

D Barry Kirkham, QC⁺
James D Burns⁺
Jeffrey B Lightfoot⁺
Christopher P Weafer⁺
Michael P Vaughan
Heather E Maconachie
Michael F Robson⁺
Zachary J Ansley⁺
George J Roper
Patrick J O'Neill

Robin C Macfarlane⁺
Duncan J Manson⁺
Daniel W Burnett, QC⁺
Ronald G Paton⁺
Gregory J Tucker, QC⁺
Terence W Yu⁺
James H McBeath⁺
Edith A Ryan⁺
Daniel H Coles
Jordan A Michaux

Douglas R Johnson⁺
Alan A Frydenlund, QC⁺
Harvey S Delaney⁺
Paul J Brown⁺
Karen S Thompson⁺
Harley J Harris⁺
Paul A Brackstone⁺
James W Zaitsoff⁺
Jocelyn M Le Dressay

Josephine M Nadel⁺
Allison R Kuchta⁺
James L Carpick⁺
Patrick J Haberl⁺
Gary M Yaffe⁺
Jonathan L Williams⁺
Scott H Stephens⁺
Pamela E Sheppard
Katharina R Spotzl

OWEN BIRD
LAW CORPORATION

PO Box 49130
Three Bentall Centre
2900-595 Burrard Street
Vancouver, BC
Canada V7X 1J5

⁺ Law Corporation
^{*} Also of the Yukon Bar

Carl J Pines, Associate Counsel⁺
Rose-Mary L Basham, QC, Associate Counsel⁺
Hon Walter S Owen, QC, QC, LLD (1981)
John I Bird, QC (2005)

August 4, 2016

VIA ELECTRONIC MAIL

British Columbia Utilities Commission
Sixth Floor, 900 Howe Street
Vancouver, BC
V6Z 2N3

Telephone 604 688-0401
Fax 604 688-2827
Website www.owenbird.com
Direct Line: 604 691-7557
Direct Fax: 604 632-4482
E-mail: cweafer@owenbird.com
Our File: 23841/0144

**Attention: Ms. Laurel Ross,
Acting Commission Secretary and Director**

Dear Sirs/Mesdames:

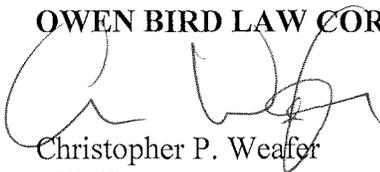
Re: British Columbia Hydro and Power Authority ("BC Hydro") Inquiry of Expenditures related to the adoption of the SAP Platform ~ Project No. 3698878

We are counsel for the Commercial Energy Consumers Association of British Columbia ("CEC"). Attached please find the CEC's first set of Information Requests with respect to the above-noted matter.

Should you have any questions regarding the foregoing, please do not hesitate to contact the writer.

Yours truly,

OWEN BIRD LAW CORPORATION



Christopher P. Weafer
CPW/jlb
cc: CEC
cc: BC Hydro
cc: Registered Interveners

REQUESTOR NAME: **Commercial Energy Consumers Association of British Columbia (CEC)**
IR ROUND NO: **#1**
TO: **British Columbia Hydro and Power Authority (BC Hydro)**
DATE: **August 4, 2016**
PROJECT NO: **3698878**
APPLICATION NAME: **Inquiry of Expenditures related to the adoption of the SAP Platform**

1. Reference: Exhibit B-3, Pages 1 and 2

22 The final scope items, as determined by the Commission are:

- 23 1. *What are the total capital and operating expenditures incurred by BC Hydro as at*
24 *the end of F2016 on the SAP platform, SAP modules and other supporting capital*
25 *enhancements to support the platform adoption?*
- 1 2. *What are BC Hydro's approval and oversight controls and processes related to*
2 *the authorization and governance of information technology capital expenditures*
3 *and projects? Were these controls and processes appropriately designed and*
4 *operating effectively with respect to management's review and oversight of*
5 *SAP-related expenditures?*
- 6 3. *Have the goals outlined in BC Hydro's Information Technology and*
7 *Telecommunication (IT&T) Five-Year Plan related to SAP initiatives been*
8 *achieved?*
- 9 4. *What is BC Hydro's planned capital spending on the adoption of the SAP platform*
10 *and independent SAP projects on a go-forward basis?*
- 11 5. *Were all SAP-related disclosures to the Commission appropriate, reasonable and*
12 *in accordance with the Utilities Commission Act?*

1.1. Are there any issues or is there any information that BC Hydro has encountered in assembling the consolidated information filing that it found did not fit within the Commission scope questions and yet was relevant to ascertaining BC Hydro's cost-effectiveness with regard to adoption of the SAP platform or the appropriateness of BC Hydro's actions with respect to its process for the adoption of the SAP platform.

2. Reference: Exhibit B-3, Page 4

9 As a result of that approach, by 2008 BC Hydro had over 600 applications and over
10 200 databases supporting its business groups.⁴ In addition to the hundreds of
11 applications and databases BC Hydro was operating, BC Hydro had also developed
12 four non-optimal ERP solutions.⁵ ERP is software that allows an organization to use a
13 system of integrated applications to manage the business.⁶

(Gartner information referenced in Note 6)

Enterprise resource planning (ERP) is defined as the ability to deliver an integrated suite of business applications. ERP tools share a common process and data model, covering broad and deep operational end-to-end processes, such as those found in finance, HR, distribution, manufacturing, service and the supply chain.

ERP applications automate and support a range of administrative and operational business processes across multiple industries, including line of business, customer-facing, administrative and the asset management aspects of an enterprise. However, ERP deployments tend to come at a significant price, and the business benefits are difficult to justify and understand.

2.1. Has BC Hydro also found that its ERP deployments have come at a significant price and been difficult to justify and understand? Please explain.

3. Reference: Exhibit B-3, Page 7

8 It was against this backdrop that BC Hydro began development of its IT&T strategy
9 with a view to integrating the IT&T landscape in an effort to better support business
10 needs and to reduce overall system complexity and costs.¹² The analysis BC Hydro
11 performed with respect to consolidation of its various ERP systems into a single
12 system was based on improving cross-functionality and integration of databases.¹³

(ARMC Presentation Referenced in Note 13, Page 4 of 6)

Financial Implications (Business Case Not Required)

Finally, we summarize the financial aspects of the strategy, including capital and operating.

(ARMC Presentation Referenced in Note 13, Page 6 of 6)

Agreement on IT&T Architectures

1. Adopt the technology architectures as proposed. For the recommendation with respect to the single ERP environment, the following recommendation was agreed to:

Each major initiative will complete the business process design and business functional requirements prior to software design. SAP will be used as a default solution. If the SAP environment does not meet the business needs, a bolt on solution will be considered. The priorities will be established by the IT&T Leadership Group but foundational projects will be considered first.

- 3.1. Please confirm that the decision to adopt the single ERP platform was made specifically with a determination that a business case was not required.
- 3.2. Please confirm that the senior management oversight team was left with the responsibility to assess the value to the organization of the single ERP platform solution.
- 3.3. Please confirm that the management team from the business units was left with the responsibility to ensure that the solution enabled and supported the business.
- 3.4. Please confirm that Attachment 9 represents the entire business case discussion for the initial stages of the SAP implementation as the ERP platform and that there is no other detailed business case.

4. Reference: Exhibit B-3, Page 12

5 The strategy to use SAP as the default solution means that BC Hydro evaluates
6 whether the platform can be leveraged whenever there is a need to adjust or extend
7 ERP-associated business functionality. Business requirements in large enterprises are
8 not static and a key objective for improving BC Hydro's ERP environment was to
9 ensure that IT&T systems could evolve and adapt in support of emerging business
10 needs and organizational priorities. BC Hydro's SAP Strategy is not a project or
11 program with a defined beginning and end. Neither the adoption of SAP as the default
12 ERP, nor the other strategic intents in the IT&T Plan finalized in 2009, were financial
13 approval decisions, nor were they approvals to necessarily use SAP for any specific
14 project or purpose. Financial approval decisions, as well as specific IT&T architectural
15 recommendations, were and are always made within the context of specific project
16 proposals and associated funding requests (all as more fully described in section 4
17 below).

- 4.1. Please confirm that the Common Infrastructure Business Case July, 2009 provided in Attachment 5 represents one of the key "business case" decisions with regard to adopting the SAP platform as the ERP for BC Hydro.

- 4.2. Please confirm that Appendix D-2 of this report is the extent of the benefit assessment done and that there was no attempt to establish and or estimate quantitatively the benefits of the decision.
- 4.3. Has BC Hydro assembled the individual project decisions and any quantitative assessment of benefits related to those decisions, which subsequently comprised the evolution of the adoption of the SAP platform, because it had been adopted as the default ERP?
- 4.3.1. If so can BC Hydro provide a summary table of those quantified benefits and relate them to the costs?

5. Reference: Exhibit B-3, Page 13

7
8

Table 1 Seven Major SAP Functional Areas and SAP Modules

Function	SAP Modules	Description	Status
Customer Care	IS-U-CCS, CR&B	IS-U-CCS was implemented at BC Hydro in 2003 to provide billing, credit and collections, account management and meter management for BC Hydro's 1.7 million residential and commercial customers. Opportunities for further expansion included enhanced customer relationship management (CRM), industrial account billing, customer analytics to drive conservation goals, and smart metering related extensions to manage the automated meter-to-cash process. This product set is also known as CR&B.	Implemented (continuing investment expected)
Financials	SAP Financials	SAP ERP has extensive financial accounting (FI) and controlling (CO) capabilities, which integrate with a variety of closely related modules including accounts receivable, sundry billing, accounts payable, travel and expenses, etc. BC Hydro's PeopleSoft Financials system was ageing and required replacement or reimplementation, including business process simplification, enhancement of controls and compliance with requirements International Financial Reporting Standards (IFRS), and SAP provided comprehensive coverage for those requirements.	Implemented (continuing investment expected)
Human Resources	SAP HCM	SAP ERP has extensive Human Capital Management (HCM) features and is another foundational element. It includes functionality such as payroll, time capture, recruitment, talent management, etc. Some of these functions were previously delivered via PeopleSoft and various point solutions.	Implemented (continuing investment expected)
Project Management	SAP Project Systems	SAP Project Systems (PS), together with supporting modules provides extensive project and portfolio management capabilities, plus close integration to other SAP solutions such as Financials, HCM, EAM and Supply Chain, and integration to 3 rd party scheduling systems such as Primavera P6. For large and complex projects such as utility asset construction or upgrades, BC Hydro had traditionally relied on limited scope custom IT solutions (e.g., Info-PM). For less complex projects, a variety of solutions are used including Microsoft.	Implemented (continuing investment expected)

Function	SAP Modules	Description	Status
Supply Chain	SAP SCM	SAP Supply Chain Management (SCM) includes a variety of functions such as materials management, procurement, contracts, and external supplier relations, and the functionality is closely integrated to work management, project management and financials processes, which are of particular importance for BC Hydro's utility operations. BC Hydro currently uses Ventyx PassPort for most of its Supply Chain functions.	Partially Implemented
Work Management	SAP EAM	SAP has extensive industry-specific functionality across the overall area of work and asset management, also known as SAP Enterprise Asset Management (EAM). This is a complex area and is fundamental to core utility related operations. 'Work management' is primarily focused on scheduling and executing core utility related work (i.e., maintenance on generation, transmission, substations, distributions assets, enhancement or changes to assets, customer-driven work such as extensions or connections, restoration work, or other work categories such as vegetation management). Work management scope areas are currently supported at BC Hydro by systems including SAP, Ventyx PassPort, GE Smallworld, and numerous other packages and custom solutions.	Partially Implemented
Asset Management	SAP EAM	As indicated above, SAP has extensive industry-specific functionality within its overall EAM solution. 'Asset management' is primarily concerned with tracking and managing the asset base including generation, transmission, substations, distribution and meters (including planning functions, equipment attributes, maintenance schedules, maintenance requirements, etc.) Asset management scope areas are currently supported at BC Hydro by systems including Ventyx PassPort, GE Smallworld, and numerous other packages and custom solutions.	Partially Implemented

5.1. Please provide the date at which the referenced status in the fourth column was determined.

5.2. For each of all of the 7 major SAP platform implementations was there a cost benefit analysis developed and if so, can those be provided?

6. Reference: Exhibit B-3, Pages 15 and 16

20 Given the enterprise nature of SAP, a very large number of projects involve SAP in
21 varying degrees; some involve core functions of SAP while others connect to SAP in a
22 minimal manner. In addition, BC Hydro does not typically categorize IT project
23 expenditures internally as SAP-related or non-SAP related. For the purpose of this
24 proceeding, we consider "SAP-related" to include projects that invest in the SAP
25 platform and core modules, and projects in which functionality resides primarily in SAP
26 core capabilities. Projects that are not considered "SAP-related" are those in which the
1 primary function does not reside in SAP, but which may integrate with SAP or have no
2 connection to SAP. To establish which projects are considered SAP-related, BC Hydro
3 reviewed all IT&T projects and made an assessment of the degree to which each
4 project involved SAP as so described.

- 6.1. Please discuss and reconcile ‘the strategy of having the SAP platform as the default ERP and having a project by project assessment of whether the project can use the SAP platform justified in the project business case’ with the fact that there is no identification of which projects are SAP related or which are ‘bolt on’.
- 6.2. In effect, will it be less than possible to evaluate the SAP platform adoption decision or has BC Hydro’s categorization referred to above enabled BC Hydro to assemble a quantitative evaluation of the SAP platform adoption decision?

7. Reference: Exhibit B-3, Page 21, Appendix A

7 Table 4 Total SAP-related Project Initiative
8 Expenditures, F2009-F2016

	Capital (\$000)	Initiative Operating (\$000)	Total (\$000)
SAP-related Projects (Table 2)	144,044	24,097	168,141
SAP-related Projects: Write-offs (Table 3)	9,663	938	10,601
Subtotal	153,707	25,035	178,742
SMI SAP-related	18,300	-	18,300
Total	172,007	25,035	197,042

12 **3.2 SAP-related Project Overview F2009-F2016**

13 Please refer to Appendix A for an overview of each project listed in Table 2, using a
14 template similar to the Appendix J format in BC Hydro RRAs. Each template provides
15 a description of each project reported in Table 2 above and includes a summary of the
16 key outcomes as well as an update of cost information as provided by BC Hydro in its
17 April IR Responses.

- 7.1. Please confirm that BC Hydro had a quantitative business case prepared for its SMI project and is regularly reporting on the achievement of benefits related to the business case.
- 7.2. Please identify for the Table 2 projects specifically, which ones have had a quantitative business case prepared in advance of the project approval and which ones have not.
- 7.3. Please identify for the Table 2 projects specifically, which ones have had a quantitative tracking of benefits achieved after the project completion and implementation and which ones have not.
- 7.4. For each project listed in Appendix A to the extent that there was a quantitative business case specifying the benefits to be achieved or that there was a quantitative accounting of benefits achieved please provide the business case benefits expected and the benefits achieved for the project.

8. Reference: Exhibit B-3, Page 30

12 An IT&T Governance committee was established in F2009 to focus on ensuring IT&T
13 investments are prioritized, achieve business value, simplify processes, enable
14 reliability and safety goals, and are achievable with minimal risk to the organization.
15 This group included senior managers from the operating groups and corporate groups,
16 and was chaired by the CIO. It was active until January 2011.

- 8.1. Please describe how this committee ensured that IT&T investments achieved business value.
- 8.2. Were the functions of this IT&T Governance Committee been taken over by the Technology Governance Committee and have they been taken over by the Executive Team, now responsible for IT governance and oversight?
- 8.3. Please describe how the current governance practices ensure that the IT&T investments achieve business value.

9. Reference: Exhibit B-3, Page 31

15 Financial approval is governed by the CPS Financial Approval Procedure (refer to
16 Attachment 12), which documents the authority assigned to BC Hydro employees to
17 approve control documents (e.g., an Expenditure Authorization Request (**EAR**)). The
18 CPS Financial Approval Procedure states that capital projects are to be reviewed
19 periodically by the project initiator to ensure that the original business case remains
20 valid; the scope, and schedule and cost objectives are current; and the basis for
21 capitalization remains valid. If there are significant changes, an updated business case
22 is to be prepared and a revised EAR submitted for approval. If the revised EAR is not
23 approved, the original authorization may be withdrawn. An EAR that has been active
24 for more than one year and where project activity has not begun will require
25 re-approval to ensure continued funding.

- 9.1. Please advise as to whether or not a project initiator conducting a periodic review of a project conducts, when ensuring that the original business case remains valid, any quantitative analysis of the benefits supporting the business case.
- 9.2. Please advise as to whether or not a project initiator conducting a periodic review of a project reports on the review, through to the Technology Governance Committee and now the Executive Team or any predecessor committees or subordinate committees.

10. Reference: Exhibit B-3, Pages 34 and 35, Attachment 14

2 BC Hydro's MAPP 4.1.1B.1 Business Case Requirements outline the requirements for
3 each business case (refer to Attachment 14). A business case is required for any
4 project (or initiative) greater than \$1 million requiring investment, expenditure or
5 commitment that has significant impact on business operations, creates material risk,
6 and/or where there are credible alternatives to a recommended course of action. Each
7 specific business group can determine the level of documentation required for a
8 business case for projects or initiatives less than \$1 million. The level of business case
9 analysis and documentation should be commensurate with the level of expenditure
10 and risk of the initiative. In IT&T, each project requires that a business case and EAR
11 be prepared. However, for projects less than \$1 million, the level of information
12 required is generally less than for projects over \$1 million.

13 The business case is developed and approved, and revised as necessary, over the
14 lifecycle of a project; strategy & planning, identification, definition, and implementation.
15 Once the project goes to operation, a project completion and evaluation report may be
16 required (refer to section 4.2.3 below).

(Page 34)

1 The PCER provides the project nature, analysis of all significant scope, schedule and
2 cost variances from the authorizations at the end of the Definition Phase, stakeholder
3 and First Nations consultation and communications, project risks and how they were
4 mitigated/ remain unresolved, impact of the completed project on business risks and
5 the benefits realized, lessons learned, conclusions and recommendations. The PCER
6 is completed by the Project Manager and is signed off by the Project Initiator, Project
7 Sponsor, Review Team (outside of the project team) and the Benefits Recipients.

(Page 35)

- 10.1. Was there a comparable business case requirements policy in place before Business Case Requirements policy in Attachment 14, effective date 2012?
- 10.2. Could BC Hydro please provide the benefits summary for all of the projects in Appendix A, where such summaries exist?
- 10.3. Could BC Hydro please provide a summary for all of the projects in Appendix A of the Post Completion Evaluation Report assessment of the benefits achieved, where such summaries exist?
- 10.4. For the Business Case Requirements Policy in Appendix 14, does BC Hydro think it may be appropriate to have a risk assessment, as discussed in Section 5 of the policy, with regard to the achievability of the project benefits?

11. Reference: Exhibit B-3, Page 38, Attachment 19

22 The framework for IT&T project delivery including the Gate Reviews is set out in
23 BC Hydro's ITDSP and Tailoring Guidelines (6D.103) (refer to Attachment 19), which
24 have been in use at BC Hydro since June 2004 when the IT&T work was outsourced.
25 The practices have evolved over the years. The last major rework of the ITDSP
26 framework was completed in March 2013 to align with the standard BC Hydro Project
27 Management Procedure and PPM lifecycle.

- 11.1. Please describe the different types of Business Cases prepared for each Gate Review specified in the ITDSP and Tailoring Guidelines in Attachment 19.
- 11.2. Please identify at which Gate the project's main Business Case is provided to meet the MAPP4.1.1B.1 guideline.

12. Reference: Exhibit B-3, Pages 41 and 42

21 BC Hydro finalized its IT&T Plan in 2009, and BC Hydro's IT&T capital projects and
22 expenditures began to ramp up in the later part of F2009 and F2010 in accordance
23 with this plan. The ITDSP framework was updated in 2009 to, among other things, add
24 Gate Reviews, but this version of ITDSP was complex. During this period there was
25 only one person (a Quality Management/QA Specialist) working in the Technology
26 PMO on implementing project delivery standards and overseeing projects. For
27 example, the role of the Project Initiator was not consistently applied. Each project was
28 expected to comply with the ITDSP and standards; however, due to limited resources

1 in the Technology PMO there was limited oversight of compliance. For example, the
2 Enterprise Financials Upgrade project fully followed ITDSP, while the EMPower project
3 that began during this period did not follow ITDSP.

- 12.1. Were there any consequences in place, during this period, for projects and their management if the standards were not followed?
- 12.2. What was the rate of compliance for projects during this period, if BC Hydro has sufficient records to be able to identify this compliance level?

13. Reference: Exhibit B-3, Page 42

11 During this period, some project teams used other methodologies with only high-level
12 or no mapping to BC Hydro's ITDSP. Several projects were not in full compliance with
13 ITDSP, and as noted above the Technology PMO had limited resources to provide
14 direction and oversee compliance. There were numerous minor and a few major
15 occurrences of non-compliance with governance and oversight standards and policies;
16 however, in most cases successful project outcomes were delivered.

13.1. Could BC Hydro please determine the rate of compliance for this period?

13.2. While the PMO had limited resources, were there nevertheless defined consequence
which would apply for anyone not in compliance if and when the enforcement was
followed.

14. Reference: Exhibit B-3, Page 43, Attachment 18

9 In 2013, BC Hydro formalized a distinction between IT&T projects, work programs and
10 capital acquisitions. This allowed BC Hydro to focus on applying the appropriate
11 governance structures to projects and work programs with varying degrees of risk and
12 complexity. In accordance with the Project Management Guidelines for Technology
13 Projects (Attachment 18), work programs follow existing sustainment processes
14 because they are generally lower risk and therefore the full application of ITDSP is not
15 required as for projects. Work programs do not follow the same life-cycle as projects,
16 but the delivery governance still requires the standard reporting, change notices and
17 completion reports. The financial governance of expenditures for work programs is the
18 same as for projects.

14.1. What has been the level of compliance with the ITDSP for this period?

14.2. Are there consequences in the current period 2013 to 2016 for non-compliance and if so,
what are they?

14.3. Are the Project Management Guidelines for Technology Projects treated as a standard or
are they just guidelines for voluntary utilization?

15. Reference: Exhibit B-3, Page 43

21 Table 9 below provides for each of BC Hydro's SAP-related projects a summary of
22 comments and any issues identified in relation to compliance with financial policies and
23 controls, and project delivery standards (i.e., ITDSP). The projects in Table 9 are
24 ordered chronologically by their start date. The evolution of IT&T project governance
25 and oversight to the current state, as discussed in the section above, is reflected in the
1 table; that is, there has been demonstrated considerable improvement in standards
2 and policy performance over time.

15.1. Is this just a judgement or does BC Hydro keep track of non-compliance incidences?

15.2. How does BC Hydro monitor policy compliance?

16. Reference: Exhibit B-3, Pages 52 and 53

8 One of the goals of the IT&T Plan is to simplify the application environment by
9 reducing the number of integrated applications, using SAP as the core technology
10 standard. The simplification referred to in this goal assumes that implementing
11 business capabilities and processes in fewer or one integrated system will (a) allow
12 disparate systems to be decommissioned, resulting in reduced operating costs, and (b)
1 enable BC Hydro to implement improved business processes due to the integrated
2 nature of ERP software.

16.1. Has BC Hydro conducted an analysis to determine if the operating costs have been reduced as a consequence of SAP related project implementations and if so, could that evaluation be provided?

16.2. Has BC Hydro measured the improved business processes in regard to SAP related project implementation and if so, could that evaluation be provided?

17. Reference: Exhibit B-3, Page 56

10 There is general business satisfaction with the SAP systems in place, demonstrated
11 through the effectiveness of support to business activities, the high reliability and
12 scalability of the systems and the stability of SAP for critical business transactions.
13 For example, BC Hydro has never missed a customer billing cycle, payroll cycle or
14 financial reporting cycle. For further discussion, please refer to section 5.2.

17.1. Has BC Hydro measured the effectiveness of support to business activities in regard to SAP related project implementation and if so, could that evaluation be provided?

- 17.2. How has the effectiveness of support to business activities been demonstrated?
- 17.3. Did BC Hydro, previously to adopting the SAP platform, ever miss a billing cycle, payroll cycle or financial reporting cycle and if so, how many and what were the consequences of missing these cycles?

18. Reference: Exhibit B-3, Page 56

23 For example, the implementation of project management functionality in SAP, via the
 24 PPM Project, allowed SAP to become the single source of truth for project structures
 25 and costs for BC Hydro. Prior to this implementation, high level project information
 26 was stored in PeopleSoft and detailed project costs were maintained in different
 27 in-house systems, causing effort to reconcile between systems on a monthly basis.

- 18.1. Has BC Hydro measured or estimated the effort for reconciling between systems prior to the SAP related project implementations and after the SAP project implementations to demonstrate a cost reduction?

19. Reference: Exhibit B-3, Page 57, Attachment 25

15 It was not intended, however, that the implementation of SAP initiatives, in and of
 16 themselves, would account for a specific operational cost savings. As noted on
 17 pages 4 to 5 of the IT&T Plan and as set out in BC Hydro's response to F2011 RRA
 18 BCUC IR 1.275.3 (refer to Attachment 25), \$4 million of the \$9.3 million reduction in
 19 IT&T operating costs were related to reduced software and application maintenance
 20 costs.

- 19.1. Please confirm that the SAP initiatives have not lead to specific operational cost savings.

RESPONSE:

The items comprising the \$9.3 million referred to in the question are contained within the list of cost reductions on page 30 of Appendix N and include the following:

	\$ million
Reduction in telecom air time costs and volume	0.80
Avoidance of software maintenance costs	2.00
Reduction in printer maintenance costs	0.48
Avoidance of future spend on PCs	1.50
Reduction in spend on servers	1.60
Reduction in spend on storage	1.00
Avoidance of spend on application maintenance	2.00
Total	9.38

The benefits associated with the above impact the entire organization but are primarily part of the OCIO budget.

- 19.2. Of the \$4 million related to reduce software and application maintenance costs, how much was related to SAP related projects?
- 19.3. What time period was this evaluation made for?
- 19.4. Was this assessment compiled from specific project business case evaluations or some other source, please identify the source?
- 19.5. Has BC Hydro produced an updated assessment to the 2016 current timeframe?
- 19.6. Does BC Hydro have a chronology for these cost reductions over the SAP implementation time frame?

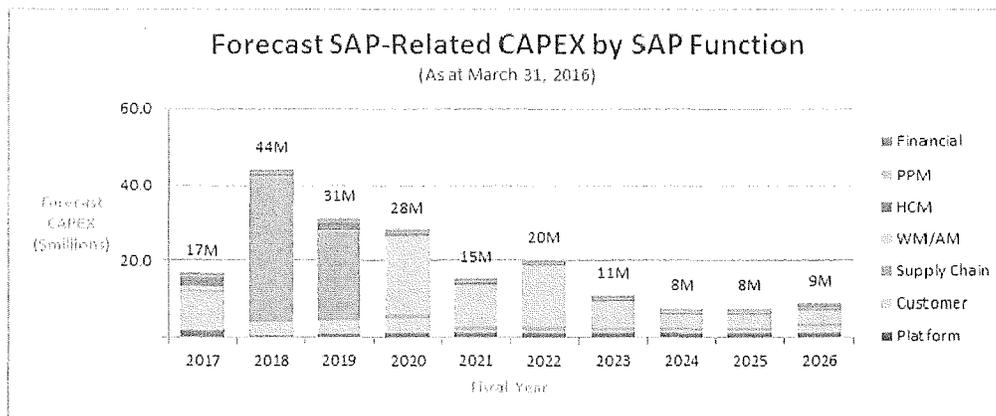
20. Reference: Exhibit B-3, Page 58

- 18 The implementation of SAP solutions across the major functional areas has
- 19 delivered the following positive outcomes:

- 20.1. Does BC Hydro have a financial analysis of these positive outcomes to determine the cost-effectiveness of the SAP project implementation over time?

21. Reference: Exhibit B-3, Page 65

6 Figure 4 Forecast of SAP-related Capital
7 Expenditures by Functional Area,
8 F2017-F2026



- 21.1. Please confirm that these expenditures will match the numbers provided in Table 11.
- 21.2. Is it correct to say that there is \$191 million of estimated additional capital expenditures to be made to implement the SAP related projects BC Hydro has planned for so far.
- 21.3. Is it correct to say that BC Hydro will have an estimated additional \$19 million of operating expenditures for the SAP related projects BC Hydro has planned so far.
- 21.4. Please provide the complete list of the legacy ERP systems and other software being displaced and decommissioned as a result of the SAP implementation past and planned and provide their related ongoing annual license fees.

- 21.5. Please provide the SAP on-going license fees for all of the project components which have been implemented or are planned to be implemented.
- 21.6. Has BC Hydro done a quantitative evaluation of the SAP implementation to date and for the planned implementation and if so could that be provided?

22. Reference: Exhibit B-3, Page 72

19 The following table provides a summary of the Utilities Commission Act provisions,
20 BC Hydro commitments and Commission requirements in effect year by year that
21 related to BC Hydro's disclosure of capital projects and expenditures, including
22 SAP-related, over the period F2009-F2016.

- 22.1. Please confirm that the BC Hydro evidence filed in Table 12 is evidence that BC Hydro has met all of the Commission and Utility Commission Act obligations for filing of information over the periods of time defined in the Table 12 evidence and if not, please identify any exceptions separately.
- 22.2. Please identify when BC Hydro may have been obligated by the Commission or UCA to identify projects that are linked such that they may appropriately be seen as a larger project initiative and identify whether or not BC Hydro has met obligations to make filings with the Commission in compliance with such a project definition.