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May 15, 2017

Mr. Patrick Wruck
Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

**RE: Project No. 3698901
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Supply Chain Applications Project**

BC Hydro writes further to its letter of May 12, 2017 to submit its remaining eight responses to Round 2 Information Requests (**IR**) as follows:

Exhibit B-6-2	BCUC IR 2.47.1.1 BCUC IR 2.47.1.2 BCUC IR 2.47.2 BCUC IR 2.48.4 BCUC IR 2.50.1
Exhibit B-7-2	BCOAPO IR 2.27.3 BCOAPO IR 2.28.1 BCOAPO IR 2.28.2

For further information, please contact Geoff Higgins at 604-623-4121 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,

Fred James
Chief Regulatory Officer

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Enclosure

British Columbia Utilities Commission Information Request No. 2.47.1.1 Dated: April 20, 2017 British Columbia Hydro & Power Authority Response issued May 15, 2017	Page 1 of 2
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47.0 Topic: B. ALTERNATIVE ANALYSIS

Reference: ABB Evidence Submission
Exhibit C-3-3, pp. 2–3; Exhibit B-1, Section 3.3.6;
Attachment F, Tab F2
Gap 1: Inability to manage service-related spend

On pages 2 and 3 of ABB's Evidence, ABB states that its software includes the Asset Suite Contract Management application and describes its functionality with respect to managing contracts. ABB also states that the Asset Suite Compose tool would allow BC Hydro to add, update, or rename fields, which "should readily allow for all services to be defined as manageable work units" and that it is questionable as to why Asset Suite would score a 2 on its ability to close gap 1.

In Section 3.3.6 of the Application, BC Hydro states that the recurring monetized benefits range for the SAP option are higher by between \$5 and \$9 million per year.

2.47.1.1 Please differentiate variable services from non-variable services and explain why they cannot be defined as manageable work units in PassPort. Please describe the additional functionality SAP Supply Chain has that allows variable services to be defined as manageable work units.

RESPONSE:

A variable service is a service that is planned, procured, managed and invoiced in terms of a measure of units of work (and as such the amount of work performed and invoiced in any given period is likely to vary). A non-variable service is one that is planned as a single defined activity or set of milestones to which is assigned an overall dollar value, rather than a unit based rate. For example, variable services include services that are planned and invoiced on an hourly basis or a piece of work that is contracted based on units of work (e.g., number of distribution poles tested). Non-variable services would include any service that is planned as a block of activity and is expected to be billed based on predefined milestone payments. An example of this would be janitorial services which might be contracted and invoiced at a fixed price per month, and is not expected to vary.

As discussed in BC Hydro's response to BCUC IR 2.47.2, SAP has two differences from PassPort that give SAP additional functionality with regard to managing variable services:

- 1. SAP contains a catalogue of defined services, while PassPort does not.**

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2. **SAP manages the procurement of materials and services through a single process and set of documents, while PassPort manages the procurement of materials and services through distinct and separate processes.**

Some examples of the additional functionality that exists in SAP as a result include:

- **SAP’s services catalogue enables users to plan work by selecting standard pre-defined services from a list, and to have the cost of the work calculated automatically based on the units of work required and the existing negotiated rates. In contrast, in PassPort, users must describe in text the service for which they need to create a contract and an estimate of the value of the service.**
- **SAP’s defined services catalogue also allows for SAP to track the amount, quality, rate, and total cost of defined services over time, providing the data to enable future negotiation of preferred rates for services. BC Hydro is currently unable to use the unstructured data captured in PassPort in the same way, without extensive manual analysis. This limitation means that BC Hydro is currently unable to answer questions such as “how much and at what rate has BC Hydro procured various engineering services over time?”**
- **Managing the procurement of services and materials through a single process allows SAP to manage unit based work that combines labour and materials into a single purchase agreement. PassPort does not support this.**
- **SAP is able to contract unit based work for any type of unit while PassPort can only define unit based work of labour (hourly) based work, and only achieve the process functionality BC Hydro requires if PassPort’s time and labour module is used. BC Hydro currently uses SAP’s time and labour system because of the internal integration between it and SAP’s human resources module, which BC Hydro also uses.**
- **SAP has the capability to automatically post financial accruals and adjust commitment amounts to be paid based on varying units of work (e.g., the plan may call for 100 units of work to be performed in a given period, but only 90 are invoiced). PassPort requires manual processing to initially plan a milestone payment via the payment authorization process for the dollar value of 100 units of work, which must be manually updated based on the dollar value of actual 90 units of work completed.**

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In Section 3.3.6 of the Application, BC Hydro states that the recurring monetized benefits range for the SAP option are higher by between \$5 and \$9 million per year.

2.47.1.2 Was the assessed inability of PassPort to define variable services as manageable work units the sole determining factor in its lower score? If not please explain the other factors providing an approximate proportion to each.

RESPONSE:

No, BC Hydro assessed PassPort a 3 out of 4 for three reasons: PassPort's lack of a services catalogue, PassPort's separate processes for procuring materials and services, and PassPort's inability to define variable services as manageable units of work. For an explanation of these items, please refer to BC Hydro's response to BCUC IR 2.47.2.

As discussed in BC Hydro's response to BCUC IR 2.47.2, the PassPort score was reduced from 3 to 2 (out of 4) due to the high dependence on integration in fully meeting the requirements of this capability, and inability to reasonably build the integration.

BC Hydro does not have a proportion to assign to each of these items. As discussed in Table 3-4 in the Application, BC Hydro assigned scores based on whether the solution would *fully, mostly, partly, slightly* or *not at all* address the capability gap. No assessment was performed on the individual items considered in the scoring; rather the score was assigned based on considering the items collectively. Based on this approach, BC Hydro's assessment is reasonable and appropriate.

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In Section 3.3.6 of the Application, BC Hydro states that the recurring monetized benefits range for the SAP option are higher by between \$5 and \$9 million per year.

2.47.2 Did BC Hydro consider ABB’s proposed solutions (Asset Suite Contract Management application and Asset Suite Compose tool) to close Gap 1 when ranking its ability to close the gap? If not, why not? If BC Hydro’s assessment of Asset Suite’s ability to close Gap 1 has changed, please provide the revised ranking in a percentage basis and provide an explanation.

RESPONSE:

BC Hydro did consider the use of Asset Suite’s Contract Management module in developing the scoring for PassPort’s ability to close capability gap 1. BC Hydro did not, however, consider the use of the “Compose” tool. BC Hydro has not changed its assessment of PassPort’s ability to close capability gap 1 based on the information provided by ABB. Please see the discussion below:

Contract Management module:

BC Hydro has utilized PassPort’s contract management module since its initial implementation of PassPort in 2003 and is well aware of its capabilities. While PassPort does have contract management capabilities, its contract management module has a number of limitations in its ability to meet BC Hydro’s requirements:

- 1. PassPort does not contain a catalogue of services (although it does contain one for materials). This alone is a critical shortcoming in PassPort as the absence of a defined services catalogue limits BC Hydro’s ability to define, manage, and report on specific services over time. In contrast, SAP has the ability to catalogue both materials and services, which is necessary for**

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effective category management as described in Attachment K – Supply Chain Business Model.

2. Because PassPort has separate modules for the management of inventory (materials) and contracts (services), it uses separate processes, documents, and data for procuring and managing each. The initiation of requests for material is through a materials request (MR) document, while initiation of a request for services is through a contract request (CR) document. These documents require separate processes and are stored in separate tables within the PassPort database. Given that a significant portion of the items BC Hydro procures include a combination of materials and services, this is another significant limitation and results in users adding materials to contract requests as textual line items, bypassing the use of PassPort’s materials catalogue, limiting its value. SAP has no such limitation and allows for the procurement of materials, services, or a combination of the two, through a single process and set of documents.
3. As discussed in BC Hydro’s response to BCUC IR 2.47.1.1, the above noted limitations in PassPort result in a number of challenges in managing variable services.

Based on this understanding of PassPort’s contract management capabilities, BC Hydro assigned a score of 3 (out of 4) to PassPort. This score was reduced to 2 (out of 4) due to the high dependence of this capability on integration to other business functions; particularly work management, project management, and finance. Today, project management and finance are both fully implemented in SAP, and work management is partially implemented in SAP. Please refer to BC Hydro’s response to BCUC IR 2.49.1 for further discussion on BC Hydro’s experience interfacing PassPort with SAP in general and specifically to SAP’s project management function.

“Compose” Tool:

BC Hydro is aware of the capabilities of the compose tool, although currently does not use it. While the compose tool can be used to develop automated workflow and simplify screens for end users, it cannot overcome the limitations noted above as they are fundamental to the structure of the PassPort data model and cannot simply be corrected by adding, updating, or renaming fields. Furthermore, the compose tool is not a specific tool for contract management, but is a general tool that can be used to tailor the PassPort application overall. BC Hydro notes that SAP has similar tools and capabilities. While BC Hydro uses such tools at times to automate workflows and simplify user interactions with its systems, it generally avoids adding, updating, and renaming fields as this is a customization of the core product, and such customizations are generally costly to implement and maintain. As a result, BC Hydro did not consider the capabilities of the compose tool in its assessment of PassPort’s ability to close capability gap 1.

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48.0 Topic: B. ALTERNATIVE ANALYSIS

Reference: ABB Evidence Submission
Exhibit C-3-3, pp. 3–4; Exhibit B-1, p. 3-9, Attachment F,
Tab F1
Gap 2: Limited contract management

On page 3-9 of the Application, BC Hydro states that in SAP, more real-time operational contract information is available to users than in Passport and requisitions allow for both services and materials in one process unlike PassPort.

On pages 3 and 4 of ABB's Evidence, ABB states that as part of Purchased Materials, users can enable the viewing of real-time operational contract information of both materials and services.

The Problem Statement for Tab F1, Row 5, states "The current data model doesn't currently support unitization of Services. Also Materials have poor master data in the system."

2.48.4 Did BC Hydro consider ABB's proposed solution (Purchased Materials) to close Gap 2 when ranking its ability to close the gap? If not, why not? If BC Hydro's assessment of Asset Suite's ability to close Gap 2 has changed, please provide the revised ranking in a percentage basis and provide an explanation.

RESPONSE:

Yes, BC Hydro did consider ABB's proposed solution to close capability gap 2, however, the proposed solution would not fully close the capability gap and therefore BC Hydro has not changed its assessment.

BC Hydro scored PassPort 3 out of 4 regarding its ability to close capability gap 2 for two reasons:

- 1. PassPort has separate processes and data objects for managing the procurement of materials and the procurement of services. This creates complexity when procuring a combination of materials and services from a single vendor. ABB's proposed method to work around this shortcoming does not overcome the fundamental complexity of processing contracts and material purchases separately and then having to manually link them to enable viewing by users. The solution proposed by ABB would not fully close the capability gap.**
- 2. PassPort does not have a catalogue of services and as a result contains less structured data about the services to be procured and managed than SAP.**

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While ABB's proposed solution would "enable the viewing of real-time contract information of both materials and service", the absence of a defined services catalogue in PassPort results in data often being stored as "free text". Data stored as "free text" is similar to an unrestricted comments field in an online survey; while it can be viewed, it does not utilize established rules and data relationships. This limits its usefulness in automated processing and data queries. In contrast, because SAP has a defined services catalogue, more of the required data is stored in structured fields increasing ease of access and use in processing. The absence of a service catalogue in PassPort is not overcome by ABB's proposed solution.

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50.0 Topic: B. ALTERNATIVE ANALYSIS

**Reference: ABB Evidence Submission
 Exhibit C-3-3, p. 9; Exhibit B-1, p. 3-11
 Gap 10: No self-serve option for routine service requests**

BC Hydro states that automation of routine procurement is dependent on a services catalogue and that given that Alternative 2 (PassPort) has more a limited services catalogue capability than SAP, it scored 3 while Alternative 1 (SAP) scored 4.

ABB states that it is unclear why Asset Suite (PassPort) is perceived as having a more limited services catalogue, or why this couldn't be automated.

2.50.1 What specific service catalogue capabilities does PassPort lack? Please discuss the missing capabilities in the context of the overall capabilities and provide detailed justification of PassPort's benefit inclusion at 75 percent (a score of 3).

RESPONSE:

The basic difference between SAP and PassPort with regard to a services catalogue capability is that SAP has a services catalogue while PassPort does not. As a result, it is not possible for a user in PassPort to access a list of catalogued services and select them for inclusion in planning a piece of work (i.e., a work order or a project) enabling the automation of subsequent procurement activities. PassPort does provide the ability to establish "background" and "model" contracts, the details of which can be copied into a new contract thereby mimicking some of the capabilities of a service catalogue. The approach is limited compared to the SAP structure which is based on having a defined and approved catalogue of available services that end users can select from.

Absence of a service catalogue limits the amount of structured data as discussed in BC Hydro's response to BCUC IR 2.48.4, which limits the ability to automate routine procurement. Given the importance of having a services catalogue for automating procurement, PassPort was scored a 3 with respect to closing capability gap 10.