

COPE 378

INFORMATION REQUEST NO. 1

British Columbia Hydro and Power Authority

Inquiry of Expenditures related to the adoption of the SAP Platform British Columbia Utilities
Commission Action on Complaint

1.0 Section 2.1 Context for BC Hydro's SAP Strategy Development, Exhibit B-3, pages 3 and 4

During 2007 and 2008, BC Hydro began to focus on its IT&T strategy in anticipation of changing business needs at BC Hydro and in particular, an increasing portfolio of capital projects and maintenance work programs.¹ BC Hydro had a decentralized IT&T management structure at that time. The Office of the Chief Information Officer (OCIO) was primarily responsible for IT&T policy, strategy, architecture and security, and enterprise-wide systems.² Subject to the standards and policy framework established by the OCIO and in accordance with the line of business organization structure in place at the time, each business group was responsible for most of their IT&T needs, including managing IT&T assets, projects and services unique to the business group. Each business group had IT&T personnel to manage their specific business requirements. Cross-organizational committees provided governance on policies and standards with the OCIO performing an oversight function to ensure adherence to policy.³

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

One focus of the long-term IT&T strategy BC Hydro was developing was to simplify and standardize the core enterprise application footprint as a foundation that would provide the agility to support and integrate emerging business needs and technologies into all aspects of the business.⁷ Additionally, BC Hydro was adopting a “One Hydro” business direction to eliminate or reduce the barriers associated with the line of business approach, in particular, to simplify financial management across the company.⁸

- 1.1 Did BC Hydro engage in a survey prior to deciding to engage in this program to centralize its IT&T to determine the effect on other similar entities to determine:
 - a) What centralization model might best serve BC Hydro’s needs; and
 - b) What centralization model, if any, could potentially reduce the corporation’s global IT&T costs?
- 1.2 COPE understands from the Compliance filing that BC Hydro did not expect that the adoption of the SAP platform would reduce the Corporation’s overall IT-related costs. Did BC Hydro expect that the adoption of the SAP platform would be revenue neutral or that it would cost more than its previous Best of Breed approach?
- 1.3 Did BC Hydro examine in any detail other utility’s or similar corporation’s approaches to IT&T centralization and made any inquiries about the potential pitfalls?
 - 1.3.1 If so, please provide the information gathered.
 - 1.3.2 If not, please explain why BC Hydro did not make this kind of inquiry.

2.0 2.1.2 Toward a Single ERP System (2008-2009), Exhibit B-3, pages 6-7

As discussed above, by 2008 BC Hydro’s broader IT&T platform was disjointed and made up of hundreds of different applications, databases and various ERP systems most of which were aimed at servicing individual business unit needs. Overall, the IT&T environment was characterized by weak business integration; difficult to maintain systems including systems that had not been technically upgraded and were at risk of losing vendor support; sub-optimal overall usability; and emerging business needs that were difficult to service within the complex IT&T environment. The existing systems did not easily speak to one another, required a high degree of customization and significant ongoing technical support. As a result, they could not easily be adapted to support new business needs.

It was against this backdrop that BC Hydro began development of its IT&T strategy with a view to integrating the IT&T landscape in an effort to better support business needs and to reduce overall system complexity and costs.¹² The analysis BC Hydro performed with respect to consolidation of its various ERP systems into a single system was based on improving cross-functionality and integration of databases.¹³ BC Hydro also looked at what was considered best practice in the industry at the time and it was evident that BC Hydro was not unique in its struggle to effectively integrate business processes as a result of the “best of breed” approach and that many other utilities were moving towards a single ERP platform.¹⁴

2.1 Did BC Hydro determine what others in the industry had done to deal with the aftermath of the “Best of Breed” approach?

2.1.1 If yes, please provide identify those industry players examined and how they dealt with this challenge.

2.1.1 If not, please explain why BC Hydro declined to examine how others in the industry had dealt with the challenges associated with this transition.

2.2 Did BC Hydro identify what industry players had successfully dealt with the aftermath of the “Best of Breed” approach?

2.2.1 Please provide for the record information BC Hydro gathered regarding how those entities successfully dealt with those issues.

2.2.2 If not, please explain why BC Hydro failed to secure this information.

2.3 Exhibit B-3, pages 7-8

- **A single ERP system was expected to require less effort to maintain when compared to multiple interfaced ‘best-of-breed’ systems. Multiple systems require different skill sets, are upgraded at different times, and rely on complex custom-built interfaces to communicate. These all add to the overall cost to support the same business functions;**

On what basis did BC Hydro form the expectation that the single ERP system would require less effort to maintain?

2.3.1 Has the SAP platform required less effort to maintain thus far than the Best of Breed systems did?

- 2.3.2 Have the SAP platform systems incurred less yearly cost to maintain thus far than the Best of Breed systems did?
- 2.3.2 Has the comparative uniformity of the single ERP system translated into a reduction in the overall costs to support the same business functions?

3.0 2.2 SAP as the Default ERP Solution (2008-2009), Exhibit B-3, page 10

► SAP is the world’s largest enterprise software vendor and the third largest global software vendor. It is headquartered in Walldorf, Germany, and has 310,000 customers in 190 countries.²¹ SAP is the leading ERP within the utilities sector, with 4,200 customers in 118 countries, and there have been many successful deployments. Of these customers, 2,000 utilities run ERP and/or Customer Relationships & Billing. SAP is used for ERP functions by most regulated utilities in Canada, including FortisBC, TransAlta, SaskPower, Manitoba Hydro, Hydro One, Hydro Quebec and NB Power.²²

- 3.1 “There have been many successful deployments.” What specifically does BC Hydro mean by “successful deployment”?
- 3.2 Did BC Hydro look at those deployments that didn’t qualify in its eyes as successful to identify factors that contributed to their failures?

4.0 Table 1, Exhibit B-3

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)

- 4.1 What ‘customer analytics to drive conservation goals’ did BC Hydro specifically identify as being available or potentially available for future expansion?

- 4.2 What specific programs or initiatives does BC Hydro see those “customer analytics to drive conservation goals” would be used for?

5.0 4.2 Financial Oversight, Exhibit B-3, page 31

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

- 5.1 Please describe in more detail what BC Hydro means by “significant changes” (i.e. significant enough to trigger a revised EAR)?
- 5.2 What, if any, additional examination was undertaken to deal with projects that were referred back for multiple revised EAR’s for additional funding?
- 5.3 This entire section talks about various parties approving authorities. Were any of the various parties given approving authority at whatever level given an understanding of the global costs of the SAP transition projects and/or the cost of the status quo for their particular aspect of the project?

6.0 4.2.1 Business Case Requirements, Exhibit B-3, p34

“BC Hydro’s MAPP 4.1.1B.1 Business Case Requirements outline the requirements for each business case (refer to Attachment 14). A business case is required for any project (or initiative) greater than \$1 million requiring investment, expenditure or commitment that has significant impact on business operations, creates material risk, and/or where there are credible alternatives to a recommended course of action.”

- 6.1 How does BC Hydro determine what has a significant impact on business operations? Who within BC Hydro engages in this analysis?

- 6.2 How does BC Hydro determine what creates a material risk? Who within BC Hydro engages in this analysis?
- 6.3 How does BC Hydro determine whether there is a credible alternative to a recommended course of action? Who within BC Hydro engages in this analysis?

7.0 4.5.1 Project Delivery Governance F2009-F2010

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

- 7.1 Did BC Hydro have a staffing strategy in place during this time period to monitor whether they required additional people to oversee projects, particularly to ensure they were ITDSP and project delivery standards compliant?

8.0 4.5.2 Project Delivery Governance F2011-F2013, Exhibit B-3

The version of the ITDSP framework in effect during this period was complex and there were challenges with applying the BC Hydro standards when Project Managers and/or service providers were using other methodologies. External Project Managers were not initially familiar with the ITDSP deliverables and processes, and during the early part of this period the Technology PMO had limited resources to provide guidance and enforce compliance.

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

In addition to an increased portfolio of IT&T projects during this period, the technology group also began the Transformation Initiative (as discussed in section [3.4](#)) and integrated BCTC's technologies when BCTC was integrated into BC Hydro pursuant to the *Clean Energy Act*.

- 8.1 Given that BC Hydro has specifically cited the difficulty external Project Managers had in working within ITDSP deliverables and processes, has the utility since increased its internal team of Project Managers?
- 8.2 BC Hydro has again cited the fact that the Technology PMO had limited resources during this time period to provide direction and oversight. Please confirm whether the resource levels cited available to the Tech PMO during F2011-F2013 were the same as during F2009-F2010.
- 8.3 Please describe all actions taken and failsafes BC Hydro now has in place to ensure that no section will be again under-resourced like the Technology PMO was between F2009 and F2013.