



April 6, 2017

ABB Enterprise Software  
400 Perimeter Center Terrace  
Suite 500  
Atlanta, Georgia 30346  
United States  
(t) +1.678.830.1000  
(f) +1.678.830.1010

Re: ABB Intervener Evidence

Dear, D. A. Cote, Commissioner of the BC Utilities Commission:

ABB would like to take this opportunity to address and rectify several erroneous statements made in Exhibits B-1 and B-3, which bring into question the methodology and basis for a decision to move to the SAP platform for Supply Chain (and eventually Work Management). Such analysis has far-reaching and broad implications, including the perceived benefits and near-term project costs, as well as longer-term support and future upgrade costs.

Related to Exhibit B-1:

- A. Gap Analysis: ABB will detail how Asset Suite (fka Passport) can address the 13 gaps, as detailed in Chapter 3, Alternative Analysis.
- B. Risk Analysis: ABB will debunk the myth that an Asset Suite upgrade has high business and delivery risk.
- C. Cost of Alternatives: ABB discusses the cost perception.

Related to Exhibit B-3, ABB will share comment on market reports, related to project justification.

As you move forward in review of this critical project, please feel free to reach out at any time with questions.

Sincerely,

A handwritten signature in blue ink that reads "Summer Trudell". The signature is written in a cursive, flowing style.

Summer Trudell  
Account Executive  
Mobile: (404) 625-0657  
Email Summer.Trudell@us.abb.com

## Exhibit B-1 Rebuttal

### (A) Gap Analysis (Section 3.3)

The 13 gaps, identified by BC Hydro as part of their review, are not true Asset Suite software “gaps,” but issues derived from ineffective or incomplete use of current software. Thus, the Passport option (known as Alternative 2) does not reflect accurate scoring. If BC Hydro bases its cost/benefit analysis on erroneous gaps, then there is a high likelihood of less benefit and more cost than anticipated in replacing Asset Suite with the SAP system. It is ABB’s strong belief and experience that an upgrade of Asset Suite is a far more cost-effective means of capturing the benefits of eliminating or reducing the impacts of the 13 identified gaps.

It is important to note that the scoring and weighting of these gaps has an enormous impact on perceived benefits and derivation of Net Present Value (NPV), thus accurate representation of gaps is of paramount importance. Otherwise, the NPV and related costs are misinformed and the basis for approving such a large-scale project becomes less sound.

Please see below responses to each gap:

- 1 - Inability to manage service-related spend 4 2
  - 2 - Limited contract management 4 3
  - 3 – Limited ability to manage inventory levels 4 4
  - 4 - Limited ability to manage individual supplier performance 4 4
  - 5 – Difficulty managing the supply chain for capital projects 4 0
  - 6 - Lack of order, delivery and payment tracking 4 3
  - 7 - Inability to support sales and returns of unused materials 4 3
  - 8 - Inability to support pre-packaging of materials for field crews 4 4
  - 9 - Lack of wireless access to inventory information 4 4
  - 10 - No self-serve option for routine service requests 4 3
  - 11 - Inability to pay suppliers without an invoice 4 1
  - 12 - Inability to streamline controls and approvals process 3 2
  - 13 - Inability to integrate the work management systems 3 3
- Total Score (out of 52) 50 SAP vs 36 Asset Suite (or Passport)**

#### **1 - Inability to manage service-related spend**

The ability to manage service related expenditures depends on the ability to define the scope of work for service contracts as manageable work units. PassPort could be readily configured to allow certain services to be defined as manageable work units, but not those that are variable (e.g. – construction services). In contrast, SAP readily allows for all services to be defined as manageable work units, including those that are variable. For these reasons Alternative 2 (PassPort) scores 2 and Alternative 1 (SAP) scores 4.

#### Response:

The Asset Suite Contract Management application represents one piece of the Asset Suite applications. Contract Management is integrated with Accounts Payable, Action Tracking, Design Engineering, Financial Integration, Labor Entry, Project Management, Purchasing, and Work Management.

Asset Suite Contract Management provides procurement tools for service orders and bilateral agreements. It is used to establish the scope of work, distribute accounting charges, and provide meaningful controls for tracking contracted services. The following features list demonstrates techniques that streamline effort and provide a competitive edge through system integration:

- Requisition for Contract Services
- Request for Proposal Processing
- Vendor Bid Proposals
- Requisition Backlog
- Contract Profile
- Contract Change Requests
- Amendments
- Payment Authorizations to track contract activities, including contractor Labor Entry time sheet roll-ups
- Contract Performance Evaluation
- Management Reporting
- Contract Payment and Closure, including full integration with Accounts Payable
- Financial Integration

The Asset Suite Contract Management application provides a standard approach for requesting contract services and effectively managing all aspects of the contract process. Contract Management provides the functionality to request, create, and manage standard contracts, blanket master contracts, and contract releases. The contract processing flow may include contract requisitions and requests for proposals (RFPs). Processes to plan and approximate resource costs, create milestones to track the progress of work being performed for a contract, and create payment authorizations that allow accounts payable to make a progress or full payment are included as part of the Contract Management application.

Approval and informational routing capabilities are also an integral part of the Contract Management process.

In addition, the Asset Suite Compose tool allows BC Hydro to add, update, or rename fields, which should readily allow for all services to be defined as manageable work units.

For these reasons, it is questionable as to why Asset Suite would score a 2.

## **2 - Limited contract management**

SAP has an advantage over PassPort in the way that key contract information is made available to users and the manner in which materials and services are requisitioned. In SAP, more real-time operational contract information is available to users and requisitions allow for both services and materials in one process unlike PassPort. Both these advantages allow better contract management in SAP than in PassPort.

The remaining functionality required to address this capability gap is present in SAP. For these reasons Alternative 1 (SAP) scored 4 and Alternative 2 (PassPort) scored 3.

### Response:

As part of Purchased Materials, users can enable the viewing of real-time operational contract information of both materials and services, if designed and setup appropriately.

Materials used for a contract are often controlled completely by the vendor within the scope of the contract; however, if there are Purchase Orders related to contract materials or equipment, it is important for the contract analyst to be knowledgeable of the status of these POs. Sometimes, materials are procured specifically for contractor work, for example in a construction project. At other times, the contract is a build-and-install contract and a PO is needed to receive the built equipment. When a contract requires consumables as part of an ongoing maintenance service agreement, one or more POs may also be tied to the contract.

When a PO is intended for contract use, the contract is referenced on the Purchase Order Header page. This page provides visibility into those POs. Hence, the ability to identify contract material status by navigation between the contract and PO is provided in both directions, from PO to Contract and from Contract to POs.

### **3 – Limited ability to manage inventory levels**

### **4 – Limited ability to manage individual supplier performance**

### **5 – Difficulty managing the supply chain for capital projects**

3 Through BC Hydro's PPM project, the SAP Project Systems module was deployed  
4 to support capital project delivery. By its nature this capability requires integration.  
5 BC Hydro has previously investigated, during both the Finance and Project and  
6 Portfolio Management SAP module projects, building additional integration between  
7 PassPort and SAP Project Systems module and determined that additional  
8 integration was not feasible. As such the PassPort option was given a score of 0.  
9 BC Hydro sees this as a critical shortcoming in PassPort's capabilities given the  
10 direct impact this would have on BC Hydro's ability to more effectively manage its  
11 major capital projects, particularly considering the significant increase in capital  
12 spending in recent years and the expectation for this to continue for at least the next  
13 10 years, as discussed in section 1.1.1.  
14 Alternative 1 (SAP) has been given a score of 4 as it would allow for direct  
15 integration between the SAP supply chain module and the SAP Project Systems  
16 module.

#### Response:

Asset Suite is designed to support the effective management of inventory levels, supplier performance, and supply chain for both capital and operational and maintenance (O&M) projects. ABB has a standard workflow for both monitoring contracts and evaluating supplier performance. This data could be pulled into an in-application report or BI platform, such as SAP Business Objects or Microsoft PowerBI, and then shared across the organization, as required.

In addition, Asset Suite has multiple avenues for integrating to other business information systems (such as SAP Project Systems), as well as numerous capabilities to manage the items as detailed in gaps 3-5 (a summary of which is detailed below). Numerous installations can testify to this functionality, which is used in a variety of electricity utility types (e.g. T&D, Fossil and Nuclear Generation, etc.)

## **Design Engineering Application Overview**

Utility personnel are increasingly challenged to provide competitive designs and estimates to customers and potential customers. The marketplace requires that these deliverables be available in real time. Best practice mandates that designs and estimates be based on approved standards and current cost data. Asset Suite provides these capabilities in its Design Engineering application. The application enables the conversion of a customer request for service into suitable alternative designs for construction work. The design can then be routed for approval before construction begins. Status tracking is maintained throughout the cycle from the creation of a request through design and estimating. Integration with the

Asset Suite Project Management and Work Management applications provides extended tracking of the work through the completion of the construction phase. The result ensures quick response to requests for service with the most cost-effective design solution, in accordance with standards and guidelines.

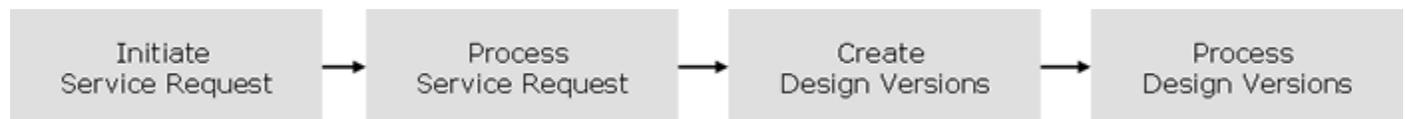
## Application Business Flow

The Design Engineering process begins with the receipt of a request for service that requires design work for a construction project. Preliminary information is gathered from a client and is related to any billing required. A service request is created in the system for the construction project, and is reviewed, approved, and linked electronically to a design header. A number of design versions are created to identify, for client approval, the locations, materials, labor resources, permits, equipment, and work standards needed to complete the project for a client.

Note: The design may be started at this point without using a service request, but is only recommended if a billing request is not being used.)

The design versions are then processed to show the steps needed to transfer the approved design to a work order. If an approval group or person is in place, Asset Suite can send design AAAs (Action/Awareness/Alert messages) for approval. Only one design may be selected and issued. The system does not allow you to add additional designs. A single design is used to create a Work Order or to be converted to a task on a Work Order.

The high-level business flow includes the following basic functions:



The Design Engineering application provides integration with the following Asset Suite applications:

- Document Management - Within Design Engineering, documents defined within the Document Management application may be identified as references for the following objects:
  - Compatible Units
  - Service Requests
  - Design Versions

The Asset Suite Document Management application has been designed to manage Documents. Documents convey information in graphical and text formats, and may exist as electronic or paper versions, or both. In any event, documents have numerous attributes including the ability to be uniquely identified.

- Contract Management - Within Design Engineering, contracts and contract requisitions defined within the Contract Management application may be identified as references for Compatible Units and Design Versions. Note that if the Asset Suite Contract Management application is unavailable, entries may be made for references within Design Engineering but are not be validated. In this situation, contract definition allows entry of a contract title within Design Engineering. If the Contract Management is available, the designer may navigate from the Contracts and Miscellaneous Cost page to the Contract Requisition page, where a new Contract Requisition may be initiated.
- Inventory Management - The Design Engineering application is functionally tied to the Inventory Management application in several key areas:
  - Compatible Unit Materials: When defining a compatible unit, the list of catalog items that make up the compatible unit may be identified. When listing materials, the user may indicate whether the material item is to be reserved when transferred to a material request. Comments may be entered to communicate, for example, special-issue instructions to warehouse personnel.

- Design Material Requirements: The designer may list compatible units, and record for a design any additional material requirements (those materials not identified within a compatible unit). In developing the cost estimate for the design, Asset Suite calculates the estimated costs based on the current average unit cost of materials found in the Master Materials Catalog at the time the CU or material is entered for the design. If there is a long delay before construction begins, the designer may choose to rebuild the cost estimate (using a pull-down option from the Design Version Details page) to obtain an updated cost estimate for the design. As work begins and materials are issued to the work orders for the design, materials are issued for the work order based on the real-time average unit cost of materials, not the cost at the time the estimate was built.
- Transfer of Compatible Unit Material to the Material Request: The CU indicator on the Material Request page allows navigation to the Compatible Unit Material List, which supports the viewing of materials comprising a specified compatible unit or compatible unit group. Once a multiplier is entered, the material request can be updated. The quantity of each catalog item is calculated by multiplying the CU quantity required by the multiplier. This catalog item is appended to the Material Request, or where the catalog item already exists on the Material Request, and then the calculated CU quantity is added to the existing quantity required.
- Transfer of Material from the Design to the Material Request: The design can identify individual material requirements as well compatible units that are assemblies of multiple catalog items. These materials may be transferred to the material request once the design has been issued for planning construction. When the construction planner plans the work order tasks, material can be transferred to either a new material request or an existing material request for work order task. When a new material request is created, the planner reviews it to update the date materials are required. Also, catalog IDs and quantities can be appended to the material request.
- Work Management - The Design Engineering application is functionally tied to the Work Management application in the following key areas:
  - Transfer of Design Compatible Unit information to the work order task: This transfer may affect resource requirements, material requirements, task account distribution, and associated property units. The transfer of the design to a work order may be accomplished from the design or from within an existing work order task. At the time of transfer, the design components related to each design based task (a specific design task or a task based on a design task type/crew type combination) grouping are transferred to work order tasks. The designer may specify a model work order or an existing work order as the target for the transfer. When no work order is specified, a work order is generated using only the design details. When a model work order is specified, a work order is generated using details from the model, and the design details. When an existing work order is specified, the design details are transferred into existing tasks (if matching tasks exist), or generated as new tasks within the existing work order when the design based task does not already exist as a work order task.
  - Transfer of additional Resource Requirements: Additional resources that were specified within the design (that is, resources that have no relationship to a compatible unit) may be transferred. The planner may select the additional design resources for inclusion into the work order task.
  - Transfer of additional Material to the Material Request: This includes material required for construction as well as material returned from the construction. Material that is planned for return may be specified as salvage or junk.
  - Transfer of Permit Requirements: The transfer of Design Permits is initiated from an option on the Task Requirements and Permits page. The option navigates the planner to the Design Permits page, where permits may be selected. The Confirm function transfers the selected permits back to the task. The costs related to the permits are transferred as miscellaneous expenses into the work order task.
  - Transfer of Contract Requirements and Miscellaneous Expenses: For transfer of Design Contracts and Design Miscellaneous Expenses, the Task Contracts/Miscellaneous Expense

page is used. An option navigates the planner to the Design Contracts and Miscellaneous Costs page, where all relevant data is presented. The planner may select all entries appropriate to the transfer. The Confirm function transfers the selected items back to the work order task.

- Transfer of Document References: The transfer of Document References is initiated from an option on the Task Document References page. The option navigates the planner to the Design Document/Work Standards page, where document references may be selected. The Confirm function transfers the selected documents back to the task.
- Transfer of Work Standards: Work Standards specified within the design may be transferred to the work order task from the Task Standards page. An option allows navigation to the Design Documents/Work Standards page, where individual work standards may be selected and transferred to the work order task.
- Project Management - When the design is for project-related work, the Project ID is referenced on the design, allowing drill-down to the Project Definition page. The opposite is also true: The design can be referenced on the project definition, which allows drill-down to the Design Development page.
- Action Tracking - Designs may be referenced from the Asset Suite Cross Reference table on the Asset Suite Cross Reference page. The Design Development page may be directly accessed from Action Tracking.

## **6 - Lack of order, delivery and payment tracking**

17 This capability requires that the end-to-end process from order, to delivery, to  
18 payment be under a single system. Currently the order and delivery processes are  
19 managed in PassPort, and the payment processes are managed in SAP. This  
20 capability gap, by its nature, cannot be closed under Alternative 2 (PassPort).  
21 Alternative 2 (PassPort) was given a score of 3 as not all of the payment information  
22 can be interfaced back to PassPort. Alternative 1 (SAP) was given a score of 4 as  
23 the deployment of SAP for supply chain would allow for the order, delivery, and  
24 payment processes to occur under one system.

### Response:

Asset Suite should not be given a lower score simply because payment processes are already completed in SAP. In fact, in many utilities that use Asset Suite, payments are made in systems ranging from SAP, PeopleSoft, and others (including Accounts Payable service companies). Asset Suite can be used to create the payment (including all audit controls and matching processes). Asset Suite also manages the cost of projects, which are usually sent to the General Ledger (Fixed Asset or General Ledger, depending on the determination of Capital or O&M charges). The record of actual payment can be retained in the system used to actually send the payment, and is not required to be provided to Asset Suite. Despite the comments in the evaluation, this is not a general requirement at any of the utility companies that utilize Asset Suite.

The Asset Suite Accounts Payable application does provide the functionality to organize, monitor and control payment processing for an organization. It provides the ability to enter invoice information, ensure that the invoices are in accordance with the financial rules, and enables cash disbursement processing and payment reconciliation. Extracts are available to provide Accounts Payable information to other applications.

Payment requests may take the form of invoices, vouchers, or individual employee payment requests in support of employee advances or expense statements. Cash disbursements may be:

- manually prepared checks
- immediate payments
- batch-generated checks

- EDI or XML transactions
- processed using a third-party payment processing system

Payments are reconciled against financial institution information. These items, along with defined financial controls and accounting classifications, present a financial picture of the Accounts Payable activities and facilitate the oversight of a company's financial condition.

## **7 - Inability to support sales and returns of unused materials**

Alternative 1 (SAP) would fully support the return of unused materials from the field and was scored 4. It is assumed that returns processing in Passport could be improved. However, Passport does not have a sales and distribution module, which is required to support the sales and returns of unused materials. For this reason, Alternative 2 (PassPort) was given a score of 3.

### Response:

Asset Suite has tools within Surplus Analysis and Investment Recovery to identify surplus stock and its subsequent removal from Inventory, thereby reducing carrying costs and releasing capital that is tied up within warehouses. Surplus Analysis provides methods of identifying surplus candidates and Investment Recovery provides a method to recover inventory losses for surplus, obsolete, or damaged material that is not returnable to the purchase vendor.

Surplus Analysis activities are composed of the following steps:

- Surplus material is identified and a Surplus Material Request is created and approved.
- The material is picked, transferred to, and received at an Investment Recovery facility.
- A Marketing Plan is created to consolidate the material and bids are created and sent, if required.
- A Material Sales Order is generated when a buyer is identified.
- Surplus material sold is shipped to the vendor.

The Surplus Analysis and Investment Recovery process uses these pages:

The Surplus Candidate Analysis Report Submission (IG01) page is used to launch the batch program which will analyze the stocking levels of Catalog IDs that match the specified parameters for surplus candidates. A report is generated with the surplus candidate results. The results are viewed and processed online using the Surplus Planning Worksheet (I600), which is then used to actively manage potential surplus candidates into Surplus Recommendations for further analysis, if required. To assist in identifying surplus candidates, the following pages are used:

- The Surplus Recommendation (I610) page provides a view of all Surplus Candidate lines that have been grouped together on a single Surplus Recommendation. By displaying a Surplus Recommendation, all the Surplus Candidate lines of the recommendation and their total value can be viewed at a glance. This page is used to process potential surplus candidates.
- The Surplus Candidates and Analysis (I620) page is used to find candidates for surplus. The Material Analyst uses the search function to obtain a list of material possibly requiring surplus by searching for material with no usage or no usage from a certain date. Searches can be performed on Catalog IDs that have never been issued or have not had activity since the date entered in the Last Issue Date field.
- The Surplus Recommendation Report Submission page (IG02) is used to initiate the printing of Surplus Recommendations. The Surplus Recommendation Report will print by Surplus Number and is sorted by the Inventory Value of the Surplus Recommendations, in descending order.

If Investment Recovery is used to surplus the material and to record the sale of the surplus items, a Surplus Material Request is created on page I010. When the Material Request is approved, the material is picked and transferred to an Investment Recovery Facility.

When surplus material is transferred to an Investment Recovery facility, a Marketing Plan is created on page I600 to consolidate material and identify purchase vendors. When a Marketing Plan is approved, vendor bids can be created through the Asset Suite Purchasing Request for Quotation pages. Material at an Investment Recovery facility is stored on pallets. The pallets can be assigned a number and referenced on the Marketing Plan. A Pallet Inquiry (I601) page is provided to view what material is located on a pallet.

When a vendor is identified to sell the surplus material, a Material Sales Order (MSO) is generated from the Marketing Plan. The Marketing Plan can be for more than one MSO to take advantage of Vendor quote responses. The MSO is priced per line item or by lot price. A Terms and Conditions page (I611) is used to add a shipping address, terms, and standard/procedure to the MSO report. When the MSO is APPROVED, a Shipping Notice (I200) is generated to ship the material to the vendor. The Vendor Check Number is recorded on the MSO which completes the Investment Recovery transaction.

As part of the Surplus process, the Shipping Notice (I200) page is used to ship the surplus material to the vendor (buyer). A Shipping Notice can be optionally generated from the Surplus Recommendation (I610) or Surplus Candidates and Analysis (I620) pages if the Investment Recovery option is not pursued. The Shipping Notice number will be stamped on the Surplus item and displays on the Surplus Recommendation (I610) and Surplus Candidates and Analysis (I620) pages.

#### **8 - Inability to support pre-packaging of materials for field crews**

Response:

This could be accommodated through electronic work packages or setup in other ways, depending upon specific requirements.

#### **9 - Lack of wireless access to inventory information**

Response:

ABB's Asset Suite has a number of mobile-enabled applications, including AnyWare for Inventory (AWI), Action Manager, and Mobile Approvals.

AWI allows warehouse personnel to perform duties, such as Material Picks, Cycle Counts, Material Returns, and Bin Movement.

Action Manager is a personal productivity app to support work and service requests.

Mobile Approvals allows users to support actions related to work orders, invoices, timesheets, contracts, etc.

#### **10 - No self-serve option for routine service requests**

<sup>13</sup> Automation of routine procurement is dependent on a services catalogue and an  
<sup>14</sup> easy user interface to navigate and workflow. Given that Alternative 2 (PassPort)  
<sup>15</sup> has more limited services catalogue capability than SAP, it scored 3 while  
<sup>16</sup> Alternative 1 (SAP) scored 4.

Response:

It is unclear why Asset Suite is perceived as having a more limited services catalogue, or why this couldn't be automated in Asset Suite?

#### **11 - Inability to pay suppliers without an invoice**

The functionality to pay a supplier without an invoice is called Evaluated Receipt

18 Settlement (**ERS**). PassPort does not have ERS capability although some limited capability could likely be custom developed in 1 PassPort. As a result, Alternative 2 2 (PassPort) scored 1, while Alternative 1 (SAP) scored 4.

Response:

This analysis is simply incorrect. Asset Suite can be used as the utility client requires, and ERS can be accommodated if the utility customer requires it. As shown in the following paragraphs, the Accounts Payable application software is very comprehensive and flexible, and although paying a supplier without an invoice is usually not “best practice”, it is often “common practice” in some utilities, requiring controls and reporting unique to this situation. The software can be configured for this capability through business process design as the software is implemented.

### **Accounts Payable Application Overview**

The Asset Suite Accounts Payable application provides the functionality to organize, monitor and control payment processing for an organization. It provides the ability to enter invoice information, insure that the invoices are in accordance with the financial rules, and enables cash disbursement processing and payment reconciliation. Extracts are available to provide Accounts Payable information to other applications.

Payment requests may take the form of invoices, vouchers, or individual employee payment requests in support of employee advances or expense statements. Cash disbursements may be:

- manually prepared checks
- immediate payments
- batch generated checks
- EDI or XML transactions
- processed using a third-party payment processing system

Payments are reconciled against financial institution information. These items, along with defined financial controls and accounting classifications, present a financial picture of the Accounts Payable activities and facilitate the oversight of a company's financial condition.

The primary business activities performed in this application include the following:

- Invoice Processing (includes Purchase Order Invoices, Signature Purchase Order Invoices Processing, Contract Invoices Processing, and Signature Contract Invoices Processing)
  - Route for Approval, if needed
  - Match Process
  - Review Invoice, if needed
  - Approve or Reject for Payment
  - Process Payment
- Voucher Processing
  - Create Vouchers
  - Enter or Modify Account Distribution
  - Approve or Reject for Payment
- Non-PO or Non-Contract Related Invoice (Vendor-Only) Processing
  - Create Invoice Header
  - Create Invoice Lines

- Enter Accounting Information
- Match Process
- Approve or Reject for Payment
- Process Payment
- Evaluated Receipt Settlement (ERS) Invoice Processing
  - Update Vendor
  - Purchasing Cycle
  - Process Receipt
  - Create ERS Invoice
  - Match Process
  - Approve or Reject for Payment
  - Process Payment
- Consignment Invoice Processing
  - Update Catalog
  - Perform Material Cycle Count or Issue Material
  - Create Consignment Invoice
  - Match Process
  - Approve or Reject for Payment
  - Process Payment
- Recurring Invoice Processing
  - Create Model Invoice
  - Establish Recurring Schedule
  - Create Recurring Invoice
  - Match Process
  - Approve or Reject for Payment
  - Process Payment
- Credit Invoice Processing
  - Manually Review Credit Invoice
  - Create Credit Invoice
  - Match Process
  - Approve or Reject for Payment
  - Process Payment
- Scheduled Payment Processing
  - Print Preliminary Payment Register
  - Manually Review Preliminary Payment Register
  - Update Payment Requests
  - Produce Batch Payments
- Special Payment Processing

- Process Request in Asset Suite
- Create Immediate Payment
- OR--
- Manually Create Check
- Record Manual Check
- Cancel Check Processing
  - Manually Stop Payment
  - Cancel Check
  - Review Payment Request
- Employee Payment Processing
  - Create Employee Payment Request
  - Approve or Reject Employee Request
  - Determine Employee Payment Amount
  - Process Payment
- Bank Account Reconciliation Processing
  - Manually Process Account Transactions
  - Manually Notify IT to Run Tape with Loaded Bank Information
  - Clear Transactions and Update Account
  - Review Results and Provide Direction, if needed
  - Resolve Discrepancy
- 1099 Processing
  - Manually Review and Correct 1099 Addresses
  - Review 1099 Amounts
  - Evaluate 1099 Totals
  - Create 1099 Export File
- Vendor Payment Inquiry
  - Lookup Payment Information
  - Manually Give Payment Information to Vendor
  - OR-- in the case of unapproved or mismatched Invoices
  - Contact User Department
  - Follow-up With Vendor

**12 - Inability to streamline controls and approvals process**

3 Closing this capability gap requires work to be managed, including approval, in a  
 4 single system. Alternative 1 (SAP) will largely allow the financial control and  
 5 approval of work to occur in SAP. Alternative 1 (SAP) will not fully allow the closure  
 6 of this capability gap because certain work (Distribution Design Work and  
 7 Generation & Transmission Stations) will remain in PassPort unless and until Work  
 8 Management and Asset Management are undertaken in SAP. Alternative 1 (SAP)

9 was given a score of 3. Alternative 2 (PassPort) was given a score of 2 as much of  
10 the work will never be managed in PassPort and there is no Human Resources  
11 module in PassPort to support the use of organizational roles to determine approval  
12 authority.

Response:

There are a number of ways to manage the approvals process in Asset Suite using information from SAP's HR module without any negative impacts. Asset Suite has an Action Awareness Alert (AAA) Routing process that provides the ability to implement a company's established approval and information flow procedures. A brief review of the concepts associated with AAA routing is covered below.

Routing is the ability to submit a package of information for review, approval, and comment. Electronic routing involves identifying a list of reviewers for an item requiring review or approval. Entries in the route list identify either an individual or a group of individuals who must act on the item. The route list also identifies the type of response needed from each individual or group.

An Alert Group is a number of individuals who have equal authority to take specific action, such as to approve a work order. An Alert Group may be qualified by Facility. Asset Suite notifies all members of an Alert Group either serially or simultaneously. The first member of an Alert Group to acknowledge a AAA message does so for all members of the work group.

AAA Route List processing for approvals can be defined as being Parallel or Sequential. Parallel processing means all Alert Type recipients will be sent AAA messages simultaneously on submission of the Route List. These recipients may APPROVE (or take some other action) in random order. Sequentially processing means serial Alert Type recipients will be sent a AAA Message (1) in the sequence (or order) that the recipient has been placed on the Route List, and (2) only after the prior recipient (if any) has taken some type of action.

To initialize the AAA Routing capability for a company you must:

- Establish the routing parameters
- Define Route Groups and Route Lists

Additional AAA capabilities are provided for:

- Approval Matrix Routing definition
- Route List Delinquency Tracking

In addition, as discussed under gap #9, there are Mobile Approval options enabling the appropriate management to respond to action requests, work requests, invoice, timesheet, and/or contract requests via a phone or tablet.

**13 - Inability to integrate the work management systems**

13 Multiple systems exist today to manage work at BC Hydro, all of which are currently  
14 integrated with SAP. Additional integration could be built between SAP and PassPort  
15 as well as the other systems that support work to partially meet this objective.

16 However, full seamless integration of work management systems for BC Hydro's  
17 many different types of work is not possible. As a result, Alternative 2 (PassPort)  
18 was given a score of 3.

19 While deploying SAP would provide some initial benefits, some future effort to put all  
20 work orders in SAP would still be required. As a result of the remaining work,

21 Alternative 1 (SAP) was also given a score of 3.

Response:

It is unclear which types of work are perceived as not being supported in Asset Suite, nor why full integration is deemed as “not possible.” ABB also has a mobile workforce management system, Service Suite, to manage scheduling and dispatch of work to the field.

## **Gap Analysis Summary**

The above gaps were rated based on an internal project team, who neither consulted ABB nor understand current Asset Suite capabilities; therefore, scoring and related calculations do not reflect true value, benefits, and costs. In summary, if the Alternative 2 option scores higher, as it should give the above information, the case for “closing the gaps” with SAP Supply Chain goes down substantially.

## **(B) Risk Analysis (Section 3.3.4)**

### **Business Risk**

The assumptions around business risk listed are incorrect. There is no reason that an Asset Suite upgrade would pose a greater business risk, if executive leadership supports the upgrade and the project is well designed and executed. Further, the reasoning in this decision was made without any engagement with the Asset Suite software vendor and without a proposal on how to implement the project. Specifically:

1. Change management will equally be a part of either an SAP transition or an Asset Suite upgrade;
2. Asset Suite can flexibly manage business processes, perhaps even more so than SAP, and the Asset Suite software owner generally urges its customers to utilize “best practice”, which are codified and shared with customers during every implementation. There is little risk that a utility would be restricted in any manner from achieving best practice, unless local situations dictate deviations.

### **Technology Risk**

The statement that an Asset Suite upgrade would result in greater IT complexity and greater challenges around future modification is simply erroneous. The Asset Suite 9 platform has actually proven to be a lower-cost technology platform to support, easing future upgrades by taking advantage of current technologies and leveraging tools that allow the configuration of the software without heavy customization costs. In short, with Asset Suite 9, ABB’s ultimate goal is to “future-proof” the software, meaning that all code is “Generally Available”, enabling future patches and upgrades to progress in an efficient, cost-effective manner.

### **Project Delivery Risk**

ABB works with a number of Systems Integrators, including Deloitte, PricewaterhouseCoopers, Accenture, and potentially others, as well as other niche partners (e.g., Trinoor, whom BC Hydro engages today). While there may not be as many people in the marketplace with Asset Suite implementation experience, the software is significantly used around the world in a variety of utility specific situations. In point of fact, Asset Suite projects generally require much less time with smaller team sizes than SAP (often at a much smaller fraction of cost).

Lastly, in addition to the System Integrators shown above, ABB has a large number of consultants able to deliver the software either on its own or in partnership with one or more systems integration teams.

### **(C) Cost of Alternatives (Section 3.3.5)**

The gross assumptions made in this section are simply incorrect. With a large number of systems integrators and the software vendor available, no attempt was made to determine actual costs, and instead, estimates made by BC Hydro penalized the Asset Suite solution without accurate results. This is particularly wrong because the system was already in use at BC Hydro, and information from the vendor could easily be discovered if there were genuine interest.

It is far more likely that had this information been sought, BC Hydro would have learned that the software could have performed the business processes desired in a cost-effective technology platform that would work well with any financial (ERP) system (such as SAP or others). Further, the requirement of re-training a large group of employees in a new system with a completely different approach would not be required, actually saving BC Hydro considerable funds.

Estimates that are burdened through a model based on one software is clearly not a reasonable approach for evaluation, when the actual data (estimates and references to support them) could be delivered when asked for. In this instance, the questions were not asked, and the estimates penalized the Asset Suite (Alternative 2) option unreasonably.

In the Summary, Section 3.3.1, BC Hydro states, “as a result of the uncertainty of Alternative 2 costs, it is difficult to draw a conclusion as to which alternative is preferable based on cost alone.” If cost is removed as a factor, and the gaps are not as great as depicted in the Alternative Analysis, BCUC should be concerned about the value of such a large expenditure. It is worth exploring whether an upgrade of Asset Suite can indeed close such gaps at a lower cost.

In the Conclusion, Section 3.3.7, BC Hydro states that Alternative 1 (SAP) is the preferred alternative, based on a number of factors, many of which are misleading, overstated, or simply untrue. Related to the “Common Platform Strategy”, it may be worth noting that many of SAP’s modules are actually acquisitions it has made from smaller companies, which create the perception of a “Common Platform.” Much of BC Hydro’s Supply Chain application touts the merits of a “Common Platform” across all business functions without much discussion around the state of the individual SAP modules and future implications. Having a large “common” platform comprised of modules in various states can actually drive up project and technical costs, as well as future support and upgrade costs.

## Exhibit B-4 Comments

1. On page 5 of 289, it's worth noting that the Gartner Magic Quadrant for Energy and Utilities Enterprise Asset Management Software, dated September 2015, was issued prior to ABB's release of Asset Suite 9 platform, an iteration of software culminated from over 30 years of development. The stated caution that "Asset Suite is one of the highest-cost EAM solutions to deploy and maintain" has been addressed with the release of Asset Suite 9 and is no longer true. The secondary caution that ABB is a niche player in the utility market, this is true. Unlike several of our competitors, our software is designed with the needs of a utility in mind. Regarding the stated caution that "There are limited service provider options, mainly ABB itself, and references report resource constraints," ABB has endeavored to strengthen its partner network and EAM practice.
2. Regarding EAM market share, if you look at the ARC Advisory Group's "Enterprise Asset Management Global Market Research Study: Market Analysis and Forecast Through 2020", published in 2016, ABB is a leading supplier of EAM software for power generation.

## Leading Suppliers of Enterprise Asset Management for Electric Power Generation

2015 Revenues = \$238.7 Million

