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Nova Scotia
Utility and Review Board

CI 16497

HYD Nictaux Electrical Refurbishment

REDACTED

September 2, 2010

NOVA SCOTIA
POWER
An Emera Company

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POWER
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UARB APPROVAL SHEET

Project Title: **HYD Nictaux Electrical Refurbishment**

CI Number: 16497

☒ Capital Project Authorization

Head Office Use:

☐ ATO

Project Number: H593

☐ Final Cost

Date: July 30, 2010

Location:			Division:	
Expenditure Profile			Schedule	
YEAR	Budget Estimate	Project Estimate		
2010	662,935	662,307	Estimated Start Date	2010-04
			Estimated In-Service Date	2010-11
			Estimated Close Date	2010-12
Total	\$662,935	\$662,307		

COMMENTS

Submitted on behalf of NOVA SCOTIA POWER INCORPORATED

Approved on behalf of NOVA SCOTIA UTILITY AND REVIEW BOARD

M/S Savory

Aug 25/2010

Authorized Signatory

DATE

DATE

Mark Savory

VP Technical and Construction

CI Number : 16497-H593 - HYD Nictaux Electrical Refurbishment Project Number H593

Parent CI Number : - Budget Version - 2010 04/08 Forecast

Cost Centre : 431 - 431-Nictaux/Paradise System

Forecast

Start :	04/01/2010
Operational :	11/30/2010
Final Cost :	12/31/2010
2010	\$662,307.82
Total :	\$662,307.82
Original Cost :	\$0.00

This project consists of replacing the existing 56 year old medium voltage switchgear at the Nictaux powerhouse.

Summary of Related CI's +/- 2 years
No other projects in 2008,2009,2010,2011 and 2012

CI Number : 16497-H593 - HYD Nictaux Electrical Refurbishment

Project Number H593

Parent CI Number :

Approved Date 4/27/2010

Cost Centre : 431

- 431-Nictaux/Paradise System

Budget Version 2010 04/08 Forecast

Capital Item Accounts

Acct	Actv	Account	Activity	Forecast Amount	Amount	Variance
092	005	092-Vehicle Cust. Serv. OT Labour A	005 Indirect Costs	781	0	781
092	005	092-Vehicle Cust. Serv. Reg. Labour	005 Indirect Costs	1,561	0	1,561
094	005	094 - Interest Capitalized	005 Indirect Costs	9,849	0	9,849
095	005	095-COPS Overtime Labour AO	005 Indirect Costs	2,216	0	2,216
095	005	095-Thermal & Hydro Contracts AO	005 Indirect Costs	17,001	0	17,001
095	005	095-Hydro Regular Labour AO	005 Indirect Costs	3,410	0	3,410
095	005	095-Hydro Overtime Labour AO	005 Indirect Costs	648	0	648
095	005	095-COPS Regular Labour AO	005 Indirect Costs	4,431	0	4,431
012	022	012 - Materials	022 - HGP - Elec Contr.Equip.	324,000	0	324,000
013	022	013 - POWER PRODUCTION Contracts	022 - HGP - Elec Contr.Equip.	150,000	0	150,000
001	085	001 - HYDRO Regular Labour	085 Design	11,904	0	11,904
002	085	002 - HYDRO Overtime Labour	085 Design	1,048	0	1,048
013	085	013 - POWER PRODUCTION Contracts	085 Design	77,504	0	77,504
001	086	001 - HYDRO Regular Labour	086 Commissioning	5,600	0	5,600
001	086	001 - CUST. SERV. Regular Labour	086 Commissioning	5,600	0	5,600
002	086	002 - HYDRO Overtime Labour	086 Commissioning	5,600	0	5,600
002	086	002 - CUST. SERV. Overtime Labour	086 Commissioning	5,600	0	5,600
011	086	011 - Travel Expense	086 Commissioning	2,500	0	2,500
041	086	041 - Meals & Entertainment	086 Commissioning	1,000	0	1,000
013	087	013 - POWER PRODUCTION Contracts	087 Field Super. & Ops.	32,056	0	32,056
Total Cost:				662,308	0	662,308
Original Cost:						

CI Number : 16497-H593	- HYD - Nictaux Electrical Refurbishm	Project Number	H593
Parent CI Number :	-	Approved Date	4/27/2010
Cost Centre : 431	- 431-Nictaux/Paradise System		

Capital Item Justification

Justification Criteria : HEALTH & SAFETY

Sub-Criteria : Equipment Replacement

Name of Report :

Document Location :

Person Responsible :

Why do this project?

A condition and risk assessment of the medium voltage switchgear at the Nictaux powerhouse was completed. The assessment revealed the existing oil-filled circuit breakers, power cables, control relays, protective relays, and voltage regulators are obsolete and have reached the end of their useful life.

Why do this project now?

This equipment has reached the end of its useful life. Failure of the switchgear or protective relays under fault conditions could present a risk of damage to the physical plant. This could also expose the hydro turbine generator to potential damage.

Why do this project this way?

Replacement of equipment of this vintage with modern electrical equipment is standard industry practice.

Revised

The cost estimate for this project is based on a similar project completed in 2006 - Paradise Electrical Refurbishments (CI 16496).

This project has been activated,

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Generation Responses

Request IR-G9:

With respect to the following:

Page 27, CI# 16497, HYD Nictaux Electrical Refurbishment, and

Page 28, CI# 16495, White Rock Electrical Refurbishment

a) Please provide a copy of the studies and reports that justify the work proposed at these facilities.

b) Please provide a breakdown of the budgets for each project.

c) Have overall assessments of other major components (exclusive of dams) been completed for hydro facilities? If not, are plans in place to do assessments?

Response IR-G9:

a) Please refer to Confidential Attachment 1 justifying the work proposed at the White Rock and Nictaux facilities be completed in 2010. It provides an assessment of NSPI's medium voltage switchgear. This attachment is confidential because the information included is the intellectual property of the consultant and was provided for the Company's sole and confidential use. Third party consultants and suppliers have a reasonable expectation that their proprietary interests in the content or analysis will be protected from public disclosure. Disclosure of their work product may impair their ability to obtain work from others at a reasonable price or in a manner acceptable to the consultant. Further, where such a report anticipates future action by NSPI, premature disclosure of such anticipated action could affect the approach of potential suppliers and cause increased costs to customers in a future competitive solicitation.

REDACTED

Response IR-G9: (cont'd)

b) As stated on page iv of the report, "The White Rock and Nictaux stations should be upgraded within the next year. If this is not possible, the decision as to the order of priority should be based on the results of further inspection and testing, and developing problems and operational concerns". In addition to the policies and practices in place to address the potential safety issues identified in the report, NSPI is in the process of proactively modifying procedures where necessary to ensure any risk to personnel and equipment are appropriately mitigated.

c) The breakdown of the estimated project costs are as follows:

CI 16497 – HYD Nictaux Electrical Refurbishment:

- Regular Labour: \$23,105
- Overtime Labour: \$12,250
- Materials: [REDACTED]
- Contracts – Design: \$77,500
- Power Production Contracts: [REDACTED]
- Expenses (Travel/Meals): \$4,280
- Interest / AO: 41,800

CI 16495 – HYD White Rock Electrical Refurbishment:

- Regular Labour: \$28,700
- Overtime Labour: \$6,650
- Materials: [REDACTED]
- Contracts – Design: \$37,505
- Power Production Contracts: [REDACTED]
- Expenses (Travel/Meals): \$3,500
- Interest / AO: 37,835

REDACTED

1 Response IR-G9: (cont'd)

2
3 To protect value for customers and mitigate the risk of prospective proponents having access
4 to project budget information, the estimated costs for materials and power production
5 contracts are confidential. All purchase orders and contracts for supply of materials and
6 installation have not yet been issued or finalized.

7
8 The more a supplier is aware of NSPI's specific requirements, the better their ability to
9 obtain the highest price, reduce competition and ultimately increase the cost for NSPI and its
10 customers. The cost of such transparency is not always immediately evident. Information
11 from regulatory proceedings can provide competitive advantages over other suppliers, and
12 that could be advantageous in bidding or negotiation. Higher prices, or avoidable contractual
13 constraints, will result in unnecessary higher costs to customers.

14
15 d) The overall assessment of major components exclusive of dams is not currently a program
16 that is in place, but is in the process of being developed. NSPI has identified and prioritized
17 the major hydro asset classes to be assessed.

NON-CONFIDENTIAL

Generation Responses

Request IR-G40:

With reference to IR-G9, some of these components are, according to the report, in bad shape, why were these allowed to deteriorate to such a degree before replacing?

Response IR-G40:

NSPI will run equipment until scheduled maintenance is executed, unless there are operating conditions which necessitate earlier intervention. It is not uncommon for some components to be in better, or worse physical condition than anticipated. They may not show signs of deteriorated performance prior to scheduled inspection, at which time it would be identified and assessed. If the deterioration was something that could assist future maintenance cycle decisions, the information would be used to modify plans, or inspection intervals.