Appendix A – Risk Factors with Current CIS
CIS Workforce Without Experience

CIS Workforce

- Net New Hires
- Total Junior Staff
- Total Intermediate Staff
- Total Senior Staff
- Total Expert Staff
CIS Workforce With Experience

CIS Experience

- Total Junior Staff
- Total Intermediate Staff
- Total Senior Staff
- Total Expert Staff
Replace Now

![Bar chart showing costs over years]

- Disc Enh ($'000)
- Enhance ($'000)
- Mtce ($'000)
Replace in 10 Years

Days ($'000)

Years

Disc Enh ($'000)
Enhance ($'000)
Mtce ($'000)
# Worksheet #1

## Enhancement Scenarios

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Current Estimate</th>
<th>1</th>
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## Resource $'s left (Reduce to 0)

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## Resource Limit in $

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<th>4010</th>
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<th>5743</th>
<th>7124</th>
<th>1408</th>
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</table>

To use this scenario planner:

- List the projects you want to do and enter the current estimate.
- Enter the amount you want to spend on a project in any given year.
- Continue to adjust the numbers until the 'Project $'s left' and 'Resources $' left' are zero.
# Worksheet #2

## Enhancement Scenarios

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</tbody>
</table>

| Cost Adjustment Factor            |                  | 1.00 | 1.40 | 1.84 | 2.32 | 3.03 | 3.84 | 4.77 | 6.12 | 7.80 | 9.90 |
| Resource Limit in $                |                  | 1150 | 1932 | 2962 | 4010 | 5232 | 5743 | 7124 | 1408 |

To use this scenario planner:

- List the projects you want to do and enter the current estimate.
- Enter the amount you want to spend on a project in any given year.
- Continue to adjust the numbers until the 'Project $'s left' and 'Resources $' left' are zero.
CIS Implementation Timing

IMPLEMENT IN 2011 (10 Year Delay)
- Operation & Mtce Costs Jump
- Enhancement can’t keep up with demand
  (Could not implement changes for competition in the 10 year period even if we started today!)
- Enhancement Costs escalate rapidly
- Increased risk of “errors/incidents”
  (to an unacceptable level?)
Replace in 5 Years

- Disc Enh ($'000)
- Enhance ($'000)
- Mtce ($'000)

Dollars ('000)

Years

1 2 3 4 5

0 500 1000 1500 2000 2500
CIS Implementation Timing

IMPLEMENT IN 2005 (2 Year Delay)
- Operation & Mtce Costs climb
- Enhancements would be limited to approximately $3m compared with 2001 requirements of $9.5m.
- Enhancement Costs escalate
- Increased risk of “errors/incidents”
  (but at near current levels)
- Know more about Peace (Functionality: Yes; Scalability: Partial; Viability: Not likely)
- Won’t be able to keep up with “norm” in terms of changes that other Utilities/Customer Service oriented corporations will be implementing in next 5 years.
CIS Implementation Timing

IMPLEMENT IN 2005 (2 Year Delay)
- Excessive “change” continuous over many years (ie. Implement new CIS then immediately go into some form of competition)
- Vendors may not take seriously
- Costs may increase or decline
- Experienced staff eligible to retire in mid project.
- Very difficult to convince existing or new employees to work on maintaining old system.
Appendix B – Background – Technology, Business and Industry
Appendix B

Background – Technology, Business & Industry

Project: Customer Information System
BACKGROUND – TECHNOLOGY

- **Customer Information System Facts**: Key facts about the current Customer Information system illustrate the background pertinent to replacement of the system.
  
  - Current system was implemented on July 2, 1972
  - Built using now obsolete ~1960’s technology
  - Supported and enhanced by a dwindling workforce
  - Based on skill requirements that are not attractive to new employees
  - Continuously enhanced, altering original design and resulting in a patchwork of changes and functionality
  - Complex changes are difficult to make based on the patchwork, and subsequent changes become more risk prone
  - Designed as an account-centric system. Today’s customer service processes require a customer-centric system (e.g. one customer/many accounts)

- **Customer Information System History**: For the past decade BC Hydro has expressed interest in a new CIS.
  
  - Multiple reviews have been undertaken (see below)
    - In 1990 it was decided that the existing CIS should be replaced and the Customer Information Billing System (CIIBS) project was undertaken.
    - This project implemented the “Daffron” product in one region, but after a high level of dissatisfaction following implementation, the pilot system was removed.
    - Additional reviews of the current system have strengthened the rationale for replacement

- **Customer Information System Reviews Part I**: Multiple reviews have demonstrated that while the current system has done a good job of supporting Customer Services, it is now time to replace it due to current and near-term risks and business requirements.
  
  - A review in 1989 identified deficiencies in the functionality. Considerable effort, on an already outdated platform, would be required just to keep up. A decision was made to wait-and-see because the results of others’ CIS replacement projects were not complete.
  - In 1990 to 1993 the Customer Billing Information System project was undertaken but not completed (as described above).
  - A subsequent CIS review in 1994 looked at the driving pressures on CIS such as: customer demands, productivity, technology, etc. It was determined the pressures had lessened and a new CIS could wait for a short period of time (see Appendix B for the 1994 report).

- **Customer Information System Reviews Part II**: Over the past three years detailed reviews have been done to set the direction for CIS Renewal. A high degree of due diligence has been applied in arriving at the solution for BC Hydro (see Appendices C and D for the Phase I and Phase II reports).
  
  - In September 1998 a brief study was done (Phase I) to compare the status of BC Hydro’s CIS to Customer Information systems in the marketplace. This initial review was completed in December 1998, and recommended that BC Hydro conduct a more detailed review with the goal of proposing the most effective approach to CIS Renewal.
Between May and December 1999 a detailed CIS Review (Phase II) was undertaken focusing on requirements, current environment, industry and utility experiences. The review identified viable CIS alternatives and formulated a recommendation.

In April 2000 a Request for Proposal process to evaluate and recommend a CIS option was undertaken (Phase III). Finalist recommendation was approved in March, 2001 with the plan to implement a package solution with the assistance of the software vendor, solution integrator and Westech (see Appendix E for the RFP specifications and Appendix F for solution selection steps).

In June 2001, the Confirm and Approve phase of the project was started to determine the following:
- Final scope and deliverables
- Detailed project delivery plan with schedule, resources and milestones
- Technology solution plan
- Change management strategy
- Project budget and finalized business case
- Development of the final contract terms with required vendors

BACKGROUND - BUSINESS & INDUSTRY

The following points briefly summarize the background on the Customer Services business unit and its business environment.

- **Customer Services provides integrated customer care/revenue cycle services:** Customer Services is the face of BC Hydro to the vast majority of its customers. Customer Services is the main representative of BC Hydro to the public, and sends bills to 99% of BC Hydro’s customers. The provision of quality Customer Services is critical to BC Hydro’s ongoing positive reputation.

- **Customer Services provides a number of critical capabilities:** The following capabilities either rely on, are impacted by, or impact the Customer Information system:
  - Customer Contact
  - Meter Reading & Community Contact Services
  - Billing
  - Credit & Collections
  - Customer Projects & Installations

- **Customer Services requires the next wave of change:** Customer Services implemented significant changes and improvements to service through its Building Customer Loyalty program. Since then, the business has continued to evolve. Customer Services needs up-to-date technology to enable further change, to support the drive to increase operational efficiency and to reduce costs.

- **Customer Services is focused on responding to driving forces in the industry:** Customer Services has created a strong legacy of service at BC Hydro. A number of powerful industry and market forces have the potential to impact this legacy. Customer Services must be prepared to adapt. The business environment is changing, and Customer Services requires new capability in order to respond efficiently and on a timely basis.
• **Rapidly increasing customer expectations across all customer segments**: Customers no longer measure against “other utility companies” but against the best customer-focused businesses in all industries.

• **New information and communications technologies**: The internet brings new channels to the market, but has changed the “balance of power” in favour of customers who are now demanding more in terms of service, cost and quality.

• **Potential for evolution of competition**: Competition surrounding BC Hydro (in other industries and locations) has increased the expectations on Customer Services. Competitive pressures will continue to shrink margins, creating an increased drive for service excellence and lower costs.

• **Customer Services is an integral part of BC Hydro**: Customer Services performs some activities in support of other business units (e.g. payment collection and disbursement). This eliminates the need for other parts of the business to build duplicated processes.

• **Customer Services requires a new Customer Information system in order to meet the next level of business challenges**:
  o Continue to meet increasing customer expectations and sustain satisfaction levels.
  o Reduce core operating costs through increased efficiencies in order to continue to meet stakeholder expectations
  o Be prepared for an uncertain future that requires flexible processes, people and technology

**BACKGROUND – SUMMARY**
Customer Services is committed to a strategy based on “Ready, Set and Grow.” We are focused on being positioned to meet the demands of an uncertain future. The current CIS system severely restricts our ability to be prepared. When BC Hydro is requested to make business changes impacting its service delivery, (e.g. changes in products & services, unbundling of some portion of the business, or providing service to other government agencies) it is a very complex, increasingly risky and costly prospect to make those changes in the CIS system.

As the figure below illustrates, history reinforces the need for a new CIS in order to reduce current business and technical risks and to make it feasible for Customer Services and BC Hydro to adapt to future changes.
Appendix C – CIS Vision and Guiding Principles
CIS Vision Document
From
March 30, 2001 Meeting
To provide a solution with the capability and flexibility to enable us to exceed our customer’s expectations in a changing business environment by:

- Implementing a customer centric view for the organization
- Integrating our business processes with CIS system design, resulting in more effective processes and efficient operations.
- Enabling the ongoing collection of revenue associated with current and future customers, products, and services.
- Successfully implementing the new CIS with the ability to add features to meet business opportunities
CIS Guiding Principles

1. Maintain flexibility to provide multi-client, multi-commodity, multi-jurisdictional customer care functions.
2. Maintain flexibility to operate under different business models and organizational structures.
3. Maintain flexibility to offer clients different products and services, including capability to serve industrial customers.
4. Streamline business processes to reduce inefficiencies, limit non value-added activities, reduce cycle time and lower costs.
5. Implement a single view of the customer.
6. Decisions are based on measurable business benefits.
7. Build capacity for timely, accurate and flexible data management.
8. Build on our multi-channel capabilities. Entice customers to choose self-serve options.
9. Apply Project Management (on Time, on Budget, in Scope) & Change Management practices to all activities.
10. Create a culture where we value, invest in and challenge employees, and where employees are flexible and open to change.
Considerations in making decisions:

1. Impact on customers?
2. Impact on employees - ease of use and ease of training?
3. Impact project timeline and/or cost?
4. Increase or lower support costs?
5. Impact the call time or billing or credit and collection activity?
6. Provide useful customer-centric information?
7. Compromise future use of features and flexibility?
8. Impact on current available functions and features?
9. Impact to interfacing systems?
10. Keep the package vanilla?