chain IT investments need to take place.⁴⁶

25. In short, BC Hydro cannot meet its business requirements or achieve the benefits of the SCA Project without closing the capability gaps in its existing supply chain IT system.

26. While BC Hydro has resources dedicated to contract and supplier management,⁴⁷ their efforts are hindered by the current IT system which does not facilitate successful active contract management and requires manual and time consuming efforts. For example, BC Hydro's current systems have limited functionality to capture contract details,⁴⁸ and BC Hydro does not have the tools that would help ensure efficient and robust work progress and contract compliance tracking on a consistent basis across all contracts. Further, BC Hydro does not have a single source of detailed contract information in its IT system, and lacks functionality within

⁴⁵ Exhibit B-1, Verification Report, p. 4-3.

⁴⁶ Phase One Application, p. 2-7. Online: https://www.bcuc.com/Documents/Proceedings/2017/DOC_48548_B-1_BCH_PUB-SupplyChainApp.pdf

⁴⁷ Exhibit B-4, CEC IR 1.26.2.

⁴⁸ Exhibit B-1, Verification Report, Appendix H, p. 20.

Passport and integration among various systems and tools to systematically evaluate contract compliance overall.⁴⁹

27. The evidence is that mitigating contract value leakage can be greatly enhanced through improvements to systems and processes that increase controls using enhanced reporting capabilities, including the ability to compare contractual terms to invoices.⁵⁰ The SCA Project will deliver the required tools and functionality, as well as standardized process flows for contract management across the organization, enabling more effective and consistent contract and supplier management and tracking of contract compliance across BC Hydro.⁵¹ As noted above, the SCA Project will provide more visibility, management and control over spend, contract terms and supplier performance. The SCA Project will deliver operational reports, such as Contract Expiration, Measure of Non-Compliance to Contract Terms and Measure of Number of Contract Change Orders that Exceed Contract Price, to more actively manage contracts and suppliers and achieve the benefits.⁵² BC Hydro submits that the evidence is clear that the SCA Project will provide significant new functionality that is required to achieve the benefits of active contract management to mitigate contract value leakage as required for Benefit ID No. 5.

28. PwC also explained why it is not useful to attempt to allocate benefits between technology and personnel, as follows:

Transformations by nature are successful due to the synergies of combining people, process and technology within a robust change management framework.

Some benefits which have been identified are clearly enabled through the adoption of technology by creating visibility to demand, automatic processing of invoices or a reduced number of transaction steps. Some benefits will require additional oversight, additional training and additional corporate buy-in to be fully realized.

⁴⁹ Exhibit B-4, CEC IR 1.26.2.

⁵⁰ Exhibit B-4, CEC IR 1.26.1.

⁵¹ Exhibit B-4, CEC IR 1.26.2.

⁵² Exhibit B-1, Appendix H, p. 20.

The great enabling factor of Supply Chain transformation projects is that personnel can spend less time focusing on tedious repetitive work and spend more time focused on value added activities. This is enabled through the elimination of steps, automation of repetitive transactions and increased visibility and data for making better decisions.

The value of trying to segment from where the value creation is derived is difficult and often a fruitless endeavor. Except in the cases where technology is eliminating transactions, benefits measurement does not provide value creation segmentation.⁵³

29. While CEC objects to this response and asserts that “simple methodologies exist to achieve the segmentation to causes”,⁵⁴ it is not clear what CEC means by this statement and there is no explanation of such methodologies or what value they would provide. CEC also does not take into account that there is an ongoing operational cost to adding additional resources to manage contracts and suppliers, and costs to changing business processes, even if they do not require a new IT system. Therefore, CEC has not provided any assessment of the costs of its hypothetical alternative to the SCA Project or explained how BC Hydro could achieve the benefits of contract and supplier management without a new IT system in the face of the substantive evidence to the contrary. Further, the CEC’s comments do not reflect the industry’s working practices, especially considering factors such as BC Hydro’s distributed workforce, volume of active contracts and suppliers, complexity around managing higher service-to-goods ratio in contracts and suppliers, and wide variety of products and services purchases. Without the supporting IT system and enhanced reporting, there is insufficient data to make effective management decisions to actively manage contracts and suppliers. BC Hydro submits that the CEC’s position should be rejected.

30. More fundamentally, the Commission has already accepted the need for the SCA Project and that BC Hydro chose the correct alternative. BC Hydro submits that CEC’s argument is out of scope, in addition to being unsupported by any evidence. In BC Hydro’s submission, it

⁵³ Exhibit B-4, CEC IR 1.24.2.

⁵⁴ CEC Argument, p. 21, para. 127.

has demonstrated the need for the SCA Project and that it is required to achieve the estimated benefits.

(e) PwC's Evidence is Credible and Should be Accepted

31. The CEC's argument that the estimate of Benefit ID No. 5 is "upwardly biased by a significant conflict of interest in the verification process"⁵⁵ is unsupported. Contrary to the CEC's submission, PwC's evidence is credible and should be accepted by the Commission.

32. First, the contents of the reports in Appendices G and H of the Verification Report that were completed by PwC's supply chain consulting practice demonstrate a high level of diligence in analyzing the benefits of the SCA Project.⁵⁶ PwC has set out its methodology and results of its analysis in detail in Appendices G and H, and its analysis is based on experience with many similar projects in the utility sector.⁵⁷ The CEC has demonstrated no error in PwC's methodology or analysis. PwC's methodology and analysis was also reviewed and endorsed by KPMG as an independent external QA Advisor. In the absence of evidence of any errors, it is reasonable to rely on the professional integrity, quality assurance and ethical standards of PwC, as well as its interest in maintaining its reputation in the industry.⁵⁸

33. Second, in response to the CEC comments on PwC's report 'A Holistic Approach to Third Party Contracts',⁵⁹ it is notable that the report was completed in 2016,⁶⁰ prior to PwC's engagement with BC Hydro. The report was not created for BC Hydro or the SCA Project, and PwC does not hold the report out as anything other than a "generic PwC report" applied across a wide-range of organizations and supply chains.⁶¹ As discussed above, the range of benefits in the report was tested and corroborated against savings achieved by utilities and similar IT projects. BC Hydro submits that this is reasonable.

⁵⁵ CEC Argument, p. 2, para. 6.

⁵⁶ Exhibit B-1, Verification Report, p. 3-4.

⁵⁷ Exhibit B-1, Verification Report, Appendix G, p. 10.

⁵⁸ Exhibit B-4, BCUC IR 1.15.1.

⁵⁹ Exhibit B-4, Attachment 1 to BC Hydro's response to CEC IR 1.23.1.

⁶⁰ Exhibit B-4, Attachment 1 to BC Hydro's response to CEC IR 1.23.1, p. 9 of 9.

⁶¹ Exhibit B-3, CEC IR 1.23.3.

34. Third, PwC's analysis led to both decreases and increases in the estimated benefits of the SCA Project, which included 13 benefits that were reduced by \$ 7.4 million from the Phase One Application.⁶² Notably, it was PwC's advice that benefits that save a small increment of time of many individuals across the organization are unlikely to be monetized.⁶³ Based on this advice, BC Hydro is not including all effort benefits in its Expected Monetized Benefits.⁶⁴ PwC also noted that, when evaluating benefits against benchmark data, no general trend of any form of estimation bias was identified.⁶⁵ For example, several benefits were reduced in duration while others were increased.⁶⁶

35. The following explanation of variances by capability gap summarizes the increases and decreases in benefits as the result of the updated benefits analysis:

- 1 - Inability to manage service related spend - down \$10.3 million: Decrease is mainly attributable to lower monetized benefits for Benefit ID No. 7, No. 26, No. 29, and No. 67. In the Design Phase it was determined that the monetizable nature of these effort benefits is lower than was assumed in Phase One. This is due to effort savings occurring as small increments amongst many individuals across the organization. While not all effort benefits can be monetized, there is value to BC Hydro as time is freed up to focus on higher value activities;
- 2 - Poor contract management - up \$10.1 million: Increase is the result of a change in the underlying approach to Benefit ID No. 5 where a 1.5 per cent reduction in overall spend is now estimated to be achievable which is up from 0.5 per cent in Phase One; and
- 3 - Limited ability to manage inventory levels - down \$2.5 million: Decrease is mainly due to elimination of Benefit ID No. 60 partially offset by the additions of new benefits (Benefit ID No. 103 and No. 104) and an increase in the expected savings for Benefit ID No. 14.⁶⁷

⁶² Exhibit B-1, Appendix H, pp. 9 and 15-18.

⁶³ Exhibit B-1, Verification Report, p. 3-1.

⁶⁴ Exhibit B-3, CEC IR 1.11.1.

⁶⁵ Exhibit B-3, BCUC IR 1.10.3.1.

⁶⁶ Exhibit B-3, BCUC IR 1.10.3.1.

⁶⁷ Exhibit B-3, BCUC IR 1.12.3.

36. In short, there is no evidence that PwC's analysis resulted in an upward bias in the estimation of the benefits analysis as CEC alleges.

37. Fourth, as discussed above, BC Hydro retained KPMG as an external, independent QA Advisor, and KPMG provided a clear endorsement of the benefits assessment process carried out by PwC and BC Hydro.

38. In summary, PwC followed a robust process, supported its conclusions with evidence and reason, and recommended changes that show no evidence of bias. In addition, the whole process was monitored and endorsed by the QA Advisor. BC Hydro submits that PwC's evidence is credible and reasonable and should be accepted by the Commission.

(f) Non-Monetized Benefits have Significant Value

39. The CEC's recommendation that the Commission not take into account any benefits other than those that can be monetized⁶⁸ should not be accepted. While BC Hydro has not monetized the vast majority of the identified effort-reduction benefits, they still retain significant value. By redeploying saved time toward other higher-value activities, these effort reduction benefits can help manage increasing workload, which may otherwise result in increased headcount.⁶⁹ As stated by PwC:

These effort benefits are often used to increase resource capacity to support the delivery of benefits, focus on higher value activities and/or support change management efforts, all of which add value to the organization.⁷⁰

40. The SCA Project will also reduce safety, financial, reputational and reliability risks for BC Hydro.⁷¹ These risk reduction benefits will positively impact BC Hydro in ways that are not readily quantifiable. Benefits of this kind are nonetheless significant and have a positive effect on risk and ought to be given weight.

⁶⁸ CEC Argument, p. 2, para. 11

⁶⁹ Exhibit B-1, Verification Report, p. 3-14.

⁷⁰ Exhibit B-1, Verification Report, Appendix G, p. 4.

⁷¹ Exhibit B-4, CEC IR 1.16.4.

41. BC Hydro submits that the Commission should give significant weight to the value of these non-monetizable benefits as they will provide material benefits to BC Hydro and ratepayers.

(g) Net Present Value Analysis is Reasonable

42. Given the above submissions, BC Hydro's Net Present Value ("NPV") analysis for the SCA Project is reasonable and should be accepted. Contrary to the CEC's arguments,⁷² the NPV using the 0.5 per cent scenario for Benefit ID No. 5 should not be given weight. As explained in detail above, such a scenario does not align with the reasonable estimation of savings as calculated by BC Hydro and PwC in the Verification Report. Using the 0.5 per cent scenario for Benefit ID No. 5 would suggest that there will be no benefits from mitigating contract value leakage, which is an unreasonable assumption on the evidence. Given the range of benefits experienced by other organizations, the 1.5 per cent scenario for Benefit ID No. 5 proposed by BC Hydro and PwC, which is further discounted by a 50 per cent realization ratio, is reasonable if not conservative. In summary, the evidence provides robust support for the conclusion that the SCA Project has a positive NPV under a range of scenarios, and that the estimated benefits provide more than adequate justification for the Implementation Phase funding of the SCA Project.

C. CONCLUSION AND REQUESTED FINDINGS

43. The Commission should find that BC Hydro has reasonably estimated the benefits of the SCA Project, including Benefit ID No. 5.

PART FOUR: PROJECT RISK AND SCHEDULE

44. Neither CEC nor BCOAPO take issue with BC Hydro's project risk assessment or project schedule. CEC's submissions on project risk and project schedule are aimed at BC Hydro's benefits analysis, rather than either risk or schedule.

⁷² CEC Argument, p. 30, paras. 193-194.

45. BC Hydro has put in place a detailed benefits tracking process and is committed to reporting the benefits of the SCA Project after the project is complete. The SCA Project, however, comes to a conclusion as a “project” at project completion, which is after the project is placed into service and the stabilization and onboarding periods are complete.⁷³ BC Hydro’s “project” schedule and the “project” risk assessment relate to project implementation, and do not include the ongoing benefits tracking process that continues after the project is completed.

46. Therefore, when CEC argues that capturing and properly attributing the benefits associated with the SCA Project is the “greatest risk”,⁷⁴ this is not a risk to the implementation of the project as those terms are used by BC Hydro in its project risk assessment. Similarly, CEC’s submission that the project schedule ought to include benefit capture and benefit attribution⁷⁵ is incorrect because the project schedule ends after project completion. While not included in the project schedule, BC Hydro has put in place a benefits tracking process, as described in the Verification Report. Neither BCOAPO nor CEC take any issue with that process.

PART FIVE: PROCEEDING WITH SCA PROJECT DOES NOT IMPACT COMMISSION DECISION

47. BC Hydro cannot agree with the CEC’s argument that BC Hydro’s internal approval of an additional \$15 million for Implementation Activities is contrary to the Commission Order issued in the Phase One Proceedings or will constrain the decision-making of the Commission.⁷⁶ The Utilities Commission Act (“UCA”) does not prohibit BC Hydro from proceeding with projects without acceptance of an expenditure schedule under section 44.2. Moreover, section 44.2(b) of the UCA expressly contemplates that BC Hydro may file an expenditure schedule containing a statement of capital expenditures that BC Hydro “has made or anticipates making” [emphasis added]. Whether the expenditures have been made or are anticipated to be made, the Commission retains its discretion to accept the expenditure schedule, reject the expenditure schedule, or accept or reject a part of the expenditure

⁷³ Exhibit B-1, Verification Report, Table 6-2.

⁷⁴ CEC Submission, p. 32, para. 205.

⁷⁵ CEC Submission, p. 33, para. 209.

⁷⁶ CEC Submission, p. 35, paras. 221 to 223.

schedule.⁷⁷ Whether the expenditures have been made or are anticipated to be made, the Commission's role is to determine whether they are in the public interest. Therefore, BC Hydro's decision to proceed with the SCA Project does not impact the Commission's decision in this proceeding.

48. As BC Hydro is not prohibited from proceeding with the SCA Project, BC Hydro was required to make a decision on whether to proceed or to halt the project during the regulatory process. In the circumstances, BC Hydro's decision to proceed with the SCA Project was reasonable. If BC Hydro had stopped the project until the conclusion of the regulatory process, BC Hydro would have risked losing key resources, and the schedule, cost and risk associated with the SCA Project would have increased to the detriment of ratepayers.⁷⁸

49. The risk of proceeding with the SCA Project is that the Commission will find that the Implementation Phase capital expenditures are not in the public interest and, ultimately, not allow BC Hydro to recover its Implementation Phase costs in rates. However, given the strong business case in support of the SCA Project, BC Hydro is confident that the ultimate determination in this proceeding will be acceptance of the associated expenditures.⁷⁹ It was therefore reasonable for BC Hydro to proceed with the SCA Project rather than significantly increase the cost and risk associated with the SCA Project.

50. In summary, given the risks of delaying the SCA Project and the strong business case for the project, BC Hydro acted prudently in proceeding with the SCA Project. This decision does not impact the Commission's Decision because the Commission's mandate is the same whether expenditures have been made or are anticipated to be made.

PART SIX: REPORTING

51. BCOAPO submits that "one condition of any approval should be that full documentation regarding the benefits tracking plan and, in particular, the baselines and metrics

⁷⁷ Exhibit B-4, CEC IR 1.3.1 to 1.3.2.

⁷⁸ Exhibit B-4, CEC IR 1.3.7; see also CEC IR 1.3.9.1 to 1.3.9.4.

⁷⁹ Exhibit B-4, CEC IR 1.4.7.

to be used for benefits tracking be provided as part of the first revenue requirements application following Project completion and that BC Hydro be prepared to address any concerns or issues as part of the associated proceeding.”⁸⁰ The Commission has previously determined that it does not have the jurisdiction to order conditional approvals under section 44.2.⁸¹ The Commission can, however, direct BC Hydro to report on its projects and BC Hydro has already committed to reporting on the benefits of the SCA Project. As stated in the Verification Report, as part of its project specific progress reporting, BC Hydro will provide updates on the benefits realization monitoring plan, which will include updates on planned baselines, metrics, and measures for tracking the realization of benefits.⁸² BC Hydro will report to the Commission in the Project Completion and Evaluation Report as well as in future revenue requirements applications until the benefits have been fully realized.⁸³ BC Hydro will be prepared to respond to questions on the information it reports.

PART SEVEN: CONCLUSION AND ORDER SOUGHT

52. BC Hydro submits that the intervener arguments confirm that the Commission can conclude that the scope questions identified in Order G-229-18 can be answered in the affirmative as set out in BC Hydro’s Final Submission. Specifically, the CEC has not provided any compelling reason to doubt the benefits analysis. To the contrary, the updated benefits analysis conducted by PwC and BC Hydro demonstrates that the benefits flowing from the SCA Project remain credible, and the NPV analyses show that the benefits continue to be sufficient to justify the SCA Project.

⁸⁰ BCOAPO Submission, pp. 20-21.

⁸¹ In its Decision on British Columbia Transmission Corporation’s Application for Approval of a Transmission System Capital Plan F2010 and F2011, the Commission states at p. 107: “The Commission Panel notes section 44.2 of the Utilities Commission Act requires the Commission to accept or reject all or part of a schedule. The Act does not provide for conditional approval.” Online at: https://www.bcuc.com/Documents/Orders/2010/DOC_24789_G-37-10_BCTC%20F2010-11TSCP%20Reapplication%20Rejected%20CapExpenditures-Reasons.pdf

⁸² Exhibit B-1, Verification Report, p. 3-18.

⁸³ Exhibit B-3, BCUC IR 1.1.2.2.

53. BC Hydro therefore requests that the Commission accept the Implementation Phase capital expenditures of the SCA Project as being in the public interest.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

Dated:	<u>February 21, 2018</u>	<u><i>[original signed by Chris Bystrom]</i></u> Chris Bystrom Counsel for BC Hydro
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Dated:	<u>February 21, 2018</u>	<u><i>[original signed by Niall Rand]</i></u> Niall Rand Counsel for BC Hydro
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