D1876(A)

REVIEWED BY EXECUTIVE COMMITTEE
MINUTE # 1335.05

DATE: 2010 12 14
Financial Planning

CAPITAL PROJECT JUSTI
FOR

Enterprise Asset Management (EAM) Phase 2

REVIEWED BY:
(Owning Dept Manager) D. E. Ans

NOTED BY:
(if applicable)

Coordinating Division:

Constructing Division: G.A. Reitmeier

Financial Department:
(if over $1 million)

RECOMMENDED FOR IMPLEMENTATION:

Owning Division Manager:

H.J. Clouston Approved at meeting 2010 11 26

F.P. MacInnes Approved at meeting 2010 11 26

J.R. McNichol Approved at meeting 2010 11 26

R.R. Raban Approved at meeting 2010 11 26

W.C.R. Wittmeier Approved at meeting 2010 11 26

L.E. Midford Approved at meeting 2010 11 26

R.J. Wittebolle Approved at meeting 2010 11 26

Business Unit V.P.:

V.A. Warden V.A. Warden 10 12 03

K.R.F. Adams

T.E. Tymofichuk

BUDGET $: (Total Net Cost)	**$19.3M**
START DATE: (1st Cost Flow)	**2011 01**
IN-SERVICE DATE: (Last Major In-service Date)	**2012 12**
RISK MATRIX/ BUSINESS CASE TIER:	**Unacceptable**
INVESTMENT REASON:	C2.13

OWNING DIVISION:

I.M. NODE NUMBER: 1.1.4.8.1.2

W.B.S. NUMBER: P-17260

MAJOR ITEM ☒ **DOMESTIC ITEM** ☐

PREPARED BY: D.E. Ans, D. Lohr, D.D. Zhang, D. Versavel

DATE PREPARED: 2010-11-25

REPORT NUMBER:

FILE NUMBER (Optional):

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION

Project Name

Enterprise Asset Management (EAM) Phase 2

Recommendation

Replace the computerized maintenance management system known as AMPS (Applied Maintenance Planning System) with an EAM, at an estimated total project cost of $19.3M with a planned start date of January, 2011 and completion date of November, 2012.

Project Scope

The scope of the project is confined to current user areas of AMPS in Power Supply (Generation South, Generation North, HVDC, and Engineering Services) and Transmission (System Support, Communications) including their associated maintenance engineering, design, and project departments. The project shall consist of the following:

- Implementation of core functionality (Personnel, Equipment Hierarchy, Work identification, Planning, Scheduling, Execution, Documentation and Analysis),
- Personnel availability and shift schedule creation in HR,
- Accounting structure creation,
- Tool and parts ordering,
- Event entry tied to Power-Up and HDS&R,
- Change management and workflow,
- Lockout/tagout to a level sufficient to identify clearance points and print permits and tags,
- Mobile computing and predictive maintenance tasks created to allow equipment condition data to be entered during work orders,
- The interfaces to Equipment Condition for Asset Investment Planning, Reliability Centered Maintenance and Root Cause Failure Analysis software, the Laboratory Information Management System (LIMS), and the Communications GIS, and
- Development of new processes and training of users.

Background

AMPS is the system used by Power Supply Generating and Converter Stations and Transmission Communications and System Support to manage maintenance and operations work, materials and tools. The program was initially placed in service in the early 1990's, and is a text based DOS-aged application. AMPS has approximately 1200 users.

The Power Supply IT Steering Committee approved formation of a team in January, 2005 with the mission to "Provide a fully integrated Computerized Maintenance Management System (CMMS) that supports Asset Management processes for current user areas of AMPS in Power Supply and Transmission." The team, with the firm Synterprise Global Consulting, completed a present state analysis of all user areas and reviewed two potential vendors to confirm available functionality and establish costs and potential benefits. The team recommended implementation of an EAM, phased into a Data Integrity phase to clean operating data and implement standard work process, followed by implementation of the Core Functionality of the EAM (Phase 2).

Power Supply has completed a Work Management System, consisting of process standards and accompanying measures to move towards best in class performance. Work Management System measures are in place for all stations, and are being used to guide improvement. Data Integrity will be completed by December, 2010.

JUSTIFICATION—BUSINESS CASE ANALYSIS (SUMMARY):

Justification and Link to Corporate/Business Unit Goals

The recommended alternative is to replace AMPS with EAM as per the Context Diagram.

The most significant financial benefit from implementation of EAM is derived from avoiding a future decrease in availability. This is achieved by ensuring all required operations and maintenance work is completed in an optimal fashion, and equipment condition information, maintenance tactics, and work processes are supported to maximize availability. Significant opportunity for improvement was noted by a quantitative analysis completed in conjunction with Synterprise Global Consulting in May, 2005, and confirmed by the work completed by the EAM Data Integrity team and Power Supply process measures.

The value of this benefit is estimated at $4.85M per year as per the EAM Benefit Summary.

EAM is expected to provide compliance reporting for quality, legislated, and customer specified programs (safety, environment, Dam Safety, NERC, MISO).

EAM is required to provide accountability for operations and maintenance work performed to support Joint Venture partnership agreements. The present systems do not provide auditable reporting inclusive of all work groups.

EAM will improve the accuracy and usability of asset data, and will provide an improved user interface. EAM will also provide technology improvements and supporting processes to capture equipment information, preventing loss due to retirements and preparing staff for the future. EAM provides the foundation for achieving the Power Supply Asset Management strategy.

The recommended alternative primarily supports Power Supply Goal 2: Provide a reliable and dependable supply of power…and Goal 5: Optimize operations, exports and development to minimize net cost to Manitoba customers, and Transmission Goal 4: Maintain, operate and expand the system efficiently and cost effectively. The recommended alternative has been pursued by all leading utilities in North America. Maintenance for Distribution equipment was moved into SAP in 2006.

The "Do Nothing" alternative results in decreased availability, reduced performance and prevents compliance with safety, environment, Dam Safety, NERC, MISO, and Joint Venture partnership reporting requirements. The Do Nothing alternative does not support the required processes for Asset Management, and jeopardizes the investment in Data Integrity.

Deferral has resulted in a loss of annual benefits, a loss of qualified staff, and a loss of corporate knowledge. Continued deferral will undermine current efforts to support and build upon a system of standards, leading to further deterioration /diversification of work processes that will increase future project cost. Deferral may also result in non-compliance with safety, environment, Dam Safety, NERC, and MISO program requirements. Deferral will prevent creation of auditable Joint Venture partnership reports.

Upon project completion, additional operating costs will be required for Information Technology Services ($479k per year for software annual maintenance) and may be required for Power Supply (up to $500k per year for centralized support personnel).

ANALYSIS OF ALTERNATIVES:

Economic Analysis		
Discount Rate	For current corporate rates see G911 6.1%	For clarification on hurdle rates, contact the Economic Analysis Department

Recommended Option	NPV (= PV of BENEFITS - PV of COSTS)
EAM (Business case based on an 15 year software lifetime)	$19.4M

Other Alternatives Considered	NPV (= PV of BENEFITS - PV of COSTS)
Do Nothing	0

Risk Analysis

There is a risk of failure to maintain data integrity and process standardization in all work groups, resulting in loss of project benefits and increased costs from Phase 2. The mitigation strategies are to continue Executive sponsorship, to maintain the process measures, to ensure compliance with the change management process, and to complete change during the project period with project personnel.

There is a risk of loss of personnel with Asset Management process knowledge to continue to meet project needs, resulting in project schedule delays and increased project costs due to interest and escalation and deferred benefits. The mitigation strategy is to train replacement staff (many Planner courses completed).

There is a risk of loss of personnel with process knowledge to continue to meet operating needs, resulting in operations and maintenance work completion problems. The mitigation strategy is to train replacement staff (many Planner courses completed), to centralize change, and to backfill essential positions during the project..

There is a risk of scope increase in Communications and System Support due to lack of Data Integrity work prior to the project. This has been addressed by adding dedicated Subject Matter Experts to the project team.

The most significant intangible cost of this work is the significant process change. This has been mitigated by process consistency implemented during Data Integrity, and the addition of trainers and Change Management personnel to the project team.

There is a risk of project cost estimate errors. This risk was mitigated by comparing the EAM costs to other major IT projects, by completing significant prework on user processes and data integrity, by involving a consultant in the project vendor selection and costing, and completing a cost estimate sensitivity analysis to ensure adequate project contingency.

There is risk that the benefits will not be obtained if users do not adopt the new software functionality. This was mitigated by incorporating user approval and buy-in at the beginning of Phase 2, and continued discussions with Engineering Services and the Maintenance Engineering departments. The project has governance and leadership in place to ensure benefits are obtained.

RESOURCE REQUIREMENTS AND CAPITAL BUDGET ESTIMATE:

Resource Requirements

The following internal resources are estimated to complete the EAM project:

		2010/11	*2011/12*	*2012/13*	*Total*
Phase 2	**EAM Staff Team (Hrs)**	**7,400**	**47,100**	**28,200**	**82,700**

The following consultant resources are estimated to complete the EAM project ($M):

		2010/11	*2011/12*	*2012/13*	*Total*
Phase 2	**Consulting**	**0.21**	**1.65**	**0.58**	**2.44**

The following total project costs are estimated to complete the EAM project ($M):

		2010/11	*2011/12*	*2012/13*	*Total*
Phase 2	**Total Project**	**3.12**	**8.82**	**7.36**	**19.30**

Proposed Schedule

EAM Phase 2 is proposed to start in January, 2011 with an in-service date of December, 2012.

Related Projects

AIP (Asset Investment Planning)
PRIMAVERA to SAP Integration
Meridium (Reliability Centered Maintenance)
Mobile Infrastructure Setup

Reference Documents

CER - EAM Phase2 EAM Benefit Analysis Summary EAM Phase 2 Project Cost Estimate EAM Phase 2 Project Plan Project Team Organizational Charts Context Diagram Input & Summary Sheet and Breakeven bar-graph EAM Phase 2 Project Staffing Strategy/Operational Budget Implications	Available on MPower: • CMMS Replacement Business Case – Synterprise Global Consulting, June 2005. • Power Supply Work Management System Standards • EAM User Requirements

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CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
EAM Project - Phase 2		1.1.4.8.1.2
Owning Division	Coordinating Division	ProjectNumber:
INFORMATION TECHNOLOGY SERV.	INFORMATION TECHNOLOGY SERV	P:17260

DESCRIPTION:

The scope of the project is confined to current user areas of AMPS in Power Supply (Generation South, Generation North, HVDC, and Engineering Services) and Transmission (System Support, Communications) including their associated maintenance engineering, design, and project departments. The project shall consist of the following:
-Implementation of core functionality (Personnel, Equipment Hierarchy, Work identification, Planning, Scheduling, Execution, Documentation and Analysis),
-Personnel availability and shift schedule creation in HR,
-Accounting structure creation,
-Tool and parts ordering,
-Event entry tied to Power-Up and HDS&R,
-Change management and workflow,
-Lockout/tagout to a level sufficient to identify clearance points and print permits and tags,
-Mobile computing and predictive maintenance tasks created to allow equipment condition data to be entered during work orders,
-The interfaces to Equipment Condition for Asset Investment Planning, Reliability Centered Maintenance and Root Cause Failure Analysis software, the Laboratory Information Management System (LIMS), and the Communications GIS, and
-Development of new processes

JUSTIFICATION:

The most significant financial benefit from implementation of EAM is derived from avoiding a future decrease in availability. This is achieved by ensuring all required operations and maintenance work is completed in an optimal fashion, and equipment condition information, maintenance tactics, and work processes are supported to maximize availability. Significant opportunity for improvement was noted by a quantitative analysis completed in conjunction with Synterprise Global Consulting in May, 2005, and confirmed by the work completed by the EAM Data Integrity team and Power Supply process measures.

REVISION:

New project, contingency $2,293

IN SERVICE DATES			Base estimate 2010/04/01 CLASS 3
2012/11/30	19292		Work start date 2011/01/01

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:						
(Over)under expend:						
V-DMA TOTAL						
REV. AMOUNTS:						
Actual cost to date:						
(Over)under expend:						
Auth 2010/11	3442	33	28			3503
Req: 2011/12	7114	111	491			7716
2012/13	7144	288	642			8074
V-HLD TOTAL	17700	432	1161			19293

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
GS	10/12/01	OWNING DIVISION	10/12/02	COORDINATING DIVISION	10/12/08	VICE-PRESIDENT	

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CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:17260

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2010/11 Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Jan	2327	28				2355	2355
Feb	524	2	12			538	2893
Mar	591	3	16			610	3503
TOTAL	3442	33	28			3503	3503
2011/12 Apr	547	3	20			570	570
May	570	4	24			598	1168
Jun	580	5	27			612	1780
Jul	604	7	32			643	2423
Aug	617	8	35			660	3083
Sep	605	9	38			652	3735
Oct	592	10	43			645	4380
Nov	605	11	46			662	5042
Dec	592	12	51			655	5697
Jan	604	13	55			672	6369
Feb	581	14	55			650	7019
Mar	617	15	65			697	7716
TOTAL	7114	111	491			7716	7716

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION ADDENDUM

D1876(A)

CAPITAL PROJECT JUSTIFICATION ADDENDUM FOR

Enterprise Asset Management (EAM) Phase 2

Addendum Number 02

REVIEWED BY:
(Owning Dept Manager): D. E Ans
IT Project Manager: S.D. Edkins

NOTED BY:
(if applicable)

Constructing Division: G. A. Reitmeier
Owning Division: J.J.C. Wortley
Owning Division: J.R McNichol
Constructing V.P.: B. Luce
Business Unit V.P.: L.E. Midford
Business Unit V.P.: S.A. Mailey
(Financial Department:
(if over $1 million)if over $1 million)

PREV. APPROVED BUDGET $: (Use $ value from approved CPJ or last approved CPJ Addendum)	$19.3M
REVISED BUDGET $: (Total Net Cost)	$35.2M
START DATE: (1st Cost Flow)	2014 11
PREV. APPROVED ISD: (Use In-service Date from approved CPJ or last approved CPJ Addendum)	2014 10
REVISED ISD: (Last Major In-service Date)	2015 04
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

RECOMMENDED FOR IMPLEMENTATION:

Owning Div. Manager: J.J.C.Wortley, J.R. McNichol

Business Unit V.P.: L.E. Midford, S.A. Mailey

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

- ☐ Safety
- ☐ System Supply
- ☒ System Reliability
- ☐ Customer Service
- ☐ Efficiency
- ☐ Environmental

NERC COMPLIANCE*: ☐ YES ☐ NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

OWNING DIVISION:	Generation Operations, Transmission
I.M. NODE NUMBER:	1.1.4.8.1.2
W.B.S. NUMBERs:	P:17260
MAJOR ITEM ☒	**DOMESTIC ITEM** ☐
PREPARED BY:	D.E. Ans, S.D. Edkins
DATE PREPARED:	2014 10 14
REPORT NUMBER:	
FILE NUMBER (Optional):	

ADDENDUM NUMBER	DATE (yyyy mm dd)	REVISION	REVISED BY	APPROVED BY
001	2014/10/15	001	S.E. Edkins	

Project Name (This section is required for all Addendums).

Enterprise Asset Management (EAM) Phase 2

Recommendation (This section is required for all Addendums).

It is recommended that the EAM project budget increase by $15.9M to a total of $35.2M.

Project Scope (This section is be filled out only if there is a change to the scope).

The major scope items will be implemented with EAM Sequence 2. The following minor scope items will be delivered with EAM sequence 3 which will be justified seperately: the MetCal interface, Reporting stage 2 and 3, Web work request, SAP MoC (Management of Change), LIMS interface, Work Clearance Management, Mobile, Historical data and Equipment bar coding.

Background (This section is be filled out only if there is information relevant to the recommendation).

The following is a summary of the key contributing factors for the increased funding. The Blueprinting of the requirements took longer than expected. The existing SAP processes and utilization were not taken into account in the original estimates. The original build and test estimates did not match the complexity of the project and replanning was required. The training and deployment , conversion and reporting schedules were under estimated. The interest and escalation charges for the project are over the budgeted amount due to the delays in the schedule.

Justification (This section is required for all addendums).

The most significant financial benefit from implementation of EAM is derived from avoiding a future decrease in availability. This is achieved by ensuring all required operations and maintenance work is completed in an optimal fashion, and equipment condition information, maintenance tactics, work processes, reliability analysis and capital planning are supported to maximize availability. Significant opportunity for improvement was noted by a quantitative analysis completed in conjunction with Synterprise Global Consulting in May, 2005, and confirmed by the work completed by the EAM Data Integrity team and Generation Operation process measures and by GO operating performance since the date of CPJ approval.

EAM is expected to provide compliance reporting for quality, legislated, and customer specified programs (safety, environment, Dam Safety, NERC).

EAM will improve the accuracy and usability of asset data, and will provide an improved user interface.

EAM will also provide technology improvements and supporting processes to capture equipment information, preventing loss due to retirements and preparing staff for the future. EAM provides the foundation for achieving the Generation Operations Asset Management strategy.

The recommended alternative primarily supports Generation Operations Goal 1: Asset Management, and Transmission Goal 3: Reliability. The recommended alternative has been pursued by all leading utilities in North America. Maintenance for Distribution equipment was moved into SAP in 2006.

The "Do Nothing" alternative results in decreased availability, reduced performance and prevents compliance with safety, environment, Dam Safety, NERC, MISO, and Joint Venture partnership reporting

Justification (This section is required for all addendums).
requirements. The Do Nothing alternative does not support the required processes for Asset Management, and jeopardizes the investment in Data Integrity. Deferral has resulted in a loss of annual benefits, a loss of qualified staff, and a loss of corporate knowledge. Continued deferral will undermine current efforts to support and build upon a system of standards, leading to further deterioration /diversification of work processes that will increase future project cost. Deferral may also result in non-compliance with safety, environment, Dam Safety, NERC, and MISO program requirements. Upon project completion, operating funds will be required for Information Technology Services ($589K per year for software annual maintenance) and an estimated incremental cost of up to $660,000 for Generation Operations for centralized support personnel. The centralized support personnel will be required for data management, training, documentation and change management, although it is uncertain to what extent at this time. Implementation of similar functionality in CS&D presently requires 8 people, and a team that evaluated centralized data management requirements recommended 6 people for Generation North, Generation South and HVDC. The training, documentation and change management functions are estimated at an additional 3-4 people. It is anticipated that funding for these positions will be allocated from existing budgets.

ANALYSIS OF ALTERNATIVES: (This section is be filled out only if there is a change to which alternative is being recommended).

Economic Analysis		
Discount Rate	6.10% **For current corporate rates see G911**	**For clarification on hurdle rates, contact Economic Analysis Department**

Recommended Option	**NPV Benefits/(Costs)**
EAM (Business case based on an 15 year software lifetime)	$1.5M

Other Alternatives Considered	**NPV Benefits/(Costs)**
Do nothing	$00

Risk Analysis – (This section is be filled out only if there is a change to the project risk).
There is a risk of failure to maintain data integrity and process standardization in all work groups, resulting in loss of project benefits and increased costs from Phase 2. The mitigation strategies are to continue Executive sponsorship, to maintain the process measures, to ensure compliance with the change management process, and to complete change during the project period with project personnel. There is a risk of loss of personnel with Asset Management process knowledge to continue to meet project needs, resulting in project schedule delays and increased project costs due to interest and escalation and

Risk Analysis – (This section is be filled out only if there is a change to the project risk).

deferred benefits. The mitigation strategy is to train replacement staff and document process.

There is a risk of loss of personnel with process knowledge to continue to meet operating needs, resulting in operations and maintenance work completion problems. The mitigation strategy is to train replacement staff , to centralize change, and to backfill essential positions during the project.

There is a risk of scope increase in Communications and System Support due to lack of Data Integrity work prior to the project. This has been addressed by adding dedicated Subject Matter Experts to the project team and starting the process and data conversion work for these groups well in advance.

The most significant intangible cost of this work is the significant process change. This has been mitigated by process consistency implemented during Data Integrity, the addition of trainers and Change Management personnel to the project team, and inclusion of a pilot at Selkirk G.S..

There is a risk of project cost estimate errors. This risk was mitigated by deferring some scope items to sequence 3 and adding contingency to account for rollout delays and scope items that have not completed blue printing (Meridium interface). The rollout plan will be finalized after the Selkirk pilot.

There is risk that the benefits will not be obtained if users do not adopt the new software functionality. This was mitigated by incorporating user approval and buy-in at the beginning of Phase 2, and continued discussions with Engineering Services and the Maintenance Engineering departments. The project has governance and leadership in place to ensure benefits are obtained.

Total Budget – (This section is required for all Addendums).

Complete the Excel table below to compare the proposed revised budget with the last approved CPJ/Addendum in terms of total and annual cost flows, in thousands of dollars (per the CERs). CPJ Addendums for Major items must be accompanied by at least draft CERs, while CPJ Addendums for Domestic items must be accompanied by final CERs.

The impact on annual budget requirements is as follows (in thousands of dollars):

Fiscal Year	Prev. Approved CPJ/Addendum	Proposed CPJ Addendum	Increase (Decrease)
Prev. Actuals	$ 19,300	$ 14,635	$ (4,665)
2014/15	$ -	$ 7,750	$ 7,750
2015/16	$ -	$ 7,062	$ 7,062
2016/17	$ -	$ 5,739	$ 5,739
Total	$ 19,300	$ 35,186	$ 15,886

Proposed Schedule (This section is be filled out only if there is a change to the project schedule).

EAM Phase 2 is proposed to be in-service with the pilot area in April 2015.

Related Projects (This section is be filled out only if changed).

APPENDIX "A"

Information Technology Services (I.T.S.)
Capital Project Justification Estimates

Annual Resource Requirements (in hours)					
Cost Centre					**Total**
Number	**Name**	**N/A**	**N/A**	**N/A**	**Hours**
Various	Various Cost Centres				97175.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
Total Hours		0.0	0.0	0.0	**97175.0**

Capital Budget Estimate - Annual budget requirements (in thousands of dollars) **Include PST where applicable as per PST Guidelines**				
Fiscal Year Cost Description	**n/a**	**n/a**	**Incremental Costs**	**Total Cost**
Internal Labour + Overhead			$ 8,921.00	$ 8,921.00
Vendor Labour, Travel & Accommodations			$ 3,851.00	$ 3,851.00
Software License			$ 1,884.00	$ 1,884.00
Software Maintenance				$ -
Hardware			$ 464.00	$ 464.00
Team Expenses			$ (837.00)	$ (837.00)
Sub-Total	$ -	$ -	$ 14,283.00	$ 14,283.00
Contingency			$ 415.00	$ 415.00
Interest & Escalation (Provided by Finance Rep			$ 1,191.00	$ 1,191.00
Total Cost	$ -	$ -	$ 15,889.00	**$ 15,889.00**

IT Coordinating Committee (ITCC) Approvals		
ITCC(s) Responsible for Approval	**Approval Received (Y/N)**	**Date Approved (yyyy/mm/dd)**

Architecture Review (ARC) Acceptances for ITS Managers Only		
Architecture Review Submission	**Review Status**	**Reviewed Date (yyyy/mm/dd)**
Gate 1 - Software Product Unknown: Awareness & Functional Fit Review		
Gate 2 - Software Product Known: Technical Architecture Review		
Link to ARC Summary		

Post Implementation Annual Costs	
Hardware Maintenance Fees (if readily available)	$ 589,000.00
Software Maintenance Fees	
Vendor Fees	
Other Costs (e.g. additional EFTs, monitoring costs, etc.)	
Total Annual Costs	**$ 589,000.00**
Target Transfer Document (eForm 0514) required and attached (Y/N)	N

Other Items (select from drop down menus)	
Is there an existing operating order(s) associated with this project/product or is a new one required?	
Product/System/Solution used for electric, gas, both?	

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CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
EAM Project - Phase 2		1.1.4.8.1.2
Owning Division Information Technology Services	Coordinating Division Information Technology Services	ProjectNumber: P:17260

DESCRIPTION:

The scope of the project is confined to current user areas of AMPS in Power Supply (Generation South, Generation North, HVDC, and Engineering Services) and Transmission (System Support, Communications) including their associated maintenance engineering, design, and project departments. The project shall consist of the following:
-Implementation of core functionality (Personnel, Equipment Hierarchy, Work identification, Planning, Scheduling, Execution, Documentation and Analysis),
-Personnel availability and shift schedule creation in HR,
-Accounting structure creation,
-Tool and parts ordering,
-Event entry tied to Power-Up and HDS&R,
-Change management and workflow,
-Lockout/tagout to a level sufficient to identify clearance points and print permits and tags,
-Mobile computing and predictive maintenance tasks created to allow equipment condition data to be entered during work orders,
-The interfaces to Equipment Condition for Asset Investment Planning, Reliability Centered Maintenance and Root Cause Failure Analysis software, the Laboratory Information Management System (LIMS), and the Communications GIS, and
-Development of new processes

JUSTIFICATION:

The most significant financial benefit from implementation of EAM is derived from avoiding a future decrease in availability. This is achieved by ensuring all required operations and maintenance work is completed in an optimal fashion, and equipment condition information, maintenance tactics, and work processes are supported to maximize availability. Significant opportunity for improvement was noted by a quantitative analysis completed in conjunction with Synterprise Global Consulting in May, 2005, and confirmed by the work completed by the EAM Data Integrity team and Power Supply process measures.

REVISION:

The Project budget increased from $19.3M to $35.2M. The following is a summary of the key contributing factors for the increased funding. The Blueprinting of the requirements took longer than expected. The existing SAP processes and utilization were not taken into account in the original estimates. The original build and test estimates did not match the complexity of the project and replanning was required. The training and deployment , conversion and reporting schedules were under estimated. The interest and escalation charges for the project are over the budgeted amount due to the delays in the schedule.

IN SERVICE DATES						Base estimate 2014/04/01 CLASS 3
2011/07/31	632					Work start date 2011/01/01
2015/04/30	34554					
PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	13239		1396			14635
(Over)under expend:	215	84	-253			46
2014/15	4418	194				4612
V-13C TOTAL	17872	278	1143			19293
REV. AMOUNTS:						
Actual cost to date:	13239		1396			14635
(Over)under expend:	1					1
Auth 2014/15	6682	16	1052			7750
Req: 2015/16	6852	106	104			7062
2016/17	5506	233				5739
V-HLD TOTAL	32280	355	2552			35187

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
		OWNING DIVISION		COORDINATING DIVISION		VICE-PRESIDENT	

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CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:17260

Approved yy mm	TOTAL AMOUNT	COMMENTS
2010 12	$19297	$15,889 increase to the project to accommodate increased internal labour $8,921; increased consulting $3,851; increased software costs $1,884; increased interest and escalation $1,191; increased hardware $0.46; increased contingency $0.42 offset by a decrease in team expenses $0.84.

Forecasted Mthly Exp.		GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2014/15	Apr	456		70			526	526
	May	518		75			593	1119
	Jun	518		76			594	1713
	Jul	523	1	81			605	2318
	Aug	497	1	84			582	2900
	Sep	480	1	84			565	3465
	Oct	684	2	90			776	4241
	Nov	586	2	91			679	4920
	Dec	619	2	97			718	5638
	Jan	651	2	101			754	6392
	Feb	586	2	94			682	7074
	Mar	564	3	109			676	7750
TOTAL		6682	16	1052			7750	7750
2015/16	Apr	524	3	104			631	631
	May	562	4				566	1197
	Jun	621	6				627	1824
	Jul	621	7				628	2452
	Aug	562	7				569	3021
	Sep	562	8				570	3591
	Oct	591	10				601	4192
	Nov	562	10				572	4764
	Dec	562	11				573	5337
	Jan	562	12				574	5911
	Feb	532	12				544	6455
	Mar	591	16				607	7062
TOTAL		6852	106	104			7062	7062

CER(T) Rev. 97/12

CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
EAM Project - Phase 2		1.1.4.8.1.2
Owning Division Information Technology Services	Coordinating Division Information Technology Services	ProjectNumber: P:17260

DESCRIPTION:

The scope of the project is confined to current user areas of AMPS in Power Supply (Generation South, Generation North, HVDC, and Engineering Services) and Transmission (System Support, Communications) including their associated maintenance engineering, design, and project departments. The project shall consist of the following:
-Implementation of core functionality (Personnel, Equipment Hierarchy, Work identification, Planning, Scheduling, Execution, Documentation and Analysis),
-Personnel availability and shift schedule creation in HR,
-Accounting structure creation,
-Tool and parts ordering,
-Event entry tied to Power-Up and HDS&R,
-Change management and workflow,
-Lockout/tagout to a level sufficient to identify clearance points and print permits and tags,
-Mobile computing and predictive maintenance tasks created to allow equipment condition data to be entered during work orders,
-The interfaces to Equipment Condition for Asset Investment Planning, Reliability Centered Maintenance and Root Cause Failure Analysis software, the Laboratory Information Management System (LIMS), and the Communications GIS, and
-Development of new processes

JUSTIFICATION:

The most significant financial benefit from implementation of EAM is derived from avoiding a future decrease in availability. This is achieved by ensuring all required operations and maintenance work is completed in an optimal fashion, and equipment condition information, maintenance tactics, and work processes are supported to maximize availability. Significant opportunity for improvement was noted by a quantitative analysis completed in conjunction with Synterprise Global Consulting in May, 2005, and confirmed by the work completed by the EAM Data Integrity team and Power Supply process measures.

REVISION:

The Project budget increased from $19.3M to $35.2M. The following is a summary of the key contributing factors for the increased funding. The Blueprinting of the requirements took longer than expected. The existing SAP processes and utilization were not taken into account in the original estimates. The original build and test estimates did not match the complexity of the project and replanning was required. The training and deployment , conversion and reporting schedules were under estimated. The interest and escalation charges for the project are over the budgeted amount due to the delays in the schedule.

IN SERVICE DATES				Base estimate 2014/04/01 CLASS 3 Work start date 2011/01/01
2011/07/31	632			
2015/04/30	34554			

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	13239		1396			14635
(Over)under expend:	-13239		-1396			-14635
V-DMA TOTAL						
REV. AMOUNTS:						
Actual cost to date:	13239		1396			14635
(Over)under expend:	1					1
Auth 2014/15	6682	16	1052			7750
Req: 2015/16	6852	106	104			7062
2016/17	5506	233				5739
V-HLD TOTAL	32280	355	2552			35187

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
KC	14/10/16	OWNING DIVISION	14/11/25	COORDINATING DIVISION	14/11/25	VICE-PRESIDENT	14/11/27

2014/10/16 12:46PM

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:17260

Approved yy mm	TOTAL AMOUNT	COMMENTS
2010 12	$19297	$15,889 increase to the project to accommodate increased internal labour $8,921; increased consulting $3,851; increased software costs $1,884; increased interest and escalation $1,191; increased hardware $0.46; increased contingency $0.42 offset by a decrease in team expenses $0.84.

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2014/15 Apr	456		70			526	526
May	518		75			593	1119
Jun	518		76			594	1713
Jul	523	1	81			605	2318
Aug	497	1	84			582	2900
Sep	480	1	84			565	3465
Oct	684	2	90			776	4241
Nov	586	2	91			679	4920
Dec	619	2	97			718	5638
Jan	651	2	101			754	6392
Feb	586	2	94			682	7074
Mar	564	3	109			676	7750
TOTAL	6682	16	1052			7750	7750
2015/16 Apr	524	3	104			631	631
May	562	4				566	1197
Jun	621	6				627	1824
Jul	621	7				628	2452
Aug	562	7				569	3021
Sep	562	8				570	3591
Oct	591	10				601	4192
Nov	562	10				572	4764
Dec	562	11				573	5337
Jan	562	12				574	5911
Feb	532	12				544	6455
Mar	591	16				607	7062
TOTAL	6852	106	104			7062	7062

D1876

CAPITAL PROJECT JUSTIFICATION
FOR

RURAL DISTRICT REORGANIZATION

REVIEWED BY:
(Owning Dept Manager)

NOTED BY:
(if applicable)

Coordinating Division: 2015-02-23 *Scott Dunn

Constructing Division: Feb. 18, 2015 BRAD IRELAND

Financial Department: GREG STOKOTELNY SEPT 2014
(if over $1 million)

RECOMMENDED FOR IMPLEMENTATION:

Owning Div. Manager: 2015-02-23 *Scott Dunn

Business Unit V.P.: 2015-02-23 *Brent Reed

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☐	Safety	☐	Customer Service
☐	System Supply	☒	Efficiency
☐	System Reliability	☐	Environmental

NERC COMPLIANCE*: ☐ YES ☐ NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

BUDGET $: (Total Net Cost)	$27,377,000
START DATE: (1st Cost Flow)	2014 08
IN-SERVICE DATE: (Last Major In-service Date)	2016 03
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

OWNING DIVISION:

I.M. NODE NUMBER: 1.1.4.2 . 4.1 .5.1

W.B.S. NUMBERs: P:22348, P:22367, P:23710 .6.1

MAJOR ITEM ☐ **DOMESTIC ITEM** ☒

PREPARED BY: Tom Akerstream, Greg Stokotelny

DATE PREPARED: 2014 09 04

REPORT NUMBER:

FILE NUMBER (Optional):

Feb 24/15

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION

Project Name
Rural District Reorganization: includes Ashern District Office, Neepawa District Office, and Rural Relocation - Phase 2 (Renovations).

Recommendation
Construct two new district offices and undertake the renovation and retrofit of existing rural offices to accommodate the relocation of staff.

Project Scope
The project scope consists of two new district offices, including construction and fit out for; Ashern District Office $7.4 million, and the Neepawa District Office $8.9 million. The project scope also contains the renovation and retrofit of existing rural offices to accommodate the relocation of staff displaced from the closing of other district offices $11.0 million.

Background
Board approved Rural District Reorganization. To accommodate the requirements of Rural Relocations, Corporate Facilities needs to construct two new district offices and renovate 13 existing rural sites.

JUSTIFICATION—BUSINESS CASE ANALYSIS (SUMMARY):

Justification and Link to Corporate/Business Unit Goals
Executive approved Rural District Reorganization. The current district offices cannot accommodate the increase in staff displaced from the closure of other rural district offices and therefore need to be expanded. In some cases this expansion requires minor renovations of existing facilities, while in other facilities major additions need to be constructed. In the case of the two new district offices, renovations of the two existing facilities is not economically feasible requiring the construction of two new facilities (This was determined before the rural relocation plan was initiated). In addition, This project will also serve the needs of associated rural groups including Apparatus Maintenance, Line Maintenance, OH Construction, and others as required.

ANALYSIS OF ALTERNATIVES:

Economic Analysis		
Discount Rate	For current corporate rates see G911 %	For clarification on hurdle rates, contact the Economic Analysis Department

Recommended Option	NPV Benefits (Costs)
N/A	N/A

Other Alternatives Considered	NPV Benefits/(Costs)
N/A	

Risk Analysis
If these projects are not undertaken Manitoba Hydro will not be able to service its rural customers appropriately.

Capital Budget Estimate

The annual net budget requirements are as follows (in thousands of dollars):

Fiscal Year	Proposed Budget
Prev. Actuals	$ 677
2014/15	$ 10,500
2015/16	$ 16,200
2016/17+	$ -
Total	$ 27,377

Proposed Schedule

Nothing significant to note.

Related Projects

Rural District Reorganization.

Reference Documents

Rural District Reorganization.

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Rural Relocation - Phase 2		1.1.4.2.6.1
Owning Division Workplace Safety & Health and Corp Serv	Coordinating Division Workplace Safety & Health and Corp Serv	ProjectNumber: P:23710

DESCRIPTION:

The project scope includes renovation and retrofit of existing offices to accommodate the relocation of staff displaced from the closing of other district offices $11.0 million.

This is part of the Rural Disrict Reorganization. This is one project of many which will see the construction of two new district offices and undertake the renovation and retrofit of 13 existing rural sites to accommodate the relocation of staff.

IN SERVICE DATES

Base estimate
2014/04/01 CLASS 0

Work start date
2014/10/01

	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
PREV.AUTHORITY						
Actual cost to date:						
(Over)under expend:						
V-DMA TOTAL						
REV. AMOUNTS:						
Actual cost to date:						
(Over)under expend:						
Auth 2014/15	3000					3000
Req: 2015/16	8000					8000
V-HLD TOTAL	11000					11000

Feb 26/15

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
GS	14 09 19	OWNING DIVISION	15 02 23	COORDINATING DIVISION	15 02 10	VICE-PRESIDENT	15 02 24

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:23710

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2014/15 Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct	500					500	500
Nov	500					500	1000
Dec	500					500	1500
Jan	500					500	2000
Feb	500					500	2500
Mar	500					500	3000
TOTAL	3000					3000	3000
2015/16 Apr	667					667	667
May	667					667	1334
Jun	667					667	2001
Jul	667					667	2668
Aug	667					667	3335
Sep	667					667	4002
Oct	667					667	4669
Nov	667					667	5336
Dec	667					667	6003
Jan	667					667	6670
Feb	667					667	7337
Mar	663					663	8000
TOTAL	8000					8000	8000

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Ashern District Office		1.1.4.2.4.1
Owning Division: Workplace Safety & Health and Corp Serv	Coordinating Division: Workplace Safety & Health and Corp Serv	ProjectNumber: P:22348

DESCRIPTION:

To build a new District Office in Ashern. Scope includes: Building Construction & Outfitting.

This is part of the Rural Disrict Reorganization. This is one project of many which will see the construction of two new district offices and undertake the renovation and retrofit of 13 existing rural sites to accommodate the relocation of staff.

IN SERVICE DATES				Base estimate 2014/04/01 CLASS 0
2015/12/31	7438			Work start date 2013/10/01

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	238					238
(Over)under expend:	-238					-238
V-DMA TOTAL						
REV. AMOUNTS:						
Actual cost to date:	238					238
(Over)under expend:						
Auth 2014/15	3379	37	84			3500
Req: 2015/16	3384	87	229			3700
V-HLD TOTAL	7001	124	313			7438

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
GS	14/09/19	OWNING DIVISION	15/02/23	COORDINATING DIVISION	15/02/10	VICE-PRESIDENT	15/02/24

Feb 2-15

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:22348

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2014/15 Apr	13		1			14	14
May	14		1			15	29
Jun	28		1			29	58
Jul	378	2	1			381	439
Aug	363	2	3			368	807
Sep	363	3	5			371	1178
Oct	402	4	7			413	1591
Nov	344	4	9			357	1948
Dec	363	5	11			379	2327
Jan	383	5	13			401	2728
Feb	344	5	13			362	3090
Mar	384	7	19			410	3500
TOTAL	3379	37	84			3500	3500
2015/16 Apr	348	7	17			372	372
May	367	8	20			395	767
Jun	406	9	21			436	1203
Jul	406	10	24			440	1643
Aug	367	9	26			402	2045
Sep	367	10	27			404	2449
Oct	387	11	30			428	2877
Nov	367	11	31			409	3286
Dec	369	12	33			414	3700
Jan							3700
Feb							3700
Mar							3700
TOTAL	3384	87	229			3700	3700

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Neepawa District Office		1.1.4.2.5.1
Owning Division: Workplace Safety & Health and Corp Serv	Coordinating Division: Workplace Safety & Health and Corp Serv	ProjectNumber: P:22367

DESCRIPTION:

To build a new District Office in Neepawa. Scope includes: Building Constructiong & outfitting.

This is part of the Rural Disrict Reorganization. This is one project of many which will see the construction of two new district offices and undertake the renovation and retrofit of 13 existing rural sites to accommodate the relocation of staff.

IN SERVICE DATES: 2015/12/31 — 8938

Base estimate: 2014/04/01 CLASS 0

Work start date: 2013/10/01

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	438		1			439
(Over)under expend:	-438		-1			-439
V-DMA TOTAL						
REV. AMOUNTS:						
Actual cost to date:	438		1			439
(Over)under expend:						
Auth 2014/15	3852	42	106			4000
Req: 2015/16	4119	106	275			4500
V-HLD TOTAL	8409	148	3821			8939

Feb 26/15

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
65	14 09 19	OWNING DIVISION	15 02 23	COORDINATING DIVISION	15 02 10	VICE-PRESIDENT	15 02 24

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:22367

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2014/15 Apr	22		2			24	24
May	23		2			25	49
Jun	23		2			25	74
Jul	435	2	3			440	514
Aug	413	3	5			421	935
Sep	413	3	7			423	1358
Oct	457	4	9			470	1828
Nov	392	4	11			407	2235
Dec	413	5	13			431	2666
Jan	435	6	16			457	3123
Feb	392	6	16			414	3537
Mar	434	9	20			463	4000
TOTAL	3852	42	106			4000	4000
2015/16 Apr	424	8	21			453	453
May	447	9	24			480	933
Jun	494	11	25			530	1463
Jul	494	12	28			534	1997
Aug	447	12	31			490	2487
Sep	447	12	32			491	2978
Oct	471	14	36			521	3499
Nov	447	14	37			498	3997
Dec	448	14	41			503	4500
Jan							4500
Feb							4500
Mar							4500
TOTAL	4119	106	275			4500	4500

D1876(A)

CAPITAL PROJECT JUSTIFICATION ADDENDUM
FOR

RURAL DISTRICT REORGANIZATION
PHASE 2A
Addendum Number 1

REVIEWED BY:
(Requesting Dept Manager) 2016/06/21

NOTED BY:
(if applicable)

Responsible Division:

Constructing Division: June 21/16

Financial Department:
(if over $1 million) 2016/06/21

RECOMMENDED FOR IMPLEMENTATION:

Requesting Div. Manager:

Business Unit V.P.: See attached memo 16/09/14

PREV. APPROVED BUDGET $: (Use $ value from approved CPJ or last approved CPJ Addendum)	$10,500,000
REVISED BUDGET $: (Total Net Cost)	$18,828,000
START DATE: (1st Cost Flow)	2015 04
PREV. APPROVED ISD: (Use In-service Date from approved CPJ or last approved CPJ Addendum)	2017 03
REVISED ISD: (Last Major In-service Date)	2017 03

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☐ Safety	☐ Customer Service
☐ System Supply	☒ Efficiency
☐ System Reliability	☐ Environmental

NERC COMPLIANCE*: ☐ YES ☐ NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

REQUESTING DIVISION:	50495
I.M. NODE NUMBER:	I.1.4.2.6.1
W.B.S. NUMBERs:	P:23710
MAJOR ITEM ☐	**DOMESTIC ITEM** ☒
PREPARED BY:	Tom Akerstream, Angelo Battistoni
DATE PREPARED:	2016 05 25
REPORT NUMBER:	
FILE NUMBER (Optional):	

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION ADDENDUM

Project Name (This section is required for all Addendums).

Rural District Reorganization: Rural Relocation Phase 2A (Renovations).

Recommendation (This section is required for all Addendums).

This includes renovations and retrofit of existing rural offices (Morden, Portage La Prairie, Virden, Russell, 805 Greenwood Selkirk, Brandon, and Steinbach) to accommodate the relocation of staff.

Project Scope (This section is be filled out only if there is a change to the scope).

The project scope also contains the renovation and retrofit and an increase due to additional requirements of existing rural offices (Morden, Portage La Prairie, Virden, Russell, 805 Greenwood Selkirk, Brandon, and Steinbach) to accommodate the relocation of staff displaced from the closing of other district offices $18.8 million.

Background (This section is be filled out only if there is information relevant to the recommendation).

Board approved Rural District Reorganization.

The original CPJ was created at level 4 of the IM node Corporate Buildings. It was decided to split this into 4 CPJs at the level 6 IM node. This CPJ was originally created with a value of $10.5 million. After a review during CEF 16 it was noted that the scope should increase due to additional requirements of $8.3 million.

To accommodate the requirements of Rural Relocations, Corporate Facilities needs to construct two new district offices and renovate 13 existing rural sites.

Justification (This section is required for all addendums).

Executive approved Rural District Reorganization.

The current district offices cannot accommodate the increase in staff displaced from the closure of other rural district offices and therefore need to be expanded. In some cases this expansion requires minor renovations of existing facilities, while in other facilities major additions need to be constructed. In the case of the two new district offices, renovations of the two existing facilities is not economically feasible requiring the construction of two new facilities (This was determined before the rural relocation plan was initiated). In addition, This project will also serve the needs of associated rural groups including Apparatus Maintenance, Line Maintenance, OH Construction, and others as required.

ANALYSIS OF ALTERNATIVES: (This section is be filled out only if there is a change to which alternative is being recommended).

Economic Analysis		
Discount Rate	% For current corporate rates see G911	For clarification on hurdle rates, contact Economic Analysis Department

Recommended Option	NPV Benefits/(Costs)
N/A	N/A

Other Alternatives Considered	NPV Benefits/(Costs)
N/A	

Risk Analysis – (This section is be filled out only if there is a change to the project risk).

If these projects are not undertaken Manitoba Hydro will not be able to service its rural customers appropriately.

Total Budget – (This section is required for all Addendums).

The impact on annual budget requirements is as follows (in thousands of dollars):

Fiscal Year	Prev. Approved CPJ/Addendum	Proposed CPJ Addendum	Increase (Decrease)
Prev. Actuals	$ 4	$ 4	$ -
2014/15	$ 2,996	$ 2,155	$ (841)
2015/16	$ 7,500	$ 6,697	$ (803)
2016/17	$ -	$ 9,972	$ 9,972
Total	$ 10,500	$ 18,828	$ 8,328

Proposed Schedule (This section is be filled out only if there is a change to the project schedule).

Related Projects (This section is be filled out only if changed).

Rural District Reorganization.

Reference Documents (This section is be filled out only if changed).
Rural District Reorganization.

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Rural Relocation - Phase 2		1.1.4.2.6.1
Responsible Division	Requesting Division	ProjectNumber:
Workplace Safety & Health and Corp Serv	Workplace Safety & Health and Corp Serv	P:22810 - P:23838

DESCRIPTION:

Renovation and retrofit of existing offices to accommodate the relocation of staff displaced from the closing of other district offices.

This is part of the Rural Disrict Reorganization. This is one project of many which will see the construction of two new district offices and undertake the renovation and retrofit of 13 existing rural sites to accommodate the relocation of staff.

JUSTIFICATION:

Executive approved Rural District Reorganization.

The current district offices cannot accommodate the increase in staff displaced from the closure of other rural district offices and therefore need to be expanded. In some cases this expansion requires minor renovations of existing facilities, while in other facilities major additions need to be constructed. In the case of the two new district offices, renovations of the two existing facilities is not economically feasible requiring the construction of two new facilities (This was determined before the rural relocation plan was initiated). In addition, This project will also serve the needs of associated rural groups including Apparatus Maintenance, Line Maintenance, OH Construction, and others as required.

REFERENCE:

CPJ - "RURAL DISTRICT REORGANIZATION".
Addendum #1 - "RURAL DISTRICT REORGANIZATION PHASE 2A"

REVISION:

May 3, 2016

The original CPJ was created at level 4 of the IM node Corporate Buildings. It was decided to split this into 4 CPJs at the level 6 IM node. This CPJ was originally created with a value of $10.5 million. After a review during CEF 16 it was noted that the scope should increase due to additional requirements of $8.3 million.

To accommodate the requirements of Rural Relocations, Corporate Facilities needs to construct two new district offices and renovate 13 existing rural sites.

Project scope includes the renovation and retrofit and an increase due to additional requirements of existing rural offices (Morden, Portage La Prairie, Virden, Russell, 805 Greenwood Selkirk, Brandon, and Steinbach) to accommodate the relocation of staff displaced from the closing of other district offices $18.8 million.

IN SERVICE DATES				Base estimate 2016/04/01 CLASS 0
2017/03/31	18828			Work start date 2014/02/01

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	8625		231			8856
(Over)under expend:	2375		-231			2144
V-CPJ TOTAL	11000					11000
REV. AMOUNTS:						
Actual cost to date:	8625		231			8856
(Over)under expend:						
Auth 2016/17	9595	107	270			9972
Req.:						
V-HLD TOTAL	18220	107	501			18828

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
HB	16 06 21	RESPONSIBLE DIVISION	16 06 21	REQUESTING DIVISION		VICE-PRESIDENT	16 09 14

2016/06/17 5:05PM

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:22810 - P:23838

Approved yy mm	TOTAL AMOUNT	COMMENTS
2014 09	10,500	New Item

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2016/17 Apr	46		32			78	78
May	49		34			83	161
Jun	979	3	1			983	1144
Jul	930	5	5			940	2084
Aug	1028	7	10			1045	3129
Sep	930	8	14			952	4081
Oct	930	10	19			959	5040
Nov	979	12	22			1013	6053
Dec	881	12	28			921	6974
Jan	930	15	32			977	7951
Feb	881	15	33			929	8880
Mar	1032	20	40			1092	9972
TOTAL	9595	107	270			9972	9972
2017/18 Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Jan							
Feb							
Mar							
TOTAL							

D1876(A)

CAPITAL PROJECT JUSTIFICATION ADDENDUM
FOR

RURAL DISTRICT REORGANIZATION
PHASE 2B Pre-Construction
Addendum Number 1

REVIEWED BY:
(Requesting Dept Manager) 2016/04/21

NOTED BY:
(if applicable)

Responsible Division:

Constructing Division: 2016/06/21

Financial Department:
(if over $1 million) 2016/06/21

RECOMMENDED FOR IMPLEMENTATION:

Requesting Div. Manager:

Business Unit V.P.: See attached memo 16/05/19

PREV. APPROVED BUDGET $: (Use $ value from approved CPJ or last approved CPJ Addendum)	$500,000
REVISED BUDGET $: (Total Net Cost)	$1,522,000
START DATE: (1st Cost Flow)	2015 04
PREV. APPROVED ISD: (Use In-service Date from approved CPJ or last approved CPJ Addendum)	2017 03
REVISED ISD: (Last Major In-service Date)	2017 03

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☐ Safety	☐ Customer Service
☐ System Supply	☒ Efficiency
☐ System Reliability	☐ Environmental

NERC COMPLIANCE*: ☐ YES ☐ NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

REQUESTING DIVISION:	50495
I.M. NODE NUMBER:	1.1.4.2.6.2
W.B.S. NUMBERs:	P:26957
MAJOR ITEM ☐	**DOMESTIC ITEM** ☒
PREPARED BY:	Tom Akerstream, Angelo Battistoni
DATE PREPARED:	2016 05 25
REPORT NUMBER:	
FILE NUMBER (Optional):	

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION ADDENDUM

Project Name (This section is required for all Addendums).

Rural District Reorganization: Rural Relocation Phase 2B (Renovations).

Recommendation (This section is required for all Addendums).

This includes renovations and retrofit of existing rural offices (Lac Du Bonnet, Arborg, Killarney, and Dauphin) to accommodate the relocation of staff.

Project Scope (This section is be filled out only if there is a change to the scope).

The project scope contains the pre-construction cost (design and site prep work) for four existing rural offices. If the project is approved by the government there will be an additional $13.5 million plus interest cost for the renovation and retrofit of the existing rural offices (Lac Du Bonnet, Arborg, Killarney, and Dauphin) to accommodate the relocation of staff displaced from the closing of other district offices.

Background (This section is be filled out only if there is information relevant to the recommendation).

Board approved Rural District Reorganization.

The original CPJ was created at level 4 of the IM node Corporate Buildings. It was decided to split this into four CPJs at the level 6 IM node. This CPJ was originally created with a value of $0.5 million. After a review during CEF 16 it was noted that the scope should increase due to additional pre-construction requirements of $1.0 million.

To accommodate the requirements of Rural Relocations, Corporate Facilities needs to construct two new district offices and renovate 13 existing rural sites.

Justification (This section is required for all addendums).

Executive approved Rural District Reorganization.

The current district offices cannot accommodate the increase in staff displaced from the closure of other rural district offices and therefore need to be expanded. In some cases this expansion requires minor renovations of existing facilities, while in other facilities major additions need to be constructed. In the case of the two new district offices, renovations of the two existing facilities is not economically feasible requiring the construction of two new facilities (This was determined before the rural relocation plan was initiated). In addition, This project will also serve the needs of associated rural groups including Apparatus Maintenance, Line Maintenance, OH Construction, and others as required.

ANALYSIS OF ALTERNATIVES: (This section is be filled out only if there is a change to which alternative is being recommended).

Economic Analysis		
Discount Rate	% For current corporate rates see G911	For clarification on hurdle rates, contact Economic Analysis Department

Recommended Option	NPV Benefits/(Costs)
N/A	N/A

Other Alternatives Considered	NPV Benefits/(Costs)
N/A	

Risk Analysis – (This section is be filled out only if there is a change to the project risk).

If these projects are not undertaken Manitoba Hydro will not be able to service its rural customers appropriately.

Total Budget – (This section is required for all Addendums).

The impact on annual budget requirements is as follows (in thousands of dollars):

Fiscal Year	Prev. Approved CPJ/Addendum	Proposed CPJ Addendum	Increase (Decrease)
Prev. Actuals	$ -	$ 461	$ 461
2016/17	$ -	$ 1,061	$ 1,061
Total	$ -	$ 1,522	$ 1,522

Proposed Schedule (This section is be filled out only if there is a change to the project schedule).

Related Projects (This section is be filled out only if changed).

Rural District Reorganization.

Reference Documents (This section is be filled out only if changed).
Rural District Reorganization.

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CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Rural Relocation - Phase 2B		1.1.4.2.6.2
Responsible Division Workplace Safety & Health and Corp Serv	Requesting Division Workplace Safety & Health and Corp Serv	ProjectNumber: P:24333 - P:26957

DESCRIPTION:

Renovation and retrofit of existing offices to accommodate the relocation of staff displaced from the closing of other district offices.

This is part of the Rural Disrict Reorganization. This is one project of many which will see the construction of two new district offices and undertake the renovation and retrofit of 13 existing rural sites to accommodate the relocation of staff.

JUSTIFICATION:

Executive approved Rural District Reorganization.

The current district offices cannot accommodate the increase in staff displaced from the closure of other rural district offices and therefore need to be expanded. In some cases this expansion requires minor renovations of existing facilities, while in other facilities major additions need to be constructed. In the case of the two new district offices, renovations of the two existing facilities is not economically feasible requiring the construction of two new facilities (This was determined before the rural relocation plan was initiated). In addition, This project will also serve the needs of associated rural groups including Apparatus Maintenance, Line Maintenance, OH Construction, and others as required.

REFERENCE:

CPJ - "RURAL DISTRICT REORGANIZATION".
Addendum #1 - "RURAL DISTRICT REORGANIZATION PHASE 2B Pre-Construction"

REVISION:

May 3, 2016

The original CPJ was created at level 4 of the IM node Corporate Buildings. It was decided to split this into 4 CPJs at the level 6 IM node. This CPJ was originally created with a value of $0.5 million. After a review during CEF 16 it was noted that the scope should increase due to additional pre-construction requirements of 1.0 million.

To accommodate the requirements of Rural Relocations, Corporate Facilities needs to construct two new district offices and renovate 13 existing rural sites.

The project scope includes the pre-construction cost (Design and site prep work) for 4 existing rural offices. If the project is approved by the government there will be an additional $13.5 million plus interest cost for the renovation and retrofit of the existing rural offices (Lac Du Bonnet, Arborg, Killarney, and Dauphin) to accommodate the relocation of staff displaced from the closing of other district offices.

IN SERVICE DATES				Base estimate 2016/04/01 CLASS 0 Work start date 2014/04/01
2017/03/31	1522			

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	447		14			461
(Over)under expend:	-447		-14			-461
V-CPJ TOTAL						
REV. AMOUNTS:						
Actual cost to date:	447		14			461
(Over)under expend:						
Auth 2016/17	1024	11	26			1061
Req.:						
V-HLD TOTAL	147	11	40			1522

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
	16 06 21	RESPONSIBLE DIVISION	16 06 21	REQUESTING DIVISION		VICE-PRESIDENT	16 09 14

2016/06/17 5:01PM

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CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (In thousands of dollars)

ProjectNumber P:24333 - P:26957

Approved yy mm	TOTAL AMOUNT	COMMENTS
2014 09	500	New Item

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2016/17 Apr	10		2			12	12
May	10		2			12	24
Jun	103					103	127
Jul	98	1	1			100	227
Aug	109	1	1			111	338
Sep	98	1	1			100	438
Oct	98	1	2			101	539
Nov	103	1	2			106	645
Dec	93	1	3			97	742
Jan	98	2	3			103	845
Feb	93	2	4			99	944
Mar	111	1	5			117	1061
TOTAL	1024	11	26			1061	1061
2017/18 Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Jan							
Feb							
Mar							
TOTAL							

D1876

CAPITAL PROJECT JUSTIFICATION
FOR

Capital Portfolio Management Program for Manitoba Hydro

REVIEWED BY:
(Coordinating Dept Manager, D. Pellegrino) 2016/02/17

(Requesting Manager -Transmission, B. Jorowski) 2016/02/18

(Requesting Department Manager - Transmission, D. Swatek) 2016/02/18

(Requesting Manager - Customer Service & Distribution, R. Isaac) 2016/02/19

(Management Financial Services – G. Borschawa) G. Borschawa 2016/02/24

NOTED BY:
Requesting Division - Transmission (G. Neufeld) 2016/02/18

Requesting Division – Customer Service & Distribution (M. Prydun): Mark Prydun 2016/02/23

Coordinating/ Requesting Division – ITS (R. Lanyon): 2016 02 26

Financial Department (S. Bauerlein): L. Bauerlein 2016/02/25
(if over $1 million)

RECOMMENDED FOR IMPLEMENTATION:

Asset Management Executive Council Chair (L. Midford): 2016/03/04

Business Unit V.P. (Bryan Luce): Mar 23/2016

BUDGET $: (Total Net Cost)	$7,366,765
START DATE: (1st Cost Flow)	March 2016
IN-SERVICE DATE: (Last Major In-service Date)	November 2017
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

REQUESTING DIVISIONS:	Transmission Planning and Design Business Support and Capital Asset Management Information Technology Services
I.M. NODE NUMBER:	1.1.4.25.1.50
W.B.S. NUMBERs:	P:26484
MAJOR ITEM X	**DOMESTIC ITEM** ☐
PREPARED BY:	D. Pellegrino/ G.Dumlao
DATE PREPARED:	2016 02 17
REPORT NUMBER:	
FILE NUMBER (Optional):	

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☐	FILE NUMBER (Optional):	☐	Customer Service
☐	System Supply	☒	Efficiency
☒	System Reliability	☐	Environmental

NERC COMPLIANCE*: ☐ YES ☒ NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

Project Scope

Out of scope: The Corporate Facilities and Fleet Services areas within HR&CS will be implemented at a later date after the ITS Division is complete and sets the framework to follow. Similarly, the implementation of C55 technology and associated process changes into the Customer Care & Energy Conservation (CC&EC) business unit will be postponed until a later date to accommodate the other implementations proposed in this CPJ. There is a special consideration made to include CC&EC's Meter Exchange Program, which is a shared program with CS&D. In addition, the integration and/or interface with systems used in the development of the corporation's Integrated Financial Forecast (IFF) will be addressed following the implementation of C55 across the organization.

Background

Manitoba Hydro is in a period of extensive investment and re-investment in its infrastructure in order to replace aging utility assets and address growing capacity constraints. This level of capital investment combined with increased financial and resource constraints have triggered the need for this program. Additionally, there is increasing interest in aligning Manitoba Hydro's asset management practices with ISO 55000, the international asset management standard released in 2014, and this program will assist Manitoba Hydro in moving towards that goal.

Capital and Asset Investment Planning

Manitoba Hydro has a vast inventory of systems and infrastructure. In order to make optimal decisions about the investments required to maintain, replace and expand this infrastructure, Manitoba Hydro requires a capital and asset investment planning program that will provide timely and consistent information regarding the condition of its asset base.

In addition, the Public Utilities Board (PUB) has requested that Manitoba Hydro provide an updated asset condition report, including a longer term plan. The CS&D and Transmission business units cannot effectively meet this request in a timely manner without the implementation of the CopperLeaf C55 solution to assess risks based on asset condition.

Manitoba Hydro also considers it important that any steps taken be aligned with the principles in ISO 55000, the Asset Management standard that was released in February 2014. ISO 55000 is becoming well accepted in asset management and regulatory circles and alignment, and possibly even compliance, with ISO 55000 may become a future business requirement.

Project Portfolio Management

In the 2014/2015 fiscal year, Manitoba Hydro managed a budget of over $600 million in sustaining capital across all business units. Currently, capital funds are allocated to individual business units considering long term planning goals, asset condition, operational risks including safety and reliability as well as resource demands. Individual projects are evaluated through the Capital Project Justification (CPJ) process. While the overall framework for capital prioritization is consistently applied across the Corporation, the risk management tools and prioritization processes are customized within the various asset categories. There is a recognized need to move to an environment where the value of capital investments are assessed on a common basis across all areas of the corporation in order to allocate funds to projects and assets that optimize strategic value and/or mitigate risk.

As an initial step, Manitoba Hydro has undertaken a project to create a Corporate Value Framework that will allow the organization to assess a project's contribution to Manitoba Hydro's corporate objectives using C55. In order to fully realize the benefits of this work, Manitoba Hydro must extend the use of this technology and framework across the corporation including Transmission, the remaining divisions within

JUSTIFICATION—BUSINESS CASE ANALYSIS (SUMMARY):

Justification and Link to Corporate/Business Unit Goals

- Improved information to stakeholders – Provide additional information regarding the condition of assets, and the related risks, as well as the extent to which the proposed plans will mitigate those risks.

The benefits can be summarized into the following groups:

1. Making value-based, risk-informed decisions ;
2. Improved budgeting and investment approval processes;
3. Improved performance by ensuring investments are aligned with corporate strategy and KPI objectives; and,
4. Improve process efficiency, risk management and cost avoidance.

Additionally, this Program moves Manitoba Hydro closer to alignment with ISO 55000 and improves the corporation's ability to address regulatory concerns with respect to pacing and prioritization of capital investments.

This Program has been reviewed and endorsed by the Corporate IT Coordinating Committee.

ANALYSIS OF ALTERNATIVES:

Economic Analysis		
Discount Rate	**For current corporate rates see G911** 4.15%	**For clarification on hurdle rates, contact the Economic Analysis Department**

Recommended Option	NPV Benefits (Costs)
Implement the program as outlined above	$48M over a 10 year period

Other Alternatives Considered	NPV Benefits/(Costs)
List each alternative considered as well as its calculated NPV.	
In 2009, Copperleaf was the successful bidder for an asset investment planning and management tool (Copperleaf's C55) initially implemented in Generation Operations. In 2014, C55 was partially implemented in Customer Service and Distribution. Owing to the successful implementation on both projects, to continue to realize the benefits being derived from this tool, no other alternatives were considered with the view of implementing this across the organization.	

Risk Analysis

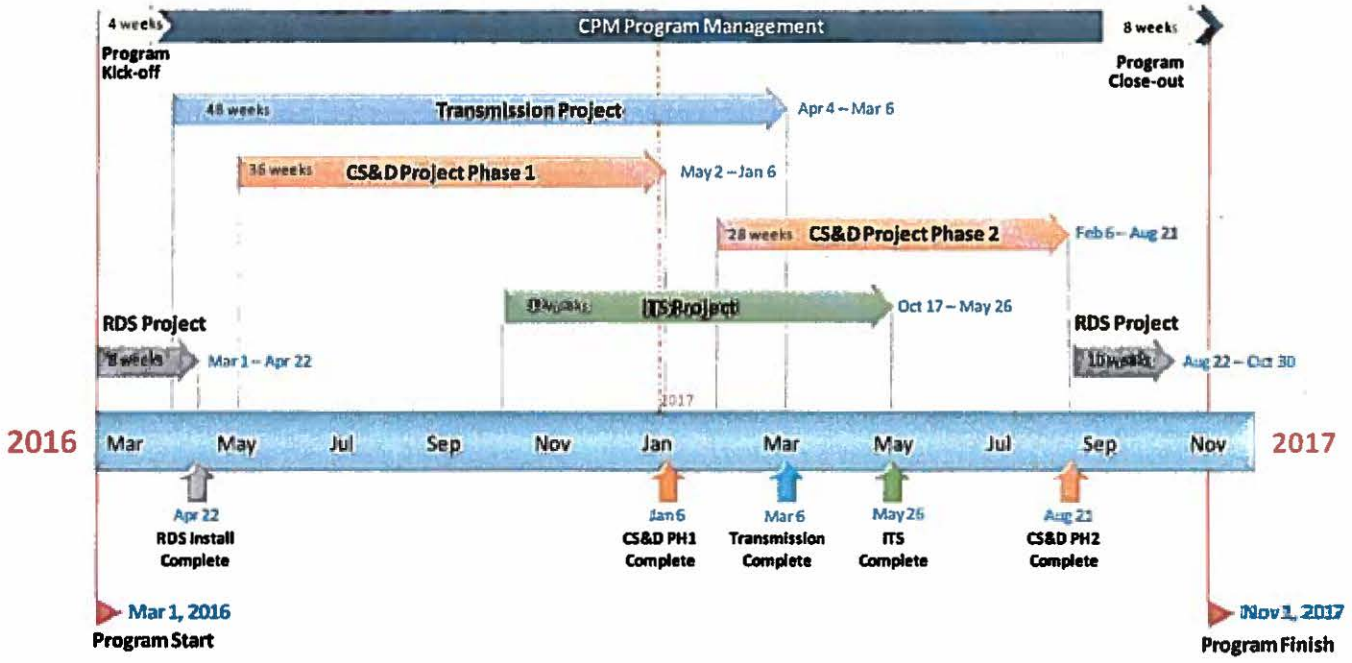
- Strong Executive sponsorship is required for Manitoba Hydro to succeed in this initiative. In support of this, a formal governance structure has been created.

Proposed Schedule

This is the anticipated schedule for the program. The RDS project mentioned below is the integration of C55 with SAP BI/BW as outlined in the Scope section.

The start dates for each project are staggered and the following considerations were made in the creation of the timeline:

- Transmission would like to start as early as possible in 2016;
- CS&D is best implemented in two phases, with the second phase scheduled to allow for asset condition assessment work to complete that will improve the data available to some of the functionality in C55;
- ITS can start in October 2016;
- The software installation component of the RDS project is completed early in the program timeline; however, report creation is scheduled later to ensure that data is available for reporting;
- Overlap time between projects are minimized to avoid strain on common resources; and
- The implementation timeline for each business area allows for the work of applying the Corporate Value Framework with Copperleaf consultants, to an agreed number of projects only, with the view of the Business Unit continuing the evaluation of the remainder of the portfolio at a timeline of their discretion.



APPENDIX "A"

Information Technology Services (I.T.S.)
Capital Project Funding Estimates

Annual Resource Requirements (in hours)					
Cost Centre / Work Centre		2015/16	2016/17	2017/18	Total
Number	Name	(Fiscal Yr1)	(Fiscal Yr2)	(fiscal Yr3)	Hours
50925	Program Management	60.0	1460.0	970.0	2490.0
50683	Finance Support	60.0	1600.0	740.0	2400.0
50811	IT Support	60.0	1070.0	1530.0	2660.0
52080	Transmission BU Staff	30.0	3480.0	0.0	3510.0
52610	CS&D BU Staff	30.0	2190.0	1010.0	3230.0
50802	ITS Div Staff	30.0	1200.0	375.0	1605.0
50683	RDS Business Soln Lead	10.0	60.0	80.0	150.0
Total Hours		280.0	11060.0	4705.0	**16045.0**

Capital Budget Estimate - Annual budget requirements (in thousands of dollars) Include PST where applicable as per PST Guidelines				
Fiscal Year Cost Description	2015/16 (Fiscal Yr1)	2016/17 (Fiscal Yr2)	2017/18 (Fiscal Yr3)	Total Cost
Internal Labour + Overhead	$ 27,594.00	$ 1,110,963.00	$ 462,305.00	$ 1,600,862.00
Vendor Labour, Travel & Accommodations	$ 23,620.00	$ 2,101,931.00	$ 649,229.00	$ 2,774,780.00
Software License	$ 1,686,420.00	$ -	$ -	$ 1,686,420.00
Software Maintenance	$ -	$ 406,728.00	$ -	$ 406,728.00
Hardware	$ -	$ -	$ -	$ -
Team Expenses	$ -	$ 5,000.00	$ 5,000.00	$ 10,000.00
Sub-Total	$ 1,737,634.00	$ 3,624,622.00	$ 1,116,534.00	$ 6,478,790.00
Contingency	$ 5,121.40	$ 321,289.40	$ 111,153.40	$ 437,564.20
Interest & Escalation (Provided by Finance Rep)	$ 36,140.08	$ 202,711.74	$ 211,559.07	$ 450,410.89
Total Cost	$ 1,778,895.48	$ 4,148,623.14	$ 1,439,246.47	**$ 7,366,765.09**

IT Coordinating Committee (ITCC) Approvals		
ITCC(s) Responsible for Approval	Approval Received (Y/N)	Date Approved (yyyy/mm/dd)
Corporate	Y	2016/01/12

Architecture Review (ARC) Acceptances for ITS Managers Only		
Architecture Review Submission	Review Status	Reviewed Date (yyyy/mm/dd)
Gate 1 - Software Product Unknown: Awareness & Functional Fit Review	N/A	N/A
Gate 2 - Software Product Known: Technical Architecture Review	In Progress	
Link to ARC Summary		

Post Implementation Annual Costs	
Hardware Maintenance Fees (if readily available)	$ -
Software Maintenance Fees	$ 414,863.00
Vendor Fees	$ 25,000.00
Other Costs (e.g. additional EFTs, monitoring costs, etc.)	$ -
Total Annual Costs	**$ 439,863.00**
Target Transfer Document (eForm 0514) required and attached (Y/N)	

Other Items (select from drop down menus)	
Is there an existing operating order(s) associated with this project/product or is a new one required?	New Order Number Required
Capital classification - Addition, or Replace/Refurbish/Upgrade	Addition
Product/System/Solution used for Electric, Gas, or Both	Both

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CAPITAL EXPENDITURE REVISION
(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Capital Portfolio Management (CPM)		1.1.4.25.1.50
Responsible Division: Information Technology Services	Requesting Division: Transmission Planning & Design	ProjectNumber: P:26484

DESCRIPTION:
The CPM Program will extend the use of the Copperleaf C55 Asset Investment Planning technology application into Transmission, Customer Service & Distribution (CS&D) and Information Technology lines of business to support the standardization of the Corporation's capital investment planning process. This application is currently in use by Generation Operations business unit and two departments in CS Corporate Value Framework (also from Copperleaf) as an evaluation tool within the C55 software to support capital investment decision making and portfolio prioritization across organizational boundaries. A final component of the project is the implementation of Copperleaf's Reporting Data Store (RDS) which will provide the ability to integrate C55 data into the SAP Business Warehouse for ad-hoc reporting.

JUSTIFICATION:
Provide standardized capital investment planning processes and improve Manitoba Hydro's project portfolio management are the primary objectives of this initiative. The benefits derived from this program can be summarized as follows: (1) allow MH to make value-based, risk-informed decisions; (2) improved budgeting and investment approval processes; (3) improved performance by ensuring investments are aligned with corporate strategy and KPI objectives; and, (4) improve process efficiency, risk management and cost avoidance. Additionally, this Program moves Manitoba Hydro closer to alignment with ISO 55000 and improves the corporation's ability to address regulatory concerns with respect to pacing and prioritization of capital investments.

REVISION:
Contingency $438

REQUESTING DIVISIONS:
Transmission Planning & Design, Business Support and Capital Asset Management, and Information Technology Services.

IN SERVICE DATES		Base estimate 2015/04/01 CLASS 0
2016/03/31	1722	Work start date 2016/02/01
2017/03/31	430	
2017/11/30	5215	

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:						
(Overlunder expend:						
V-DMA TOTAL						
REV. AMOUNTS:						
Actual cost to date:						
(Overlunder expend:						
Auth 2015/16	1743	34	3			1780
Req: 2016/17	3946	98	104			4148
2017/18	1228	48	164			1440
V-HLD TOTAL	6917	180	271			7368

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
	16 02 17	RESPONSIBLE		REQUESTING DIVISION	2016/	VICE-PRESIDENT	16 03

2016/02/17 12:07PM

D1878

CAPITAL PROJECT JUSTIFICATION
FOR

Gillam Fleet Services Garage

REVIEWED BY:
(Requesting Dept Manager)
2016/06/21

NOTED BY:
(if applicable)
KB Berry June 21, 2016

Responsible Division:

Constructing Division:

Financial Department:
(if over $1 million)
2016/06/21

RECOMMENDED FOR IMPLEMENTATION:

Requesting Div. Manager: June 21/16

Business Unit V.P.: June 28/16

BUDGET $: (Total Net Cost)	$3,200,000
START DATE: (1st Cost Flow)	2016 07
IN-SERVICE DATE: (Last Major In-service Date)	2017 02
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

REQUESTING DIVISION:	WS&H and Corporate Services
I.M. NODE NUMBER:	1.1.4.2.9.1
W.B.S. NUMBERs:	P:26964 and P:26965
MAJOR ITEM ☐	**DOMESTIC ITEM** ☒
PREPARED BY:	Thomas Akerstream
DATE PREPARED:	2016 06 10
REPORT NUMBER:	
FILE NUMBER (Optional):	

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☐ Safety	☐ Customer Service
☐ System Supply	☐ Efficiency
☐ System Reliability	☐ Environmental

NERC COMPLIANCE*: ☐ **YES** ☒ **NO**

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION

Project Name

Fleet Services Garage - Gillam

Recommendation

Construct, for Fleet Services, for an approximate cost of $3.2 million, a vehicle service garage in Gillam to replace the existing garage, which is located on the Kettle Generating Station site, and which will be out of service by January 2017.

Project Scope

Fleet Services is presently provides vehicle maintenance and repair services out of a building located on the Kettle Generating Station site. The Kettle building is in complete disrepair and will lose its sewer and potable water supply in December 2016. The cost to refurbish the existing building is greater than the cost of replacing the building with a newly constructed, designed-for-purpose facility. It is preferable to have the new facility located in Gillam so that it is closer to most of the service requirements and other businesses.

The cost of constructing and outfitting the new facility is estimated at $3.2 million.

Background

Fleet Services is currently providing vehicle maintenance and repair services to the Gillam area out of a modified storage building located on the Kettle Generating Station site. The building is in complete disrepair and requires extensive renovation to make it a safe workplace and meet applicable codes, and service standards. The structural integrity of the building is in question, the thermal insulation does not meet code, mechanical and electrical systems have suffered significant water damage and need to be replaced (not feasibly repairable). The building does not meet current building code requirements; in particular, the vehicle exhaust ventilation system is not operational, which poses significant safety and health risks.

JUSTIFICATION—BUSINESS CASE ANALYSIS (SUMMARY):

Justification and Link to Corporate/Business Unit Goals

Water and sewer service to the existing facility will be discontinued by the end of December 2016, rendering the building non-compliant with building code. Fleet Services will not be able to provide essential services in Gillam beyond December 2016 unless the existing facility is extensively refurbished and upgraded or a new structure is constructed. There are also several safety issues with the existing facility that would need to be addressed in order to continue operations in the facility. Other locations to house this service have been investigated; none of the alternative facilities were deemed suitable and all other options were deemed more costly than new construction of a purpose-designed facility. At present, Manitoba Hydro does not have a viable alternative service delivery model/option for providing vehicle maintenance and repair services in Gillam. Therefore, the proposed option is the most cost effective option and the only feasible option to maintain this essential service (and business continuity).

ANALYSIS OF ALTERNATIVES:

Economic Analysis		
Discount Rate	For current corporate rates see G911 %	For clarification on hurdle rates, contact the Economic Analysis Department

Recommended Option	NPV Benefits (Costs)
Name the recommended option and provide its Net Present Value (NPV).	NPV is usually negative in a "cost minimization" project where the justification is other than economic or financial i.e., safety, environment etc.

Other Alternatives Considered	NPV Benefits/(Costs)
List each alternative considered as well as its calculated NPV.	

Risk Analysis
If the building is not constructed Fleet Services will not be able to provide their services in Gillam.

Capital Budget Estimate

Summarize the total capital net cost for the project in thousands of dollars (per the CERs – see Excel table below). CPJs for Major items must be accompanied by at least draft CERs, while CPJs for Domestic items must be accompanied by final CERs.

The annual net budget requirements are as follows (in thousands of dollars):

Fiscal Year	Proposed Budget
Prev. Actuals	$ -
2013/14	$ -
2014/15	$ -
2015/16	$ -
2016/17+	$3,200.00
Total	$3,200.00

Proposed Schedule

Tender for construction to be issued in July. Contractor to begin construction in late August.

Related Projects

none

Reference Documents

none

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Gillam Fleet Servs Garage		1.1.4.2.9.1
Responsible Division	Requesting Division	ProjectNumber:
Workplace Safety & Health and Corp Serv	Workplace Safety & Health and Corp Serv	P:26964 - P:26965

DESCRIPTION:

Construction Gillam Fleet Services Garage:

To construct a garage in Gillam for Fleet Services to replace their existing facility in Kettle. The Kettle facility will be out of service by January 2017, and it will cost approximately $3.2 million to replace it.

Fleet Services has been providing services out of a building in Kettle. The Kettle building is in complete disrepair and will lose its sewer and water supply in December 2016. The cost to refurbish the existing building will be higher than constructing new. Given the opportunity to construct a new building it would be better located in Gillam where all of the business resides. Time is of the essence as the existing water and sewer supply will be discontinued by the end of this calendar year December 2016.

The cost of the new facility is estimated at $3.2 million. This estimate includes the cost of pre-construction which is estimated to be $0.420 million.

Not replacing the facility would increase Fleet Services' costs of operation significantly and will also create an unacceptable down time for the vehicles that need repair.

Fleet Services has been providing service to Gillam by operating out of a modified storage building in Kettle. The building has fallen into complete disrepair and requires extensive renovation. The structural integrity of the building is in question, the insulation values do not meet code, the mechanical and electrical systems need to be completely replaced and have both suffered significant water damage. In addition the building does not meet current building code requirements including the vehicle ventilation system which is non operational creating safety issues in the building.

JUSTIFICATION:

In order for Fleet Services to continue to provide service in Gillam a new structure is required. The existing structure will lose its water and sewer this December (2016) and no longer meets building code. There are also a number of safety related issues that need to be addressed. Other locations to house this service have been investigated, none were appropriate and all were most costly options. Not continuing the service would also be a more expensive option to Manitoba Hydro and would also not be acceptable given the down time required for the vehicle to be repaired.

REFERENCE:

CPJ - "Gillam Fleet Services Garage"

REVISION:

New item.

IN SERVICE DATES				Base estimate
2017/02/28	3199			2016/04/01 CLASS 0
				Work start date 2016/06/01

	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
PREV.AUTHORITY						
Actual cost to date:						
(Over)under expend:						
V-CPJ TOTAL						
REV. AMOUNTS:						
Actual cost to date:						
(Over)under expend:						
Auth 2016/17	3114	35	51			3200
Req.:						
V-HLD TOTAL	3114	35	51			3200

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
AB	16 06 21	RESPONSIBLE DIVISION	16 06 21	REQUESTING DIVISION		VICE-PRESIDENT	16 07 18

2016/06/17 4:34PM 16/06/21 KBerry June 21 2016

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:26964 - P:26965

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2016/17 Apr							
May							
Jun	16					16	16
Jul	385	2				387	403
Aug	425	3	2			430	833
Sep	385	3	4			392	1225
Oct	385	4	6			395	1620
Nov	405	5	7			417	2037
Dec	365	5	9			379	2416
Jan	385	6	11			402	2818
Feb	365	6	12			383	3201
Mar	-2	1				-1	3200
TOTAL	3114	35	51			3200	3200
2017/18 Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Jan							
Feb							
Mar							
TOTAL							

D1876(A)

CAPITAL PROJECT JUSTIFICATION ADDENDUM FOR

Environmental Health & Safety Management

Addendum Number 1

REVIEWED BY:
(Requesting Dept Manager) 2015/12/07

NOTED BY:
(if applicable)

Responsible Division:

Constructing Division:

Financial Department:
(if over $1 million) 15 12 10

RECOMMENDED FOR IMPLEMENTATION:

Requesting Div. Manager: 2015/12/07

Business Unit V.P.:

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

x	Safety	☐	Customer Service
☐	System Supply	☐	Efficiency
☐	System Reliability	☐	Environmental

NERC COMPLIANCE*: ☐ YES x NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

PREV. APPROVED BUDGET $: (Use $ value from approved CPJ or last approved CPJ Addendum)	$1,872,000
REVISED BUDGET $: (Total Net Cost)	$3,166,000
START DATE: (1st Cost Flow)	2015 03
PREV. APPROVED ISD: (Use In-service Date from approved CPJ or last approved CPJ Addendum)	2016 01
REVISED ISD: (Last Major In-service Date)	2016 04
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

REQUESTING DIVISION:	Workplace Safety & Health
I.M. NODE NUMBER:	~~1.1.4.25.1.50~~ 1.1.4.12.1.1
W.B.S. NUMBERs:	P:24606
MAJOR ITEM ☐	**DOMESTIC ITEM** x
PREPARED BY:	Barbara Waters
DATE PREPARED:	2015 12 02
REPORT NUMBER:	
FILE NUMBER (Optional):	

ADDENDUM NUMBER	DATE (yyyy mm dd)	REVISION	REVISED BY	APPROVED BY
1	2015 11 10	1	Barbara Waters	

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION ADDENDUM

Project Name (This section is required for all Addendums).

Environmental Health & Safety Management (EHSM)

Recommendation (This section is required for all Addendums).

The EHSM Project requires a budget increase and schedule extension to accommodate the gaps identified in the blueprinting process.

The project will require an additional $1.3M for internal labour and external consultants to complete the development and implementation of the EHSM module.

Project Scope (This section is be filled out only if there is a change to the scope).

The scope has increased significantly as the standard delivered product from CSC does not meet Canadian regulatory and compliance requirements.

Background (This section is be filled out only if there is information relevant to the recommendation).

The Project team and the Project Sponsor were aware that a re-assessment of the project would need to be undertaken at the completion of the Blueprinting Phase given the large scope of the project. This project involves the installation and implementation of two major components of the SAP EHSM landscape. Without the detailed specifications requirements that arise out of the comprehensive blueprinting process, it was not feasible to provide accurate financial estimates as was attempted in the original Business Case analysis in November 2014.

At Project Initiation stage, the project Team understood that there were major differences in the regulatory reporting and compliance requirements of the Canadian regulatory agencies and their American counterparts. Our site visit to an American utility showed a seamless fit to the USA regulatory protocols for which the SAP Product was designed. Our visit to a Canadian utility involved a demonstration of a highly customized earlier version of the SAP Product.

Our consultant (CSC) for the development and installation of the SAP product has supplied Specification Documents and associated change order funding requirements for the development of the SAP Product to meet our Blueprinted requirements. These increased external costs will also result in increases to internal costs for the Project team and the Information Technology Services Division.

The additional funding will ensure that the Project team will be able to install and implement an EH&S Incident Management system and a Hazardous Substance Management system that will meet the corporation's current and future requirements for regulatory compliance, stakeholder satisfaction and operational efficiency.

Justification (This section is required for all addendums).

Additional funds are required to deliver a fully functional, regulatory-compliant Incident Management and Hazardous Materials system.

Justification (This section is required for all addendums).

As detailed in our original Business case analysis (dated 2014 11 14), there are significant benefits that will be realized from this project, including:

- Reduction of two EFT's (1 Workplace safety , 1 Corporate Environment)
- Improved EH &S Governance and Regulatory Compliance
- Cost avoidance of Fines and penalties
- Technical Currency of information management Systems aligned with SAP enterprise system.
- Process Improvement

While the implementation of these two Components of SAP EH&S will not allow for the full decommissioning of the Safety Net system, it will provide:

- A timely, efficient, Industry standardized approach to Incident Investigation and Management
- A comprehensive framework for Hazardous Substance Information Management including to the new Globally Harmonized protocol for Safety Data systems.

ANALYSIS OF ALTERNATIVES: (This section is be filled out only if there is a change to which alternative is being recommended).

Economic Analysis		
Discount Rate	4.15% For current corporate rates see G911	For clarification on hurdle rates, contact Economic Analysis Department

Recommended Option	NPV Benefits/(Costs)
NPV based on 15-year calculation which includes $200,000 per year for EFT savings.	-$1.1M

Other Alternatives Considered	NPV Benefits/(Cos)
List each alternative considered as well as its calculated NPV.	

Risk Analysis – (This section is be filled out only if there is a change to the project risk).

There is a risk that CSC is not able to complete the required development in the required timeframe, given that they are utilizing off-shore resources which may require extended security clearances.

Total Budget (This section is required for all Addendums).

Complete the Excel table below to compare the proposed revised budget with the last approved CPJ/Addendum in terms of total and annual cost flows, in thousands of dollars (per the CERs). CPJ Addendums for Major items must be accompanied by at least draft CERs, while CPJ Addendums for Domestic items must be accompanied by final CERs.

The impact on annual budget requirements is as follows (in thousands of dollars):

Fiscal Year	Prev. Approved CPJ/Addendum	Proposed CPJ Addendum	Increase (Decrease)
Prev. Actuals	$ 194,000	$ 194,000	$ -
2013/14	$ -	$ -	$ -
2014/15	$ -	$ 9,000	$ 9,000
2015/16	$ 1,678,000	$ 1,665,000	$ (13,000)
2016/17+	$ -	$ 1,298,000	$ 1,298,000
Total	$ 1,872,000	$ 3,166,000	$ 1,294,000

Proposed Schedule (This section is be filled out only if there is a change to the project schedule).

The EHSM module is scheduled for implementation end of Apr, 2016.

Related Projects (This section is be filled out only if changed).

Reference Documents (This section is be filled out only if changed).
A briefing note summarizing the funding request is attached.

APPENDIX "A" - Addendum 1

Information Technology Services (I.T.S.)
Capital Project Funding Estimates

Annual Resource Requirements (in hours)					
Cost Centre / Work Centre		2015/16	2016/17	2017/18	Total
Number	Name	(Fiscal Yr1)	(Fiscal Yr2)	(fiscal Yr3)	Hours
50640	EH&S Integration Dept.	414.0	286.0		700.0
50648	Workplace Safety Dept.	189.0	61.0		250.0
50649	EH&S Integration Dept.	95.0	105.0		200.0
50683	MFS (Finance)	314.0	106.0		420.0
50800	Business Systems Dept.	12.0	8.0		20.0
50811	SAP Logistics	106.0	94.0		200.0
50812	SAP ERP Development	775.0	528.0		1303.0
50814	SAP HR Appl. Support	777.0	483.0		1260.0
50818	SAP Web System Dev.	-87.0	479.0		392.0
50841	Org. Change Management	67.0	45.0		112.0
50870	I.T. I&O (Basis)	314.0	86.0		400.0
50925	Business Systems Projects	167.0	113.0		280.0
Total Hours		3143.0	2394.0	0.0	5537.0

Capital Budget Estimate - Annual budget requirements (in thousands of dollars) Include PST where applicable as per PST Guidelines				
Fiscal Year Cost Description	2015/16 (Fiscal Yr1)	2016/17 (Fiscal Yr2)	2017/18 (Fiscal Yr3)	Total Cost
Internal Labour + Overhead	$ (4,000.00)	$ 193,000.00		$ 189,000.00
Vendor Labour, Travel & Accommodations		$ 951,000.00		$ 951,000.00
Software License		$ 16,000.00		$ 16,000.00
Software Maintenance				$ -
Hardware				$ -
Team Expenses				$ -
Sub-Total	$ (4,000.00)	$ 1,160,000.00	$ -	$ 1,156,000.00
Contingency		$ 90,000.00		$ 90,000.00
Interest & Escalation (Provided by Finance Rep)		$ 48,000.00		$ 48,000.00
Total Cost	$ (4,000.00)	$ 1,298,000.00	$ -	$ 1,294,000.00

IT Coordinating Committee (ITCC) Approvals		
ITCC(s) Responsible for Approval	Approval Received (Y/N)	Date Approved (yyyy/mm/dd)
Human Resource & Corporate Services	Y	2015/11/02

*N/A to Addendum; see original

Architecture Review (ARC) Acceptances for ITS Managers Only		
Architecture Review Submission	Review Status	Reviewed Date (yyyy/mm/dd)
Gate 1 - Software Product Unknown: Awareness & Functional Fit Review		
Gate 2 - Software Product Known: Technical Architecture Review		
Link to ARC Summary	-	

*N/A to Addendum; see original

Post Implementation Annual Costs	
Hardware Maintenance Fees (if readily available)	$ -
Software Maintenance Fees	
Vendor Fees	
Other Costs (e.g. additional EFTs, monitoring costs, etc.)	
Total Annual Costs	$ -
Target Transfer Document (eForm 0514) required and attached (Y/N)	

Other Items (select from drop down menus)	
Is there an existing operating order(s) associated with this project/product or is a new one required?	
Product/System/Solution used for electric, gas, both?	

CEII Rev: 97 12

CAPITAL EXPENDITURE REVISION
(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Environmental Health & Safety Management		1.1.4.25.1.50
Responsible Division: Information Technology Services	Requesting Division: Workplace Safety & Health and Corp Serv	ProjectNumber: P:24606

DESCRIPTION:
The implementation of the SAP Environmental Health & Safety (EHS) module will address technical currency issues with the data management surrounding hazardous materials, as well as streamline and enhance the process involved with incident management, analysis and reporting.

JUSTIFICATION:
Manitoba Hydro must replace the existing software used for collection and reporting of incident data and hazardous materials management. The present systems are disjointed, non-compatible, unsupported, and, in some cases, technically obsolete. Unresolved, these issues could impede the line management ability to fully comply with the requirements of both the Environmental and Occupational Health and Safety management systems in all business units.

REVISION:
Contingency: $125

ADDENDUM:
The EHSM Project requires a budget increase and schedule extension to accommodate the deficiencies identified in the Blueprinting Phase. The scope has increased significantly as the standard delivered product from CSC Canada does not meet Canadian regulatory and compliance requirements. The project will require an increase from $1.873M to $3.166M, an additional $1.293M to complete the development and implementation of the EHSM module.

IN SERVICE DATES				Base estimate 2014/04/01 CLASS 0
2016/04/30	3168			Work start date 2015/01/01

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	193		1			194
(Over)under expend:						
2015/16	1603	29	46			1678
V-DMA TOTAL	1796	29	47			1872
REV. AMOUNTS:						
Actual cost to date:	193		1			194
(Over)under expend:	8	1				9
Auth 2015/16	1602	20	43			1665
Req: 2016/17	1251	39	8			1298
V-HLD TOTAL	3054	60	52			3166

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
JMR	15/12/02	RESPONSIBLE	15/12/07	REQUESTING DIVISION	15/12/07	VICE-PRESIDENT	

2015/12/02 3:31PM

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:24606

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2015/16 Apr	157	1	1			159	159
May	86		2			88	247
Jun	98	1	2			101	348
Jul	64		3			67	415
Aug	74		3			77	492
Sep	80		3			83	575
Oct	97	1	4			102	677
Nov	68	1	4			73	750
Dec	69	1	4			74	824
Jan	157	1	5			163	987
Feb	293	5	5			303	1290
Mar	359	9	7			375	1665
TOTAL	1602	20	43			1665	1665
2016/17 Apr	582	16	8			606	606
May	470	16				486	1092
Jun	199	7				206	1298
Jul							1298
Aug							1298
Sep							1298
Oct							1298
Nov							1298
Dec							1298
Jan							1298
Feb							1298
Mar							1298
TOTAL	1251	39	8			1298	1298

D1876

CAPITAL PROJECT JUSTIFICATION
FOR

Station Transformer Trailer Replacement

REVIEWED BY: Ron Pernerowski
(Owning Dept Manager)

NOTED BY:
(if applicable)

Coordinating Division: Workplace Safety & Health

Constructing Division: Workplace Safety & Health

Financial Department:
(if over $1 million)

RECOMMENDED FOR IMPLEMENTATION:

Owning Div. Manager: Brad Ireland 7/14/15

Business Unit V.P.: Bryan Luc

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☒	Safety	☒	Customer Service
☐	System Supply	☒	Efficiency
☒	System Reliability	☐	Environmental

NERC COMPLIANCE*: ☐ YES ☒ NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

BUDGET $: (Total Net Cost)	$3,000,000
START DATE: (1st Cost Flow)	2016 02
IN-SERVICE DATE: (Last Major In-service Date)	2016 08
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

OWNING DIVISION:	Workplace Safety & Health
I.M. NODE NUMBER:	1.1.4.11.1.1
W.B.S. NUMBERs:	P:25431
MAJOR ITEM ☐	**DOMESTIC ITEM** ☒
PREPARED BY:	Blair Shuturma
DATE PREPARED:	2015 06 30
REPORT NUMBER:	
FILE NUMBER (Optional):	

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION

Project Name

Station Transformer Trailer Replacement

Recommendation

Replace the existing 150 ton capacity trailer for Haulage Services.
Existing trailer no longer has the capacity to transport new station transformers.

Project Scope

Retire the existing trailer and replace with a new trailer currently having specifications being drawn up.

Background

The Supply Chain Performance Enhancement Project reviewed the cost savings associated with outsourcing versus continuing to perform this work internally. The review determined that based on a threshold of five moves per year, the cost for in-sourcing this work got increasingly favorable as the number of transformer moves increased.

JUSTIFICATION—BUSINESS CASE ANALYSIS (SUMMARY):

Justification and Link to Corporate/Business Unit Goals

The existing trailer has capacity for a 55,000 kg payload and to meet future station transformer demand, a trailer with 80,000 – 100,000 kg payload capabilities would be required.

The study found that the case in favour of in-sourcing this work is strongest when the number of moves increases above a threshold of five moves annually. Current forecasts for generating and sub-station transformer moves indicate that there are currently fourteen new transformer moves that are beyond the capacity of existing equipment but would be within capacity if the proposed equipment.

There were some considerations and assessments noted in the review;

- Manitoba Hydro already has the largest asset in performing this work which is expertise in all aspects of performing this work
- Availability of a third party contractor may be a concern especially in an emergency situation
- Contractors may lack flexibility and would require the transformer crews assistance
- May need to assess level of competition and determine if Manitoba Hydro is operating in a captive market
- Less support for operations thereby shifting responsibility over to the stakeholder
- May have to repurpose the transformer crew or reduce headcount

This project supports the recommendations provided from a review of the Haulage transformer crew and outsourcing recently concluded by Ernst & Young in the Target Operating Model portion of the Supply Chain Performance Enhancement Project.

ANALYSIS OF ALTERNATIVES:

Economic Analysis

Discount Rate	For current corporate rates see G911 4.9%	For clarification on hurdle rates, contact the Economic Analysis Department

Recommended Option	NPV Benefits (Costs)
Replace existing trailer with a new trailer with 150 ton capacity allowing for permittable payloads of up to 100,000 kgs.	$1,900,308 This NPV was provided by the Supply Chain Enhancement Program. There is more than incremental costs included in the analysis. This NPV was done to mimic 10 years of the asset.

Other Alternatives Considered	NPV Benefits/(Costs)
Out-sourcing to third party contractor	$3,258,277 This NPV was provided by the Supply Chain Enhancement Program. There is more than incremental costs included in the analysis. This NPV was done to mimic 10 years of the asset.

Risk Analysis

As this work has been performed by Manitoba Hydro's internal transformer crew for many years, there is no risk in upgrading the trailer and continuing to provide this service.

Capital Budget Estimate

The annual net budget requirements are as follows (in thousands of dollars):

Fiscal Year	Proposed Budget	
Prev. Actuals	$	-
2015/16	$	500
2016/18	$	2,500
2017/18	$	-
2018/19+	$	-
Total	$	3,000

Proposed Schedule

RFP – July 2015
Review of RFP & Selection – August 2015

Related Projects

Supply Chain Enhancement Project.

Substation/Generating Station Transformer Moves.

Reference Documents

None.

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION
(IN THOUSANDS OF DOLLARS)

SIMULATED ROLLOVER

Title		Investment Management Node:
Station Transformer Trailer Replacement		1.1.4.11.1.1
Owning Division: Workplace Safety & Health and Corp Serv	Coordinating Division: Workplace Safety & Health and Corp Serv	ProjectNumber: P:25431

DESCRIPTION:
Replace the existing 150 ton capacity trailer for Haulage Services. Existing trailer no longer has the capacity to transport new station transformers.

JUSTIFICATION:
The existing trailer has capacity for a 55,000 kg payload and to meet future station transformer demand, a trailer with 80,000 - 100,000 kg payload capabilities would be required.

The study found that the case in favour of in-sourcing this work is strongest when the number of moves increases above a threshold of five moves annually. Current forecasts for generating and sub-station transformer moves indicate that there are currently fourteen new transformer moves that are beyond the capacity of existing equipment but would be within capacity if the proposed equipment.

IN SERVICE DATES				Base estimate: 2015/04/01 CLASS 0
2016/08/31	3000			Work start date: 2016/02/01

	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
PREV.AUTHORITY						
Actual cost to date:						
(Over)under expend:						
V-CPJ TOTAL						
REV. AMOUNTS:						
Actual cost to date:						
(Over)under expend:						
Auth 2015/16	490	9	1			500
Req: 2016/17	2420	69	11			2500
V-HLD TOTAL	2910	78	12			3000

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd
KC	15 07 15	OWNING DIVISION		COORDINATING DIVISION	15 07 21	VICE-PRESIDENT	15 08 07

2015/07/15 10:30AM

CER(1) Rev. 97 12

CAPITAL EXPENDITURE REVISION

SIMULATED ROLLOVER

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:25431

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2015/16 Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Jan							
Feb	225	4				229	229
Mar	265	5	1			271	500
TOTAL	490	9	1			500	500
2016/17 Apr			2			2	2
May			2			2	4
Jun			2			2	6
Jul			2			2	8
Aug	2420	69	3			2492	2500
Sep							2500
Oct							2500
Nov							2500
Dec							2500
Jan							2500
Feb							2500
Mar							2500
TOTAL	2420	69	11			2500	2500

D1876(A)

CAPITAL PROJECT JUSTIFICATION
FOR

Travel And Expense Management

REVIEWED BY:
(Owning Dept Manager)

NOTED BY:
(if applicable)

Coordinating Division: Corporate Services Division

Constructing Division: IT Services

Financial Department:
(if over $1 million)

RECOMMENDED FOR IMPLEMENTATION:

Owning Div. Manager:

Business Unit V.P.:

BUDGET $: (Total Net Cost)	$1,519,000
START DATE: (1st Cost Flow)	2011 11 01
IN-SERVICE DATE: (Last Major In-service Date)	2013 05 31
RISK MATRIX/ BUSINESS CASE TIER:	
INVESTMENT REASON:	

OWNING DIVISION:	Corporate Services Division
I.M. NODE NUMBER:	1.1.4.25.1.50
W.B.S. NUMBERs:	P:19022
MAJOR ITEM ☐	**DOMESTIC ITEM** ☒
PREPARED BY:	Barbara Waters, Bob Wiebe
DATE PREPARED:	2011 10 24
REPORT NUMBER:	
FILE NUMBER (Optional):	

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION

Project Name

Travel And Expense Management

Recommendation

The Project Team recommends that the Travel and Expense Management project proceed as proposed.

The project involves an enhancement to the current SAP Travel Management module, along with improvements to current processes for travel booking, expense management, and reporting. This will allow the following processes/systems to be integrated into SAP: Corporate Credit Card (VISA), Diners, and Receipts Management.

Project Scope

The proposed Travel and Expense Management project will:

- consolidate all travel and expense-related expenditures within the Travel Management domain,
- simplify travel and expense reporting,
- bring greater transparency to the overall travel and expense expenditures,
- provide greater user convenience and processing efficiencies,
- provide integration with existing SAP modules (HCM - Human Capital Management, Business Intelligence NetWeaver, and Financial Accounting) to enable information sharing. This would eliminate data duplication and entry (e.g. employee and accounting information).
- provide future application opportunities to move to mobility tools (e.g. smart phone applications).

Background

The SAP Travel Management module has been in use at Manitoba Hydro since 2005 and is made available to staff via the Employee Self Service portal, otherwise known as MyHR. The current scope of the Travel Management module is limited to out-of-pocket, personal expenses, vehicle mileage, per diem, and other expense claims. The reporting within the module is limited to the minimally configured portion; some reporting requirements are difficult to obtain.

Other, non-SAP, systems are used to process travel and expense-related information. The widely-used Corporate Credit Card (VISA) expenses are presently utilizing an external online, web-based application and database. Expenses incurred include accommodations, meals, airline charges, services and material purchases. The information must be downloaded for reporting and is not linked to other common reporting applications. The monthly cardholder statements are printed and receipts attached. Approximately 21,000 statements (with receipts) per year for 2600 cardholders are stored in Records Management. Reporting is extensive but limited to the web-based application.

The scheduled airline travel is purchased centrally through the Corporate Travel group and is expensed on Diner's Club (BMO) account. The actual air travel costs for air fare are captured separately and the costs and reconciliation are maintained through paper-based processes. The data for corporate reporting is collected through Diner's and is dependent on their reporting tools. Accommodation, meal, airline charges,

Background

and vehicle rental costs are paid for separately by travelers using their corporation-issued VISA Corporate Cards.

The employee-incurred costs are reimbursed using a portion of the SAP expense module (Travel Management). The out-of-pocket reimbursements include meals and accommodations, per diem, mileage, airline charges, and other expenses similar to expenditures in VISA and Diner's. Data presently collected in the partially configured expense module is difficult to report from and impossible to amalgamate with other information sources.

As a result of the decentralized manner in which the costs are recorded, it becomes very difficult to measure and manage the overall expense. The fiscal expenditure the module would affect annually is:

- $54 million Corporate Card (VISA)
- $20 million Employee incurred and claimed expenses
- $ 5 million Air travel purchases (scheduled airline travel)
- $79 million Total Corporate Expenses.

Management has expressed concerns regarding the lack of consolidated, accurate, and complete reporting. The desired flexibility for data mining includes organizational, pattern, auditing, and efficiency analysis reporting. The purpose is to manage through informed decisions, identifying issues early on, and change process or policies accordingly to reflect fiscal responsibilities. Also, to provide management the ability to restrict choice activities to affect savings or control costs, such as recent travels restrictions, without affecting imperative activities.

The proposed Travel and Expense project scope would include:

- Expansion of the existing module and reporting (via SAP Enhancement Pack 5).
- The initiation of trip requests from within the Travel Management module, including approval workflow requests.
- The delivery of a self-service reservation tool known as GetThere, which is an "Expedia-like" service offering which is integrated with the SAP software.
- A change in process for In-Province travel. Currently, northern staff book directly with the airlines as opposed to using a self-service tool that provides all available fares and options. The proposed process would have all staff book travel via the GetThere self-service booking tool, with costs linked to accounting objects.
- Workflow notifications for approval when discounted fares are in jeopardy due to lead times.
- Managing the reconciliation of Visa transactions through the SAP software, as opposed to the current process. This will result in posting Visa charges to the appropriate Expense Reports within the Travel Management module.
- The digitization of Visa transaction receipts and the storing of the receipt images in SAP, associated with the appropriate trip or expense report.
- Improved travel and expense reporting by centralizing all trip-related expenditures within the Travel Management module.

JUSTIFICATION—BUSINESS CASE ANALYSIS (SUMMARY):

Justification and Link to Corporate/Business Unit Goals

2010-11 CORPORATE STRATEGIC PLAN:

This project is consistent with Corporate Operating Principle: ***Practice continuous improvements*** *through ongoing coaching, learning, and innovation, focused on the needs and wants of internal and external customers.*

The overall travel activity within Manitoba Hydro has increased significantly over the last 6 years, and given the continued capital expansion plans, it is not expected to diminish in the near future.

The implementation of the self-service software, coupled with the approval workflow and business process changes, are expected to deliver a reduction in travel expenditures by a combination of:

- Lower air fares as a result of self-service functionality and improved approval workflow
- Improved expense management resulting from consolidated travel costs.

Tangible Benefit Details and Assumptions:

- Expected Air fare reductions of $25,000 are based on the projections that improved workflow and more timely approvals will allow more economical fares to be secured.

  The expectation is that the new approval process will also include a reminder workflow notification when the proposed trip is encroaching upon the lead time required to secure reduced fares. Also, the module will flag over-budget costs prior to approval and booking.

- Expected Travel Staff Reductions of $120,000 will be delivered via attrition. There are currently three full time staff equivalents that deal with the current travel volume. With the implementation of the GetThere self service functionality, the workload will allow the staffing compliment to be reduced to two full time equivalents.

  The dollars associated with this reduction have been calculated using the current activity rate in the Purchase Business Services cost centre.

- Expected Storage reductions of $45,000 will be accomplished by the electronic capture of the Visa transactions. This will eliminate the physical storage of the Visa statements, resulting in a reduction in fees paid to Iron Mountain. Staff assigned (0.75 of EFT) to the processing of the card statements will be moved to other tasks.

- The additional rebate from VISA, $40,000, is a change from presently using Diner's Club account to purchase the travel tickets. There are no rebates from Diner's whereas by using the traveler's VISA Corporate Card, the cost of travel would be included in the current rebate structure and possibly increase the rate.

Intangible Benefits realized will ultimately deliver value to the Corporation:

- All related costs for a trip will be consolidated within one expense report. Current travel costs are decentralized; consolidating these costs is extremely labour intensive. The consolidation will greatly reduce the effort currently expended in preparing the quarterly travel reports, and will deliver more accurate and transparent travel and expense management reporting

JUSTIFICATION—BUSINESS CASE ANALYSIS (SUMMARY):

Justification and Link to Corporate/Business Unit Goals

- All Visa receipts will be digitized and electronically attached to the Expense reports. This will provide easy access to the transaction details and eliminate the paper copies of the monthly statements and filing of these documents in the Records Management department.

The realization of overall savings is difficult to quantify. However, the possibility is real with enhanced, accurate, and complete reporting of data. The benefits of reduced effort and future savings are real and cannot be ignored. The module affects approximately $79 million in expenditures per year. With enhanced reporting and management follow-through, savings of 1% might be achieved. If so, the payback for the cost of expanding this module could be as little as 2 years. However, we anticipate a gradual escalation of savings over subsequent years as management and process changes are utilized.

The present investment in the SAP Expense module negates any consideration of other applications. Other applications would require interfaces and batching of information to be connected to SAP and other applications, resulting in further development costs. Review of other travel applications indicates similar nature and design and comparable costs and costing structure.

ANALYSIS OF ALTERNATIVES:

Economic Analysis

Discount Rate	For current corporate rates see G911 5.95%	For clarification on hurdle rates, contact the Economic Analysis Department

Recommended Option	NPV (= PV of BENEFITS - PV of COSTS)
Travel And Expense Management with Enhancement Pack 5 (EHP5) - this requires more effort and delivers the GetThere functionality. This option provides the highest return to the company.	$350,000

Other Alternatives Considered	NPV (= PV of BENEFITS - PV of COSTS)
Travel And Expense Management with Enhancement Pack 4 (EHP4) - this would require 53 days less effort but would not provide the GetThere functionality included with EHP5. This option was not selected as EHP5 with GetThere, EFT reduction, and Airfare reduction would not be realized.	($500,000)
Do Nothing This is not considered a viable option.	

Risk Analysis

The largest risk to the overall project budget is the integration of the GetThere service. There are a number of technical considerations that need to be explored in order to ensure the solution is properly integrated into our current SAP landscape.

Risk Analysis

There will also be several process changes that need to be managed and implemented across the Corporation. These include:

- Changes to the manner in which travel is requested and approved
- Changes to the Visa reconciliation
- Scanning of Visa receipts and attaching them to electronic Expense reports.

As a result of these process changes, the Business Solutions Manager will have to determine an effective Change Management strategy to ensure a successful adoption of the new processes.

Other risks to consider:

- The Project Manager, 1 Business Analyst, and 1 Developer are inexperienced in the SAP environment
- Competition for resources, due to other SAP projects, may occur.

RESOURCE REQUIREMENTS AND CAPITAL BUDGET ESTIMATE:

Resource Requirements

Cost Centre	2011/12	2012/13	2013/14
50810 SAP Financial Applications Support	194	565	104
50811 SAP Logistics Applications Support	80	1,515	185
50812 SAP ERP System Development Support	296	1,025	162
50814 SAP HR Applications Support	279	1,653	185
50818 SAP Web Development Support	354	3,748	661
50870 I&O Web & Messaging Management (Basis Support)	240	280	157
50490 Purchasing Business Services	-	1,470	347
Total Resource Requirements (Hours)	**1,443**	**10,256**	**1,801**

Total Budget

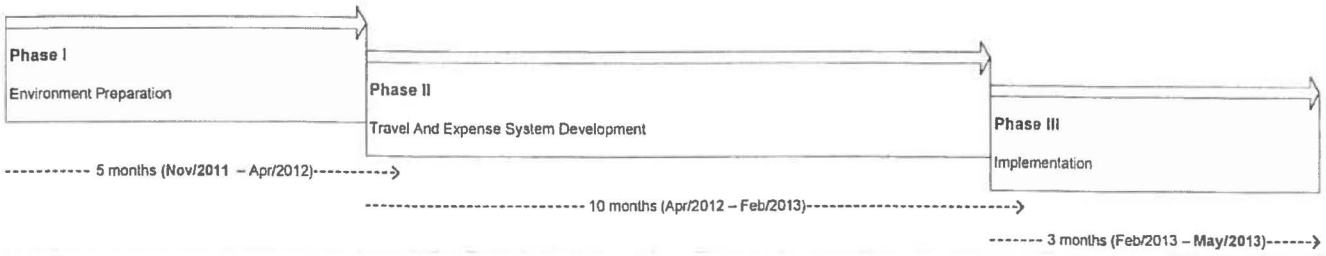
Item	Total
Training	$15,000
Travel & Living	$10,000
Consulting	$100,000
Internal Labour	$1,017,000
Overhead	$173,000
IDC & Escalation	$84,000
Contingency	$120,000
Total Budget	**$1,519,000**

Fiscal Year	Budget
2011/12	$195,000
2012/13	$1,108,000
2013/14	$216,000
Total Budget	**$1,519,000**

The above represent Class 1 estimates (+/- 50%) which will be refined following the completion of the Process and Owner Requirements documents.

Proposed Schedule

Travel And Expense Management – Proposed Schedule



Related Projects

1. Enterprise Asset Management Project - may impact resources.

Reference Documents

1. P290S Costs and Benefits.doc

D1676(A)

CAPITAL PROJECT JUSTIFICATION ADDENDUM FOR

Travel & Expense Managment

Addendum Number 1

REVIEWED BY:
(Owning Dept Manager)
Marc Arnal 2014/01/22

NOTED BY:
(if applicable)

Coordinating Division: Corporate Services Division
2014/01/14

Constructing Division: IT Services

Financial Department:
(if over $1 million)
14/01/24

RECOMMENDED FOR IMPLEMENTATION:

Owning Div. Manager:

Business Unit V.P.:

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☐	Safety	☐	Customer Service
☐	System Supply	☒	Efficiency
☐	System Reliability	☐	Environmental

NERC COMPLIANCE*: ☐ **YES** ☒ **NO**

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

PREV. APPROVED BUDGET $: (Use $ value from approved CPJ or last approved CPJ Addendum)	$1,519,000
REVISED BUDGET $: (Total Net Cost)	$2,272,000
START DATE: (1st Cost Flow)	2011 11
PREV. APPROVED ISD: (Use In-service Date from approved CPJ or last approved CPJ Addendum)	2013 06
REVISED ISD: (Last Major In-service Date)	2014 02
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

OWNING DIVISION:	Corporate Services
I.M. NODE NUMBER:	1.1.4.25.1.50
W.B.S. NUMBERs:	P:19022
MAJOR ITEM ☐	**DOMESTIC ITEM** ☒
PREPARED BY:	Marc Arnal
DATE PREPARED:	2013 12 11
REPORT NUMBER:	
FILE NUMBER (Optional):	

1	2014 01 21	1	Marc Arnal	
ADDENDUM NUMBER	**DATE** (yyyy mm dd)	**REVISION**	**REVISED BY**	**APPROVED BY**

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION ADDENDUM

Project Name (This section is required for all Addendums).

Travel and Expense Management.

Recommendation (This section is required for all Addendums).

The Travel and Expense Management Project requires a schedule extension to accommodate the completion of the User Acceptance Testing and provide sufficient time for training affected Corporate staff. The Travel & Expense module will be implemented on January 25th 2014.

The project will require an additional $750k in internal labour to complete all of the remaining deliverables that have been requested.

Over the course of the project, there have been several factors that have led to the increased costs. The Project Team has run into several technical challenges in providing a complete and operating product, including the integration with the web-based travel service. The reporting has also consumed significantly more time than was original estimated, as the number of reporting deliverables has grown to 40 reports / dashboards. Reporting was always a key deliverable of the project, but the volume is considerably greater than originally anticipated.

Project Scope (This section is be filled out only if there is a change to the scope).

The project scope has increased slightly, in that approval workflows will be required for charter flights. In addition to this, the number of reporting deliverables has grown to 40, from an original estimate of 10. The Project Team, with participation from Purchasing and Finance have developed a comprehensive suite of analytical reports.

Background (This section is be filled out only if there is information relevant to the recommendation).

The TEM Project shifted the implementation date from November 30th 2013, to January 25th 2014. This shift was primarily as a result of delays in completing User Acceptance Testing, which subsequently impacted organizational change management preparations. The testing is now predominantly complete, with a software freeze scheduled for December 17th. Training material is now being assembled for both self service delivery, as well as instructor lead classes. Training will take place in the weeks leading up to the implementation date.

Justification (This section is required for all addendums).

The delivery of the tangible benefits, which is a reduction in staff coordinating travel, will be achieved once the travel functionality is implemented. It is expected the analytics will drive further savings in travel and expense, once data has been accumulated and non policy conformance is identified.

The additional funding requirement does not impact the Net Present Value as the additional costs are not incremental. This project has been staffed entirely with internal labour and no additional resources have been brought into the Corporation to backfill for project team members.

ANALYSIS OF ALTERNATIVES: (This section is be filled out only if there is a change to which alternative is being recommended).

Economic Analysis		
Discount Rate		For clarification on hurdle rates, contact Economic Analysis Department

Recommended Option	NPV Benefits/(Costs)

Other Alternatives Considered	NPV Benefits/(Costs)

Risk Analysis – (This section is be filled out only if there is a change to the project risk).

There is minimal risk in continuing with this project.

Total Budget – (This section is required for all Addendums).

The impact on annual budget requirements is as follows (in thousands of dollars):

Fiscal Year	Prev. Approved CPJ/Addendum	Proposed CPJ Addendum	Increase (Decrease)
Prev. Actuals	$ 567,000	$ 567,000	$ -
2013/14	$ 951,000	$ 1,236,000	$ 285,000
2014/15	$ -	$ 469,000	$ 469,000
2015/16	$ -	$ -	$ -
2016/17+	$ -	$ -	$ -
Total	$ 1,518,000	$ 2,272,000	$ 754,000

Proposed Schedule (This section is be filled out only if there is a change to the project schedule).

The self service booking tool, along with the credit card reconciliation functionality is scheduled for implementation January 25th. The remaining reporting deliverables will be implemented in multiple releases, with the first release scheduled for May 2014, which will contain the senior management travel dashboards. The subsequent analytics will be delivered as they are completed, with the final reports complete in August.

Related Projects (This section is be filled out only if changed).

The Enterprise Asset Management, and Capital Reporting initiatives are competing for the same resource pool that will be used to deliver the analytics for this project. This is contributing to the extended delivery schedule.

Reference Documents (This section is be filled out only if changed).
A briefing note summarizing the funding request is attached.

APPENDIX "A"

INFORMATION TECHNOLOGY SERVICES
CAPITAL PROJECT JUSTIFICATION ESTIMATES
Addendum

Annual Resource Requirements (in hours)

Cost Centre		2012/2013 (fiscal year1)	2013/2014 (fiscal year2)	2014/2015 (fiscal year3)	Total
Number	Name				
50490	Purchasing		300	300	600
50810	SAP Finance Application Support		100	400	500
50812	SAP ERP Development		1000	2000	3000
50814	SAP HR Application Support		300	400	700
50818	SAP Web Development		700	1000	1700
50683	Finance		300	300	600
Total Hours			**2700**	**4400**	**7100**

Capital Budget Estimate – Annual budget requirements (in thousands of dollars) Include PST where applicable as per PST Guidelines.

Fiscal Year Cost Description	2012/2013 (fiscal year 1)	2013/2014 (fiscal year 2)	2014/2015 (fiscal year 3)	Total
Internal Labour + Overhead		$ 282,625	$ 467,125	$ 749,750
Vendor Labour, Travel & Accommodations		$0		$0
Software License		$0		$0
Software Maintenance		$0		$0
Hardware		$0		$0
Team Expenses		$0		$0
Sub-total		$ 282,625	$ 467,125	$ 749,750
Contingency				
Interest & Escalation (provided by IT Business Accounting staff)		$ 2,500	$ 1,500	$ 4,000
Total	**$**	**$ 285,125**	**$ 468,625**	**$ 753,750**

IT Coordinating Committee (ITCC) Approvals

ITCC(s) Responsible for Approval	Approval Received (Y/N)	Date Approved (yyyy/mm/dd)
Customer Care & Marketing		
Customer Service & Distribution		
Finance & Administration		
Power Supply		
Transmission		
HR & Corporate Services	Y	2011/10/24

D1876(A)

CAPITAL PROJECT JUSTIFICATION ADDENDUM FOR

Travel & Expense Managment

Addendum Number 2

REVIEWED BY:
(Owning Dept Manager)

NOTED BY:
(if applicable)

Coordinating Division: Corporate Services Division 2014/12/22

Constructing Division: IT Services

Financial Department:
(if over $1 million) 2014/12/16

RECOMMENDED FOR IMPLEMENTATION:

Owning Div. Manager: 14/12/30

Business Unit V.P. 01/12/15

PRIMARY JUSTIFICATION:
Indicate key project driver(s):

☐	Safety	☐	Customer Service
☐	System Supply	☒	Efficiency
☐	System Reliability	☐	Environmental

NERC COMPLIANCE*: ☐ YES ☒ NO

*Determine if the project requires compliance with North American Electric Reliability Corporation (NERC) CIP Cyber Security Standards.

PREV. APPROVED BUDGET $: (Use $ value from approved CPJ or last approved CPJ Addendum)	$2.272,000
REVISED BUDGET $: (Total Net Cost)	$2,808,000
START DATE: (1st Cost Flow)	2011 11
PREV. APPROVED ISD: (Use In-service Date from approved CPJ or last approved CPJ Addendum)	2013 06
REVISED ISD: (Last Major In-service Date)	2015 03
RISK MATRIX/ BUSINESS CASE TIER: (Optional)	
INVESTMENT REASONS: (Optional)	

OWNING DIVISION:	Corporate Services
I.M. NODE NUMBER:	1.1.4.25.1.50
W.B.S. NUMBERs:	P:19022
MAJOR ITEM ☐	**DOMESTIC ITEM** ☒
PREPARED BY:	Marc Arnal
DATE PREPARED:	2014 11 25
REPORT NUMBER:	
FILE NUMBER (Optional):	

ADDENDUM NUMBER	DATE (yyyy mm dd)	REVISION	REVISED BY	APPROVED BY
2	2014 11 25	2	Marc Arnal	
1	2014 01 21	1	Marc Arnal	

MANITOBA HYDRO
CAPITAL PROJECT JUSTIFICATION ADDENDUM

Project Name (This section is required for all Addendums).

Travel and Expense Management.

Recommendation (This section is required for all Addendums).

The Travel and Expense Management Project was implemented in January 2014, and the majority of the effort since that time has focused on the design and development of reporting to support the new functionality.

The project will require an additional $537k in internal labour to make enhancements to the Travel Manifest and complete the delivery of the reporting to improve the management and control of charter flights. Internal Audit produced an In-Province Air Travel report in January 2014 making several recommendations to enhance air travel reporting. These particular enhancements were deferred by the TEM Steering Committee in order to protect the original in-service date. This particular addendum provides the funding to deliver the deferred functionality.

Project Scope (This section is be filled out only if there is a change to the scope).

The project scope has increased in that approval workflows will be required for charter flights. In addition to this, these enhancements will streamline the cost allocations of charter flights number as these allocations will be determined by the passengers' respective cost centres.

Background (This section is be filled out only if there is information relevant to the recommendation).

The TEM Project went live with self service travel functionality on January 25th 2014 and to date in excess of 3,000 self service travel plans have been created and approved. The expense data is being captured in the data warehouse, and the travel data will be loaded into the warehouse by the end of the calendar year. The travel dashboard and associated reporting will be available in January 2015.

While the project was underway, Internal Audit issued their findings and recommendations regarding In-Province travel. At the time, there was consensus to defer the recommended improvements to the Air Manifest for charter flights. Now that the original scope is nearing completion, the enhanced functionality should be developed in order to respond to the Audit recommendations.

Justification (This section is required for all addendums).

The January 2013 Internal Audit report makes reference to providing information on vacancies on charters and average cost per flight. The proposed enhancements will deliver analytics that outlines the average cost per flight, the costs associated with vacant seats on charters, as well as providing email notifications to Supervisors for all booked northern travel.

ANALYSIS OF ALTERNATIVES: (This section is be filled out only if there is a change to which alternative is being recommended).

Economic Analysis

Discount Rate		For clarification on hurdle rates, contact Economic Analysis Department

Recommended Option	**NPV Benefits/(Costs)**

Other Alternatives Considered	**NPV Benefits/(Costs)**

Risk Analysis – (This section is be filled out only if there is a change to the project risk).

There is minimal risk in continuing with this project.

Total Budget – (This section is required for all Addendums).

The impact on annual budget requirements is as follows (in thousands of dollars):

Fiscal Year	Prev. Approved CPJ/Addendum	Proposed CPJ Addendum	Increase (Decrease)
Prev. Actuals	$ 1,922	$ 1,922	$ -
2014/15	$ 349	$ 886	$ 537
2015/16	$ -	$ -	$ -
2016/17+	$ -	$ -	$ -
Total	$ 2,271	$ 2,808	$ 537

Proposed Schedule (This section is be filled out only if there is a change to the project schedule).

The travel reporting and dashboard will be delivered in January 2015. The Air Manifest enhancements and In-Province analytics will be delivered by the end of March 2015.

Related Projects (This section is be filled out only if changed).

The Enterprise Asset Management, and Capital Reporting initiatives are competing for the same resource pool that will be used to deliver the analytics for this project. This is contributing to the extended delivery schedule.

Reference Documents (This section is be filled out only if changed).

The Internal Audit In-Province Air Travel report is attached.

APPENDIX "A"

INFORMATION TECHNOLOGY SERVICES
CAPITAL PROJECT JUSTIFICATION ESTIMATES
Addendum

Annual Resource Requirements (in hours)

Cost Centre		2012/2013 (fiscal year1)	2013/2014 (fiscal year2)	2014/2015 (fiscal year3)	Total
Number	Name				
50490	Purchasing			500	500
50810	SAP Finance Application Support				
50812	SAP ERP Development			2000	2000
50814	SAP HR Application Support				
50818	SAP Web Development			2000	2000
50683	Finance			500	500
Total Hours				**5000**	**5000**

Capital Budget Estimate – Annual budget requirements (in thousands of dollars) **Include PST** where applicable as per PST Guidelines.

Fiscal Year Cost Description	2012/2013 (fiscal year 1)	2013/2014 (fiscal year 2)	2014/2015 (fiscal year 3)	Total
Internal Labour + Overhead		$0	$ 537,000	$ 537,000
Vendor Labour, Travel & Accommodations		$0		$0
Software License		$0		$0
Software Maintenance		$0		$0
Hardware		$0		$0
Team Expenses		$0		$0
Sub-total		$0	$ 537,000	$ 537,000
Contingency				
Interest & Escalation (provided by IT Business Accounting staff)		$0	$ 0	$ 0
Total	**$**	**$0**	**$ 537,000**	**$ 537,000**

IT Coordinating Committee (ITCC) Approvals

ITCC(s) Responsible for Approval	Approval Received (Y/N)	Date Approved (yyyy/mm/dd)
Customer Care & Marketing		
Customer Service & Distribution		
Finance & Administration		
Power Supply		
Transmission		
HR & Corporate Services	Y	2011/10/24

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CAPITAL EXPENDITURE REVISION

(IN THOUSANDS OF DOLLARS)

Title		Investment Management Node:
Skype for Business		1.1.4.25.1.50
Responsible Division Information Technology Services	Requesting Division Information Technology Services	ProjectNumber: P:25572

DESCRIPTION:

Skype for Business (SFB) replaces Adobe Connect as the corporate-standard for software video conferencing, and introduces new communication and collaboration technologies to the corporation.
This project includes the configuration of Skype for Business server infrastructure, deployment of the Skype for Business software client application to all corporate workstations, and the implementation of meeting room hardware.

JUSTIFICATION:

-Reduce software licensing maintenance costs by replacing Adobe Connect.
-Enable all employees to utilize instant messaging and audio/video conferencing from their workstations, leveraging Microsoft Office licensing that Manitoba Hydro already owns.
-Reduce the corporation's travel expenses required to attend meetings, as a result of increased usage of remote audio/video conferencing within SFB.
-Improve communications and collaboration amongst employees within Manitoba Hydro and with external contacts.
-Increase scheduling flexibility for meetings by reducing the need for employees' to meet in meeting rooms; many meetings can be done by employees from their desks with SFB.
-Allow employees to attend meetings when circumstances prevent them from attending in person.
-Implement audio/video meeting room hardware in select meeting rooms, enabling employees that must meet physically as a group to conference with other remote attendees.

REVISION:

Contingency $20

IN SERVICE DATES		Base estimate 2015/04/01 CLASS 0 Work start date 2015/07/01
2017/03/31	1011	

PREV.AUTHORITY	GROSS	ESCALATION	INT.CAPITALIZED	SALVAGE	CONTRIBUTION	TOTAL NET COST
Actual cost to date:	212		5			217
(Over)under expend:						
2016/17	-212		-5			-217
V-DMA TOTAL						
REV. AMOUNTS:						
Actual cost to date:	212		5			217
(Over)under expend:	51	1				52
Auth 2016/17	697	22	22			741
Req.:						
V-HLD TOTAL	960	23	27			1010

Prepared by	yy mm dd	Approved by	yy mm dd	Approved by	yy mm dd	Approved by
	160802	RESPONSIBLE	16 08 02	REQUESTING DIVISION	16 8 16	VICE-PRESIDENT

2016/08/02 2:47PM fw w/Attn Acct

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CAPITAL EXPENDITURE REVISION

FORECAST HISTORY (in thousands of dollars)

ProjectNumber P:25572

Approved yy mm	TOTAL AMOUNT	COMMENTS

Forecasted Mthly Exp.	GROSS	ESCALATION	INTEREST CAP.	CONTRIBUTION	SALVAGE	TOTAL NET COST	YTD Accumulated
2016/17 Apr	16		1			17	17
May			1			1	18
Jun			1			1	19
Jul			1			1	20
Aug			1			1	21
Sep	97	3	1			101	122
Oct	97	3	2			102	224
Nov	102	3	2			107	331
Dec	92	3	3			98	429
Jan	97	3	3			103	532
Feb	92	3	3			98	630
Mar	104	4	3			111	741
TOTAL	697	22	22			741	741
2017/18 Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Jan							
Feb							
Mar							
TOTAL							