

**CENTRAL MAINE POWER COMPANY
 RESPONSE TO INDUSTRIAL ENERGY CONSUMER GROUP'S DATA
 REQUEST NO. 1
 DOCKET No. 2008-255**

October 23, 2008

IECG-01-07

- Q.** Please provide CMP's annual investment in transmission plant for each year from 1998 to 2008. If possible, please provide a printout of 1998 to 2008 transmission investment by job or line or any other designation that shows the date, cost and reason for the investment.
- A.** The table below contains CMP's actual transmission investment for the period 2003 through 2008. CMP does not have the requested transmission data prior to 2003. Detail project information is attached for the majority of the major transmission projects for the period 2006 through 2008. The detail project information shows planned cost and the reason for and timing of the project. CMP does not have detailed project information before 2006.

**Central Maine Power Company
 Annual Transmission Investment**

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u> YTD August
Transmission	\$7,502	\$10,723	\$10,969	\$21,521	\$75,521	\$66,455
Buildings & Structures	119	127	270	392	268	74
Transportation *	1	163	546	397	1,181	189
Information Technology	487	336	393	210	90	162
Other General Property	242	(86)	(2)	289	262	252
Total Capital Expenditure	<u>8,351</u>	<u>11,264</u>	<u>12,175</u>	<u>22,809</u>	<u>77,321</u>	<u>67,132</u>

* (Vehicles were leased 2001-2003)

Response Prepared By:

Tracey Smith
 Lead Analyst, Regulatory Support

Response Submitted By:

Paul A. Dumais
 Director, Regulatory Services

Attachments:

1. 2008 Transmission major Models.pdf
2. 2007 Transmission major Models.pdf
3. 2006 Transmission major Models.pdf

Maguire Road 115 kV Switchyard - Central Maine Power

Capital Project Business Case

Project Title: Maguire Road 115 kV Switchyard	Project Number: CMP-08-01
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Project Type: Infrastructure
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2008 Capital	\$16,070
Capital Needed to Complete Project:	\$16,070
Prior Capital Spent:	\$16,010
Total Project Capital:	\$32,081

Description of Project:

This 2007-08 project involves: 1) relocating the Maguire Rd Switchyard so that it intersects with three 115 kV T-lines (S140, S163 & S250), 2) adding nine 115 kV breakers to the yard, 3) connecting the three T-lines to the breakers, 4) adding a 50 MVar, 115 kV capacitor to the yard, 5) rebuilding 30.5 mi. of 115 kV transmission (S163, S197 & S219), 6) reconductoring 9.3 mi. of 115 kV transmission (S220), 7) upgrading 115 kV relays at five neighboring S/S's, 8) building / upgrading control house / breakers at Louden S/S and 9) installing four new 345 kV breakers at Buxton S/S.

Summary of Project Justification and Benefits:

This major project will substantially reduce the exposure CMP's southern Maine 115 kV transmission system currently has to low voltages (below Maine PUC allowed minimums) and high currents (in excess of the thermal limits of the conductors) that will result from any number of equipment failures and system faults on both CMP's and PSNH's systems. Some failures and faults on CMP's system will also affect voltages on PSNH's coastal system. In some cases, voltages and currents can only be corrected through load shedding. Although each individual failure or fault has a relatively low probability of occurring, there is, in the aggregate, a much higher probability that CMP's system will experience one of the events. The widespread impacts of such an event would be highly publicized, likely resulting in a regulatory investigation and costly outcome.

Budget Year of Expenditures:	2008	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$27,303
Internal Rate of Return [%]		27.5%
NPV Payback in years	5.1	
Cash Payback in years	4.4	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Woodstock Reinforcements - Central Maine Power

Capital Project Business Case

Project Title:	Project Number:
Woodstock Reinforcements	CMP-08-03

Project Type:	2008 Capital	\$11,190
Infrastructure	Capital Needed to Complete Project:	\$11,190
	Prior Capital Spent:	\$2,461
	Total Project Capital:	\$13,651

Description of Project:
 This 2007-08 project involves 1) adding a second 115/34 kV transformer, six 115 kV breakers and a new control house at the existing Woodstock S/S, 2) bringing an existing 115 kV transmission line (S217) that currently passes Woodstock S/S into the S/S, and 3) rebuilding the existing 115 kV transmission line (S211) that runs from Woodstock S/S to Rumford. (this project was previously approved as CMP-07-28; some spending on the S211 rebuild has slipped from 2007 to 2008 because of a land acquisition issue and a system requirement that a portion of the Y138 project be completed first)

Summary of Project Justification and Benefits:
 The project will correct two deficiencies. First, it will eliminate the risk of having to shed up to 31 MW of load in the Woodstock / Bethel area (includes Sunday River and Mt. Abram ski areas) due to a failure of the existing 115/34 kV transformer at Woodstock S/S or a fault on either of the two 115 kV transmission lines feeding the S/S. Any such failure would reduce area volt ages to less than 70% of the MPUC standard and would load another area 34.5 kV transmission line to 167% of its design rating. Second, it will, in conjunction with the Y138 and Rumford Reinforcement Projects, substantially strengthen the Western Maine transmission system which currently suffers exposure to a number of contingencies that can affect voltages and restrict power flows. The region supports a large paper mill, multiple ski areas, a number of generators, and several proposed wind farms.

Budget Year of Expenditures :	2008	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$7,465
Internal Rate of Return [%]		15.1%
NPV Payback in years	9.9	
Cash Payback in years	7.3	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Boothbay Area Reinforcements - Central Maine Power

Capital Project Business Case

Project Title: Boothbay Area Reinforcements	Project Number: CMP-08-05
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Project Type: Infrastructure	<table border="1"> <tr> <td>2008 Capital</td> <td>\$3,316</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$3,316</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$5,502</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$8,818</td> </tr> </table>	2008 Capital	\$3,316	Capital Needed to Complete Project:	\$3,316	Prior Capital Spent:	\$5,502	Total Project Capital:	\$8,818
2008 Capital	\$3,316								
Capital Needed to Complete Project:	\$3,316								
Prior Capital Spent:	\$5,502								
Total Project Capital:	\$8,818								

Description of Project:
This 2007-08 project involves 1) 2-115 kV breakers, 2nd 20/37 MVA 115/34 kV LTC transformer, 34 kV breaker & 5.4 MVar 34 kV cap bank with breaker at Newcastle S/S, 2) 3-34 kV breakers, 5.4 MVar 34 kV cap bank with breaker & new control house at Edgecomb S/S, 3) 5.4 MVar 34 kV cap bank, new control house & SCADA at Boothbay Harbor S/S, 4) 34 kV breaker, 3.6 MVar 34 kV cap bank with breaker, new control house & SCADA at Damariscotta Mills S/S, 5) 34 kV transformer upgrade & new 12 kV circuit at Bristol S/S, 6) 37 mi. of 34 kV T-line re-rates, and 7) 2 relay upgrades.

Summary of Project Justification and Benefits:
This project is a comprehensive upgrade (four S/S's and five transmission lines) of the 34 kV transmission system that supplies the greater Boothbay region. System studies indicate that, within the next several years, the system will experience overloading of multiple system components, particularly under various contingency situations (loss of any number of transmission lines and/or transformers). In some instances, voltage drops will require load shedding in order to maintain system integrity. The area, which includes the coastal region from the Boothbay peninsula to areas south of Damariscotta, has experienced strong load growth due to the construction of shore-front homes and tourist-related commercial development. Long radial feeds down the various peninsulas mean that outages will affect large numbers of customers, particularly during the peak-load summer months.

Budget Year of Expenditures:	2008	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Total Project
Net Present Value (\$000)	\$5,788
Internal Rate of Return [%]	29.3%
NPV Payback in years	4.9
Cash Payback in years	4.3

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Rumford Area Reinforcements - Central Maine Power

Capital Project Business Case

Project Title: Rumford Area Reinforcements	Project Number: CMP-08-28
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Project Type: Infrastructure	<table border="1"> <tr> <td>2008 Capital</td> <td>\$2,654</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$4,429</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$0</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$4,429</td> </tr> </table>	2008 Capital	\$2,654	Capital Needed to Complete Project:	\$4,429	Prior Capital Spent:	\$0	Total Project Capital:	\$4,429
2008 Capital	\$2,654								
Capital Needed to Complete Project:	\$4,429								
Prior Capital Spent:	\$0								
Total Project Capital:	\$4,429								

Description of Project:
This 2008-09 project involves 1) constructing a new 115 kV substation with ring bus on Railroad St in Rumford to separate the single 115 kV T-line (S218) that currently feeds the NewPage paper mill into two 115 kV T-lines that will separately feed NewPage and interconnect with Rumford Falls Hydro, 2) building a new 2 mile 115 kV T-line (S243) to interconnect the new Railroad St S/S with the existing Rumford IP S/S, 3) expanding the Rumford IP S/S in order to interconnect the new 115 kV T-line, and 4) adding a 25 MVA and a 30 MVA capacitor bank at Rumford IP S/S and IP-Riley S/S, respectively.

Summary of Project Justification and Benefits:
This project will resolve two issues. First, the Rumford Falls Hydro facility, which currently feeds the NewPage paper mill, has been sold by NewPage and now requires direct interconnection with CMP's system. The new Railroad St S/S will separate the hydro facility from the mill. NewPage will pay the cost of the new S/S. Second, various contingencies in the Rumford area transmission system (failure of a T-line, stuck breaker, etc.) would require CMP to shed load (primarily at the NewPage paper mill) in order to avoid unacceptable voltage sags, or order area generators to reduce output (there are currently three generating facilities in Rumford and several area wind farms are proposed) in order to avoid potentially catastrophic T-line overloads. The new 115 kV T-line and capacitor banks will substantially reduce the risk of either event occurring.

Budget Year of Expenditures :	2008	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$1,665
Internal Rate of Return [%]		11.3%
NPV Payback in years	15.7	
Cash Payback in years	9.9	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Lewiston-Auburn Area Reinforcements - Central Maine Power

Capital Project Business Case

Project Title: Lewiston-Auburn Area Reinforcements	Project Number: CMP-08-30
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Project Type: Infrastructure	<table border="1"> <tr> <td>2008 Capital</td> <td>\$1,400</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$21,000</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$0</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$21,000</td> </tr> </table>	2008 Capital	\$1,400	Capital Needed to Complete Project:	\$21,000	Prior Capital Spent:	\$0	Total Project Capital:	\$21,000
2008 Capital	\$1,400								
Capital Needed to Complete Project:	\$21,000								
Prior Capital Spent:	\$0								
Total Project Capital:	\$21,000								

Description of Project:
 This 2008-2011 project involves 1) constructing a new Middle St S/S in downtown Lewiston with two 22 MVA 115/12 kV transformers, a 37 MVA 115/34 transformer, ten 12 kV circuit positions and two 34 kV circuit positions, 2) building a new 115 kV transmission line from Gulf Island S/S to the new Middle St. S/S, then continuing on to Lewiston Lower S/S (total 4-5 miles depending on route), 3) moving eight 12 kV distribution circuits and a 34 kV generator interconnection (Monty Hydro) from Lewiston (Steam) S/S to the new Middle St S/S, and 4) dismantling the existing Lewiston S/S.

Summary of Project Justification and Benefits:
 The project will correct multiple transformer and 34 kV sub-transmission line overloads in the Lewiston-Auburn (L-A) area. Downtown L-A is fed by several 34 kV sub-transmission lines and 34/12 kV substations. The recently completed Lewiston-Auburn Area Study revealed that, by 2010, a number of the lines and S/S transformers will be overloaded. Overloading and voltage sags will be particularly acute given any number of transmission line or transformer/bus failures. The in-town location and physical space and condition at Lewiston S/S significantly limit CMP's options. The City of Lewiston is very supportive given their plan to redevelop in-town Lewiston; due to the overload situation, growth potential is limited, and they would like to see Lewiston S/S moved. Since this is a 115 kV project, Maine PUC approval will be required which may potentially result in regulatory delays.

Budget Year of Expenditures:	2008	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Total Project
Net Present Value (\$000)	\$36,434
Internal Rate of Return [%]	19.5%
NPV Payback in years	14.6
Cash Payback in years	12.1

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Surowiec SS 115 KV Protection/Control Upgrade - Central Maine Power

Capital Project Business Case

Project Title: Surowiec SS 115 KV Protection/Control Upgrade	Project Number: CMP-08-06
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Project Type: Infrastructure	<table border="1"> <tr> <td>2008 Capital</td> <td>\$3,372</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$3,372</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$1,798</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$5,170</td> </tr> </table>	2008 Capital	\$3,372	Capital Needed to Complete Project:	\$3,372	Prior Capital Spent:	\$1,798	Total Project Capital:	\$5,170
2008 Capital	\$3,372								
Capital Needed to Complete Project:	\$3,372								
Prior Capital Spent:	\$1,798								
Total Project Capital:	\$5,170								

Description of Project:
This 2007-08 project will upgrade the 115 kV portion of Surowiec S/S in Pownal. Specifically, the project involves 1) adding a control house, 2) replacing 10 breakers and upgrading associated relaying, 3) replacing 3 voltage transformers and adding / replacing up to 24 coupling capacitor voltage transformers on various buses and T-lines, 4) upgrading primary & back-up relays on 7 T-lines & 2 buses, 5) upgrading primary relays on the remote ends of 6 T-lines, 6) upgrading SCADA, 7) replacing batteries, and 8) adding / replacing lightning arrestors. (previously approved as CMP-07-28)

Summary of Project Justification and Benefits:
The project will upgrade existing protection / control equipment at Surowiec S/S which was installed in the late 1960's. The S/S has been experiencing operational / maintenance issues with growing frequency due to the deteriorating condition of the equipment. Problems include old electro-mechanical relays, breakers and other protective devices that need constant maintenance, and coupling capacitor voltage transformers (CCVT) that have started to fail. One CCVT recently experienced a catastrophic failure that tripped 3 - 115 kV T-lines; wind gusts sent foil strips from the CCVT onto the 115 kV bus while crews were making repairs. Surowiec S/S is a critical part of CMP's 115 kV / 34 kV transmission system because it is a central hub for numerous 115 kV and 345 kV transmission lines. Thus, system failures are highly visible and, as the situation worsens, will likely result in substantial number of claims, complaints and regulatory investigation.

Budget Year of Expenditures:	2008	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$4,277
Internal Rate of Return [%]		23.7%
NPV Payback in years	6.2	
Cash Payback in years	5.3	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Detroit SS Protection/Control Upgrade - Central Maine Power

Capital Project Business Case

Project Title: Detroit SS Protection/Control Upgrade	Project Number: CMP-08-07
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Project Type: Infrastructure	<table border="1"> <tr> <td>2008 Capital</td> <td>\$1,999</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$1,999</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$1,571</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$3,569</td> </tr> </table>	2008 Capital	\$1,999	Capital Needed to Complete Project:	\$1,999	Prior Capital Spent:	\$1,571	Total Project Capital:	\$3,569
2008 Capital	\$1,999								
Capital Needed to Complete Project:	\$1,999								
Prior Capital Spent:	\$1,571								
Total Project Capital:	\$3,569								

Description of Project:
 This 2007-08 project involves 1) adding a control house at Detroit S/S, 2) replacing three 115 kV breakers, three 34 kV breakers, and a circuit switcher on the 115/34 kV transformer, 3) upgrading the 115 kV bus, 4) upgrading relays on four 115 kV T-lines (includes remote end at Wymen Hydro S/S) and on the 115 kV bus, 5) upgrading relays on two 34 kV T-lines and on a 34 kV capacitor bank and 115/34 kV transformer, 6) upgrading SCADA, 7) upgrading 12 kV recloser controls, and 8) making other miscellaneous improvements such as replacing control cables and conduits / duct banks.

Summary of Project Justification and Benefits:
 The project will upgrade existing protection / control equipment at Detroit S/S, most of which is 30-50 years old. The S/S has been experiencing operational/maintenance issues with growing frequency due to deteriorating condition of equipment. Problems include old electro-mechanical relays, breakers and other protective devices that need constant maintenance, collapsing duct work and foundations, and frayed wiring and damaged cabling. Some customer interruptions have occurred although major outages have been avoided thus far. Detroit S/S is a critical part of CMP's 115 kV / 34 kV transmission system that supports an extensive area in the northeastern part of CMP's service territory. Thus, system interruptions are highly visible and, as the situation worsens, will likely result in substantial number of claims, complaints and regulatory investigation.

Budget Year of Expenditures:	2008	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$1,473
Internal Rate of Return [%]		17.0%
NPV Payback in years	8.1	
Cash Payback in years	6.7	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Augusta East Side SS Protection/Control Upgrade - Central Maine Power

Capital Project Business Case

Project Title: Augusta East Side SS Protection/Control Upgrade	Project Number: CMP-08-20
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Project Type: Infrastructure	<table border="1"> <tr> <td>2008 Capital</td> <td>\$1,002</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$1,002</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$0</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$1,002</td> </tr> </table>	2008 Capital	\$1,002	Capital Needed to Complete Project:	\$1,002	Prior Capital Spent:	\$0	Total Project Capital:	\$1,002
2008 Capital	\$1,002								
Capital Needed to Complete Project:	\$1,002								
Prior Capital Spent:	\$0								
Total Project Capital:	\$1,002								

Description of Project:
 This project is a comprehensive upgrade of the 34 kV and 115 kV protection and control systems at Augusta East S/S. In particular, the project involves 1) replacing all of the roughly 40 year old electromechanical relays with new electronic relays (including relays on five 34 kV T-lines, two 115 kV T-lines, one 34 kV bus, one 115/34 kV transformer and one 34 kV capacitor bank), 2) adding a 115 kV breaker on a 115 kV transmission line that currently has no breaker, 3) replacing a 115 kV circuit switcher, and 4) replacing the old SCADA system.

Summary of Project Justification and Benefits:
 The project will solve on-going maintenance and operational issues related to the aged protection and control system. The 40 year old equipment requires constant maintenance, such as recalibration (settings tend to drift over time), and does not always operate when and as required. Replacement parts are no longer available. The existing SCADA system has required frequent repair. The existing equipment does not provide adequate visibility to CMP personnel to assess operational problems. Current conditions would require the circuit switcher to operate at 135% of its rating. Augusta East S/S is a primary supply point to Augusta, including the State capital complex. An outage resulting from a protection and control failure would directly affect the Governor's office, Legislative chambers and the Maine PUC offices. An outage could also affect Maxcys S/S which is a Bulk Power System facility.

Budget Year of Expenditures :	2008	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$1,018
Internal Rate of Return [%]		19.8%
NPV Payback in years	7.3	
Cash Payback in years	6.2	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Mason SS 115 KV Protection/Control Upgrade - Central Maine Power

Capital Project Business Case

Project Title: Mason SS 115 KV Protection/Control Upgrade	Project Number: CMP-08-21
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Project Type: Infrastructure
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2008 Capital	\$1,299
Capital Needed to Complete Project:	\$1,299
Prior Capital Spent:	\$0
Total Project Capital:	\$1,299

Description of Project:
 This project, located at the Mason 345/115 S/S in Wiscasset, involves 1) replacing existing 40 year old electromechanical relays (located on a 115 kV transmission line, a 115/34 kV transformer and a 34 kV capacitor bank) with new electronic relays, 2) relocating the relays from the control room of the old Mason Station generating plant to the Mason S/S control house, and 3) replacing two 40 year old 115 kV breakers.

Summary of Project Justification and Benefits:
 The project will address two significant issues. First, CMP no longer owns the old Mason Station generating plant or its control room where the relays are located (purchased by FPL Energy, resold to developer PointEast). PointEast has not maintained proper operating conditions (loss of heat in winter, near catastrophic roof leaks) posing significant risks to CMP's equipment. The situation does not meet new NERC physical security requirements since CMP cannot control access. Second, the 40 year old relays and breakers require constant maintenance, such as recalibration (relay settings tend to drift over time), and do not always operate when and as required. Replacement parts are no longer available. The Mason S/S is a critical Bulk Power System facility and a principal supply point to the mid-coast area. The project will significantly reduce the risk of a very visible system failure.

Budget Year of Expenditures :	2008	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$1,307
Internal Rate of Return [%]		20.2%
NPV Payback in years	7.2	
Cash Payback in years	6.1	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Park St S/S Protection Upgrade & Cap Bank - Central Maine Power

Capital Project Business Case

Project Title: Park St S/S Protection Upgrade & Cap Bank	Project Number: CMP-08-22
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Project Type: Infrastructure
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2008 Capital	\$1,159
Capital Needed to Complete Project:	\$1,159
Prior Capital Spent:	\$0
Total Project Capital:	\$1,159

Description of Project:
This project involves 1) upgrading relaying on the 115/34 kV transformer at Park St S/S in Rockland, 2) upgrading low side relaying and adding a 115 kV circuit switcher and relaying on the high side, 3) upgrading relays on a 115 kV transmission line (including the remote end at Highland S/S in Warren), 4) adding three 115 kV coupling capacity voltage transformers, 5) adding a 34 kV capacitor bank and associated relaying and 6) performing miscellaneous other upgrades. Also, upgrading SCADA at Highland S/S.

Summary of Project Justification and Benefits:
The project will address several issues. First, the 115/34 kV transformer does not have adequate circuit switching and relay protection which is very unusual for a transformer on CMP's 115 kV transmission system. Second, the existing relays are roughly 40 year old electromechanical devices which require constant maintenance, such as recalibration (relay settings tend to drift over time), and do not always operate when and as required. Replacement parts are no longer available. Third, the capacitor bank will prevent area voltages from dropping below the Maine PUC allowed minimum in the event of an outage on the 115 kV transmission line which is the principal feed to Park St S/S. The project will reduce on-going outage and power quality issues that have resulted in multiple complaints from a large industrial customer, and increase reliability for the Maine State Prison.

Budget Year of Expenditures:	2008	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$1,185
Internal Rate of Return [%]		20.4%
NPV Payback in years	7.2	
Cash Payback in years	6.1	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Louden SS 34 KV Protection/Control Upgrade - Central Maine Power

Capital Project Business Case

Project Title: Louden SS 34 KV Protection/Control Upgrade	Project Number: CMP-08-23
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Project Type: Infrastructure	<table border="1"> <tr> <td>2008 Capital</td> <td>\$2,568</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$2,568</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$933</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$3,501</td> </tr> </table>	2008 Capital	\$2,568	Capital Needed to Complete Project:	\$2,568	Prior Capital Spent:	\$933	Total Project Capital:	\$3,501
2008 Capital	\$2,568								
Capital Needed to Complete Project:	\$2,568								
Prior Capital Spent:	\$933								
Total Project Capital:	\$3,501								

Description of Project:
 This project will upgrade protection and control on the 34 kV portion of Louden S/S in Saco. Specifically, the project involves 1) replacing five breakers, 2) performing eleven relay upgrades, 3) installing nine potential transformers & stands, 4) replacing one of two 115/34 kV transformers, 5) replacing LTC controls on the other transformer, 6) installing new cabinets in control house, 7) replacing 12 kV recloser & cabinet, 8) pouring new foundations, 9) installing lightning arresters, and 10) performing extensive trenching and cabling to replace control cables for all of the upgrades.

Summary of Project Justification and Benefits:
 The project will upgrade existing 34 kV protection / control equipment at Louden S/S, most of which is 30-50 years old. The S/S has been experiencing operational/maintenance issues with growing frequency due to deteriorating condition of equipment. Problems include old electro-mechanical relays, breakers and other protective devices that need constant maintenance, collapsing duct work and foundations, and frayed wiring and damaged cabling. Some customer interruptions have occurred although major outages have been avoided thus far. Louden S/S is a critical part of the 34 kV transmission system that supports the greater Biddeford / Saco / Old Orchard area. Thus, system interruptions are highly visible and, as the situation worsens, will likely result in substantial number of claims, complaints and regulatory investigation. (see Business Case Addendum)

Budget Year of Expenditures:	2008	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$2,998
Internal Rate of Return [%]		21.3%
NPV Payback in years	6.8	
Cash Payback in years	5.8	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Benton 115 kV Switchyard	Project Number: CMP-07-13
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Project Type: Infrastructure	<table border="1"> <tr> <td>2007 Capital</td> <td>\$4,320</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$9,241</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$500</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$9,741</td> </tr> </table>	2007 Capital	\$4,320	Capital Needed to Complete Project:	\$9,241	Prior Capital Spent:	\$500	Total Project Capital:	\$9,741
2007 Capital	\$4,320								
Capital Needed to Complete Project:	\$9,241								
Prior Capital Spent:	\$500								
Total Project Capital:	\$9,741								

Description of Project:
 This 2006-08 project involves: 1) building a new 115 kV switchyard where two 115 kV transmission lines (S83 & S67A) are in close proximity to each other in Benton, 2) installing six 115 kV breakers at the yard, 3) connecting the two transmission lines to the breakers, 4) installing a 20 MVAR capacitor bank at the yard, and 5) re-rating approximately 33 miles of the two 115 kV transmission lines (selectively replacing poles with higher poles and re-tensioning conductor). (2006 spending approved per CMP-06-48)

Summary of Project Justification and Benefits:
 This project will provide a third 115 kV source to the greater Waterville-Skowhegan area by tying a 115 kV transmission line that bypasses the area (S67A) to one of two 115 kV lines that currently supply the area (S83). Loss of either of the lines currently feeding the area will result in area voltages dropping well below MPUC allowed minimums, particularly if one of the generators at the SAPPI-Somerset paper mill is not operating at the time. CMP would need to shed roughly 60 MVA of area load in order to restore system voltages to allowed minimums. Such an event would be highly visible and most certainly result in significant customer claims and a regulatory proceeding with a potentially expensive outcome. The third 115 kV source and capacitor bank prevent that from occurring as well as provide additional voltage support as far north as Lakewood S/S.

Budget Year of Expenditures:	2007	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$3,884
Internal Rate of Return [%]		12%
NPV Payback in years	14.8	
Cash Payback in years	9.7	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Boothbay Area Reinforcements	Project Number: CMP-07-25
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Project Type: Infrastructure	<table border="1"> <tr> <td>2007 Capital</td> <td>\$5,659</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$5,659</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$0</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$5,659</td> </tr> </table>	2007 Capital	\$5,659	Capital Needed to Complete Project:	\$5,659	Prior Capital Spent:	\$0	Total Project Capital:	\$5,659
2007 Capital	\$5,659								
Capital Needed to Complete Project:	\$5,659								
Prior Capital Spent:	\$0								
Total Project Capital:	\$5,659								

Description of Project:
 This project involves 1) 2-115 kV breakers, 2nd 20/37 MVA 115/34 kV LTC transformer, 34 kV breaker & 5.4 MVAR 34 kV cap bank with breaker at Newcastle S/S, 2) 2-34 kV breakers, 5.4 MVAR 34 kV cap bank with breaker & new control house at Edgcomb S/S, 3) 5.4 MVAR 34 kV cap bank, new control house & SCADA at Boothbay Harbor S/S, 4) 34 kV breaker, 3.6 MVAR 34 kV cap bank with breaker, new control house & SCADA at Damariscotta Mills S/S, 5) 34 kV transformer upgrade & new 12 kV circuit at Bristol S/S, and 6) 37 mi. of 34 kV transmission line re-rates.

Summary of Project Justification and Benefits:
 This project is a comprehensive upgrade (four S/S's and five transmission lines) of the 34 kV transmission system that supplies the greater Boothbay region. System studies indicate that, within the next several years, the system will experience overloading of multiple system components, particularly under various contingency situations (loss of any number of transmission lines and/or transformers). In some instances, voltage drops will require load shedding in order to maintain system integrity. The area, which includes the coastal region from the Boothbay peninsula to areas south of Damariscotta, has experienced strong load growth due to the construction of shore-front homes and tourist-related commercial development. Long radial feeds down the various peninsulas mean that outages will affect large numbers of customers, particularly during the peak-load summer months.

Budget Year of Expenditures:	2007	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$3,949
Internal Rate of Return [%]		15%
NPV Payback in years	9.4	
Cash Payback in years	7.6	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Detroit SS Protection/Control Upgrade	Project Number: CMP-07-21
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Project Type: Infrastructure
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2007 Capital	\$1,327
Capital Needed to Complete Project:	\$1,327
Prior Capital Spent:	\$0
Total Project Capital:	\$1,327

Description of Project:

This project will involve 1) replacing two 115 kV oil-filled breakers, three 34.5 kV breakers, and breakers on either side of the 115/34.5 kV transformer, 2) upgrading relays on three different 115 kV transmission lines (includes replacing coordinating relays at Wyman Hydro S/S) and on the 115 kV bus, 3) replacing relays on two 34.5 kV transmission lines and on a 34.5 kV capacitor bank and 115/34.5 kV transformer, 4) upgrading SCADA, and 5) making other miscellaneous improvements such as replacing cables and conduits / duct banks.

Summary of Project Justification and Benefits:

The project will upgrade existing protection / control equipment at Detroit S/S, most of which is 30-50 years old. The S/S has been experiencing operational/maintenance issues with growing frequency due to deteriorating condition of equipment. Problems include old electro-mechanical relays, breakers and other protective devices that need constant maintenance, collapsing duct work and foundations, and frayed wiring and damaged cabling. Some customer interruptions have occurred although major outages have been avoided thus far. Detroit S/S is a critical part of CMP's 115 kV / 34.5 kV transmission system that supports an extensive area in the northeastern part of CMP's service territory. Thus, system interruptions are highly visible and, as the situation worsens, will likely result in substantial number of claims, complaints and regulatory investigation.

Budget Year of Expenditures :	2007	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$772
Internal Rate of Return [%]		15%
NPV Payback in years	8.9	
Cash Payback in years	7.1	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Maguire Road 115 kV Switchyard	Project Number: CMP-07-12
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Project Type: Infrastructure
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2007 Capital	\$15,600
Capital Needed to Complete Project:	\$31,200
Prior Capital Spent:	\$300
Total Project Capital:	\$31,500

Description of Project:

This 2006-08 project involves: 1) relocating the Maguire Rd Switchyard so that it intersects with three 115 kV transmission lines (S140, S163 & S250), 2) adding nine 115 kV breakers to the yard, 3) connecting the three transmission lines to the breakers, 4) adding a 50 MVAR, 115 kV capacitor to the yard, 5) rebuilding 30.5 mi. of 115 kV transmission (S163, S197 & S219), 6) reconductoring 9.3 mi. of 115 kV transmission (S220), and 7) upgrading 115 kV relays at five neighboring S/S's. This project will be completed in conjunction with installing new 345 kV breakers at Buxton S/S.

Summary of Project Justification and Benefits:

This major project will substantially reduce the exposure CMP's southern Maine 115 kV transmission system currently has to low voltages (below Maine PUC allowed minimums) and high currents (in excess of the thermal limits of the conductors) that will result from any number of equipment failures and system faults on both CMP's and PSNH's systems. Some failures and faults on CMP's system will also affect voltages on PSNH's coastal system. In some cases, voltages and currents can only be corrected through load shedding. Although each individual failure or fault has a relatively low probability of occurring, there is, in the aggregate, a much higher probability that CMP's system will experience one of the events. The widespread impacts of such an event would be highly publicized, likely resulting in a regulatory investigation and costly outcome.

Budget Year of Expenditures:	2007	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$10,007
Internal Rate of Return [%]		11%
NPV Payback in years	16.0	
Cash Payback in years	10.0	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Maxcys-Bucksport SPS Upgrade	Project Number: CMP-07-11
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Project Type: Required by Regulation
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2007 Capital	\$3,341
Capital Needed to Complete Project:	\$3,341
Prior Capital Spent:	\$1,385
Total Project Capital:	\$4,726

Description of Project:
This 2006-07 project involves upgrading and merging two existing Special Protection Schemes (SPS) at Maxcys S/S and Bucksport S/S that, in the event of a loss of portions of the MEPCO 345 kV transmission line, protects CMP's adjacent 115 kV transmission system from severe voltage and line sags. The upgrade will primarily involve installation of a programmable logic controller at Maxcys S/S and redundant communications links between Maxcys S/S, Bucksport S/S and the Maine Independence and Bucksport Energy merchant plants. (2006 spending approved per CMP-06-32(R1))

Summary of Project Justification and Benefits:
The project will correct shortcomings in the existing SPS that 1) have resulted in unintended trips of the Bucksport Energy merchant plant, and 2) can result in slow response or failure to operate. In the event of a 345 kV line outage, failure to operate properly results in 1) area voltages temporarily dropping below the Maine PUC minimum, and 2) excessive line sags on the adjacent 115 kV circuits so that clearances are less than National Electric Safety Code minimums. The project is on RTO-NE's current list of required system improvements, obligating CMP to complete the project. Eliminating unintended trips and voltage / line sag issues reduce CMP's exposure to outage-related costs from customer claims and regulatory investigations.

Budget Year of Expenditures :	2007	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Total Project
Net Present Value (\$000)	\$1,664

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Augusta-Maxcys-Winslow Fiber Link	Project Number: CMP-07-22
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Project Type: Required by Regulation
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2007 Capital	\$3,055
Capital Needed to Complete Project:	\$3,055
Prior Capital Spent:	\$0
Total Project Capital:	\$3,055

Description of Project:

This project involves 1) installing 26 mi. of optical fiber (OPGW) along transmission S84 from Winslow S/S to Maxcys S/S, 2) upgrading communication equipment at Winslow S/S, 3) installing 23 mi. of optical fiber (OPGW) along transmission S88 from Maxcys S/S to Augusta East S/S and along transmission S213 from Augusta East S/S to Puddledock S/S, 4) upgrading communication equipment at Maxcys S/S and Augusta East S/S, and 5) installing 2.5 mi. of optical fiber (ADDS) along transmission S39 from Puddledock S/S to the Augusta Service Building.

Summary of Project Justification and Benefits:

The project will satisfy a major NERC requirement resulting from the recently completed NERC audit of CMP's transmission system and operations. The project will establish a second and secure communications link between CMP's Augusta control center in the General Office and the emergency back-up control center at the Fairfield Service Center. The only existing link is over 3rd party lines (not secure) and has been subject to failure. NERC expects the work to be completed by mid-2008. CMP proposes to piggyback this project on the Maxcys-Bucksport SPS project (currently underway) in order to gain the efficiencies of utilizing resources that have already been mobilized in the same general area (otherwise add a 25% premium to project costs to reflect re-mobilization). The project will also complete another segment of the on-going upgrade of CMP's corporate communications system.

Budget Year of Expenditures :	2007	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Total Project
Net Present Value (\$000)	\$923

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: NRI Reinforcements	Project Number: CMP-07-20
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Project Type: Required by Regulation
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2007 Capital	\$1,570
Capital Needed to Complete Project:	\$1,570
Prior Capital Spent:	\$139
Total Project Capital:	\$1,709

Description of Project:

This project involves 1) adding a 30 MVAR shunt capacitor bank to the 115 kV bus at Gulf Island S/S, 2) replacing a 345 kV breaker at Maxcys S/S with a breaker with a higher short circuit current rating, 3) performing a relay upgrade on the 345 kV Section 388 transmission line, 4) adding lightning arrestors to the same transmission line, and 5) upgrading communications. In the event that the Y138 project (CMP-07-19) does not proceed as planned, a 30 MVAR capacitor bank will be required at Kimball Rd S/S (the Y138 project includes a 60 MVAR capacitor bank at Kimball Rd S/S).

Summary of Project Justification and Benefits:

Bangor Hydro-Electric has started construction on a second 345 kV transmission line between Maine and New Brunswick, to be known as the Northeast Reliability Interconnect, or NRI. System studies have identified the above improvements as needed to maintain system integrity after the new line goes in service in December 2007. Since the project is now on ISO-NE's list of necessary system improvements, CMP is obligated by the RTO-NE participants agreement to complete the work. (2006 spending approved per CMP-06-44)

Budget Year of Expenditures:	2007	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Total Project
Net Present Value (\$000)	\$624

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Raymond Area Reinforcements	Project Number: CMP-07-08
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Project Type: Infrastructure	<table border="1"> <tr> <td>2007 Capital</td> <td>\$755</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$755</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$3,970</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$4,725</td> </tr> </table>	2007 Capital	\$755	Capital Needed to Complete Project:	\$755	Prior Capital Spent:	\$3,970	Total Project Capital:	\$4,725
2007 Capital	\$755								
Capital Needed to Complete Project:	\$755								
Prior Capital Spent:	\$3,970								
Total Project Capital:	\$4,725								

Description of Project:
 This 2006-07 project involves 1) expanding the Raymond 115 kV S/S, 2) installing a second 20/37 MVA 115-to-34.5 kV transformer, 3) adding two 115 kV breakers, 4) adding a 5.4 MVar capacitor bank to the 34.5 kV bus, 5) installing SCADA, 6) from the S/S, building 8.2 miles of new 34.5 kV transmission line next to an existing 34.5 kV transmission line, 7) switching over from the existing line to the new line, and 8) tearing down the old line. In anticipation of future upgrades, the new line will be built to 69 kV standards but energized at 34.5 kV. (2006 spending approved per CMP- 06-13)

Summary of Project Justification and Benefits:
 This project involves substantially reducing the risk of needing to shed roughly 18 MW of load if the existing 115/34.5 kV transformer at Raymond 115 kV S/S fails or either of two 115 kV lines feeding the S/S fail. Any such failure would reduce area voltages to less than 70% of standard (Maine PUC minimum is 95%) and would load a 34.5 kV transmission line that feeds several area distribution S/S to 150% of its summer design rating. In order to get area voltages and line loadings back to minimum acceptable levels, load shedding would need to occur (including a Portland Pipeline pumping station). However, shedding would not be immediate as it requires dispatcher intervention. In the meantime, very low voltages would significantly impact customer motor and electronic load and would likely result in substantial claims and regulatory costs.

Budget Year of Expenditures:	2007	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Total Project
Net Present Value (\$000)	\$1,779
Internal Rate of Return [%]	21%
NPV Payback in years	8.1
Cash Payback in years	6.6

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title:	Project Number:
Section 118 Reconduct or	CMP-07-10

Project Type:	2007 Capital	\$438
Growth	Capital Needed to Complete Project:	\$438
	Prior Capital Spent:	\$329
	Total Project Capital:	\$767

Description of Project:
 This 2006-07 project involves upgrading 2.25 miles of an existing 34.5 kV subtransmission circuit between Quaker Hill S/S and Bassett S/S by 1) performing some side-trimming to widen the existing ROW, 2) building a new circuit with heavier conductor along a 15 ft offset to the existing circuit, 3) cutting over from the old circuit to the new circuit during a brief outage, and 4) removing the old circuit. The new circuit will be built to 69 kV standards at a very small incremental cost (primarily larger insulators) in anticipation of future capacity upgrades in this ROW-constrained area.

Summary of Project Justification and Benefits:
 The project will 1) relieve overloading on a critical 34.5 kV radial sub-transmission circuit that feeds two distribution S/S's (2006 summer peak load was almost 130% of the line rating), thus reducing the potential for outage-related costs from customer claims, PUC complaints and expedited repairs, 2) provide additional capacity for future growth. The overloading will be relieved by using a heavier conductor that has a higher capacity. Due to the circuit's status as the single feed to the two S/S's (circuit continues on past Bassett S/S to S. Berwick S/S), it cannot be directly reconducted since that would require a lengthy outage. Thus, the upgrade can only occur by building a new circuit adjacent to the old circuit. The need for the project is driven by the high-margin residential growth in the part of southern York County where the two S/S's are located.

Budget Year of Expenditures :	2007	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	\$2,258	\$10,013
Internal Rate of Return [%]	79%	80%
NPV Payback in years	2.7	
Cash Payback in years	2.5	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title:	Project Number:
Section 34 Rebuild	CMP-07-09

Project Type:	2007 Capital	\$928
Infrastructure	Capital Needed to Complete Project:	\$928
	Prior Capital Spent:	\$822
	Total Project Capital:	\$1,750

Description of Project:
 This 2006-07 project involves replacing the 34.5 kV Section 34 sub-transmission line that connects Guilford S/S and Dover S/S. The existing line is 8.5 miles long, consists largely of 80 year old conductor and structures, and is the only transmission source into the Dover-Foxcroft area. A new 34.5 kV line will be constructed adjacent to the existing line in the same right-of-way for 7.5 miles and along new right-of-way for the remaining 1 mile. Once constructed, the new line will be energized and the old line will be removed. (2006 spending approved per CMP-06-18)

Summary of Project Justification and Benefits:
 The project will correct a critical reliability issue in the Dover-Foxcroft area. Due to its advanced age and severely deteriorated state, Section 34 is experiencing an increasing number of lengthy outages. From 8/04 through 8/05, the line was down four times for a total of almost 18 hours. Since it is the only transmission source to Dover S/S, the entire Dover-Foxcroft area is without power during an outage (including a large sawmill that has undergone several expansions in the past few years). Since a large part of the circuit is in a hard-to-access right-of-way, finding problems and making repairs can be difficult and time-consuming (sometimes requiring foot patrols). A CMP officer met with the Minority Leader of the Maine Senate to discuss the problem; failure to correct the problem soon will most certainly result in a regulatory investigation which will likely be costly.

Budget Year of Expenditures :	2007	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$898
Internal Rate of Return [%]		21%
NPV Payback in years	6.1	
Cash Payback in years	5.1	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title:	Project Number:
Woodstock Reinforcements	CMP-07-28

Project Type:	2007 Capital	\$3,420
Infrastructure	Capital Needed to Complete Project:	\$13,651
	Prior Capital Spent:	\$0
	Total Project Capital:	\$13,651

Description of Project:
 This 2007-08 project involves 1) adding a second 115/34 kV transformer, six 115 kV breakers and a new control house at the existing Woodstock S/S, 2) bringing an existing 115 kV transmission line (S217) that currently passes Woodstock S/S into the S/S, and 3) rebuilding the existing 115 kV transmission line (S211) that runs from Woodstock S/S to Rumford.

Summary of Project Justification and Benefits:
 The project will correct two deficiencies. First, it will eliminate the risk of having to shed up to 31 MW of load in the Woodstock / Bethel area (includes Sunday River and Mt. Abram ski areas) due to a failure of the existing 115/34 kV transformer at Woodstock S/S or a fault on either of the two 115 kV transmission lines feeding the S/S. Any such failure would reduce area volt ages to less than 70% of the MPUC standard and would load another area 34.5 kV transmission line to 167% of its design rating. Second, it will, in conjunction with the Yt38 and Rumford Reinforcement Projects, substantially strengthen the Western Maine transmission system which currently suffers exposure to a number of contingencies that can affect voltages and restrict power flows. The region supports a large paper mill, multiple ski areas, a number of generators, and several proposed wind farms.

Budget Year of Expenditures :	2007	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$5,558
Internal Rate of Return [%]		12%
NPV Payback in years	14.5	
Cash Payback in years	9.7	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Y138 & Harrison S/S Decommission	Project Number: CMP-07-19
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Project Type: Required by Regulation	<table border="1"> <tr> <td>2007 Capital</td> <td>\$4,733</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$4,733</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$774</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$5,508</td> </tr> </table>	2007 Capital	\$4,733	Capital Needed to Complete Project:	\$4,733	Prior Capital Spent:	\$774	Total Project Capital:	\$5,508
2007 Capital	\$4,733								
Capital Needed to Complete Project:	\$4,733								
Prior Capital Spent:	\$774								
Total Project Capital:	\$5,508								

Description of Project:
 This 2006-07 project involves 1) re-rating 28 mi. of 115 kV S214 from Kimball Rd S/S to ME/NH border, 2) upgrading S214 relays, 3) adding 115 kV bus and 2-30 MVAR capacitors at S/S, 4) swapping connections for 2-115 kV lines at S/S and installing 2-115 kV bus tie-breakers, 5) adding 115/34.5 kV transformer and 34.5 kV bus at S/S, 6) re-routing 3 nearby 34.5 kV circuits in/out of S/S, 7) rebuilding ends of two 115 kV circuits at S/S to provide additional clearance, 8) rerouting 1/4 mile of 34.5 kV circuit from Harrison S/S to Kimball Rd S/S, and 9) decommissioning Harrison S/S.

Summary of Project Justification and Benefits:
 Section 214 currently serves load in PSNH's service territory in NH. PSNH is going to close an existing gap in their system (Y138) in 2007, thus closing a loop that includes S214. That project will affect power flows in CMP's transmission system. As a result, RTO-NE is requiring CMP to complete steps 1), 2) and 3) described above. In addition, S214 also feeds the 115/34.5 kV Harrison S/S. Loads on that S/S will limit flows across S214 which are projected to increase with the Y138 project. Steps 4) thru 9) will consolidate Harrison S/S with Kimball Rd S/S that feeds S214 so that Harrison S/S loads will be taken off S214, thus increasing allowable flows. It will also eliminate the potential for a S214 outage affecting both Harrison S/S and Lovell S/S which would produce unstable voltages in western Maine. (2006 spending approved per CMP-06-36)

Budget Year of Expenditures:	2007	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Total Project
Net Present Value (\$000)	\$1,349

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information

Central Maine Power

Capital Project Business Case

Project Title: Surowiec SS 115 KV Protection/Control Upgrade	Project Number: CMP-07-28
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Project Type: Infrastructure	<table border="1"> <tr> <td>2007 Capital</td> <td>\$4,611</td> </tr> <tr> <td>Capital Needed to Complete Project:</td> <td>\$4,611</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$0</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$4,611</td> </tr> </table>	2007 Capital	\$4,611	Capital Needed to Complete Project:	\$4,611	Prior Capital Spent:	\$0	Total Project Capital:	\$4,611
2007 Capital	\$4,611								
Capital Needed to Complete Project:	\$4,611								
Prior Capital Spent:	\$0								
Total Project Capital:	\$4,611								

Description of Project:
This project will upgrade the 115 kV portion of Surowiec S/S in Pownal. Specifically, the project involves 1) replacing 10 breakers and upgrading associated relaying, 2) replacing 20 disconnect switches (1 on each side of the breakers being replaced), 3) replacing 3 voltage transformers and 24 coupling capacitor voltage transformers on various busses and T-lines, 4) upgrading primary & back-up relays on 7 T-lines & 1 bus, 5) upgrading primary relays on 1 bus & the remote ends of 3 T-lines (Crowleys S/S, Gulf Island S/S, Mason S/S), 6) upgrading SCADA, and 7) replacing batteries.

Summary of Project Justification and Benefits:
The project will upgrade existing protection / control equipment at Surowiec S/S which was installed in the late 1960's. The S/S has been experiencing operational / maintenance issues with growing frequency due to the deteriorating condition of the equipment. Problems include old electro-mechanical relays, breakers and other protective devices that need constant maintenance, and coupling capacitor voltage transformers (CCVT) that have started to fail. One CCVT recently experienced a catastrophic failure that tripped 3 - 115 kV T-lines; wind gusts sent foil strips from the CCVT onto the 115 kV bus while crews were making repairs. Surowiec S/S is a critical part of CMP's 115 kV / 34.5 kV transmission system because it is a central hub for numerous 115 kV and 34.5 kV transmission lines. Thus, system failures are highly visible and, as the situation worsens, will likely result in substantial number of claims, complaints and regulatory investigation.

Budget Year of Expenditures :	2007	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	6.74%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:		Total Project
Net Present Value (\$000)		\$2,189
Internal Rate of Return [%]		13%
NPV Payback in years	11.0	
Cash Payback in years	8.0	

Project Approvals:	Name	Contact Information
Project Sponsor:	Steve Robinson	207-626-9594
Capital Allocation Team Chair:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information
Approved by:	Provide Information	Provide Information



Capital Project Business Case

Project Title:		Project Number:
Section 34 Rebuild	(Parkman / Sangerville / Dover-Foxcroft)	CMP-06-18

Project Type: Infrastructure	2006 Capital (\$000)	\$852
	Total Capital Needed to Complete Project:	\$1,846
	Prior Capital Spent:	\$0
	Total Project Capital:	\$1,846

Description of Project:
This project involves replacing the 34.5 kV Section 34 sub-transmission line that connects Guilford S/S and Dover S/S. The existing line is 8.5 miles long, consists largely of 80 year old conductor and structures, and is the only transmission source into the Dover-Foxcroft area. A new 34.5 kV line will be constructed adjacent to the existing line in the same right-of-way. Once constructed, the new line will be energized and the old line will be removed.

Summary of Project Justification and Benefits:
The project will correct a critical reliability issue in the Dover-Foxcroft area. Due to its advanced age and severely deteriorated state, Section 34 is experiencing an increasing number of lengthy outages. Since last August, the line has been down four times for a total of almost 18 hours. Since it is the only transmission source to Dover S/S, the entire Dover-Foxcroft area is without power during an outage (including a large sawmill planning a 700 kVa expansion). Since a large part of the circuit is in a hard-to-access right-of-way, finding problems and making repairs can be difficult and time-consuming. (sometimes requiring foot patrols). A CMP officer recently met with the Minority Leader of the Maine Senate to discuss the problem; failure to correct the problem soon will most certainly result in a regulatory investigation which will likely result in a rate case.

Budget Year of Expenditures:	2006	Project Life (tax life years)	20
Exit Year (if applicable)		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value (if applicable)	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$26)	\$1,096
Internal Rate of Return [%]	6.7%	14.8%
NPV Payback in years	10.3	
Cash Payback in years	7.6	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title:	Project Number:
Section 19 River Crossing Upgrade (Farmingdale / Chelsea)	CMP-06-19

Project Type:	2006 Capital (\$000)	\$656
Infrastructure	Total Capital Needed to Complete Project:	\$656
	Prior Capital Spent:	\$60
	Total Project Capital:	\$716

Description of Project:
This 2005-06 project involves 1) adding 34.5 kV conductors to galvanized steel towers currently supporting the Kennebec River crossing for a 115 kV circuit, 2) switching Section 19 from adjacent 92 year old steel lattice towers to new conductors and removing the old conductors, 3) building a new wooden river crossing, 4) moving a 12.47 kV distribution circuit from old to new towers, and 5) dismantling the old towers. This project was approved for 2005 funding (CMP-05-18) but has largely been deferred into 2006 due to Army Corp of Engineer permitting.

Summary of Project Justification and Benefits:
The project will eliminate substantial safety risks associated with the deteriorating condition of 5 existing 92 year old steel lattice towers that support the Kennebec River crossing of a 34.5 kV sub-transmission circuit (Sect 19) and a 12.47 kV distribution circuit. An independent engineering inspection indicates that some structural components of the towers are experiencing corrosion and buckling which may be affecting the towers' load bearing capabilities. Remedial measures have been implemented to stabilize towers, but they will not stop the continuing deterioration. CMP personnel are no longer allowed on the towers due to safety and liability concerns. The project minimizes costs by utilizing the adjacent transmission towers and by installing lower cost wooden towers appropriate for lighter distribution circuits.

Budget Year of Expenditures:	2006	Project Life (tax life years)	20
Exit Year (if applicable)		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value (if applicable)	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$229)	\$2
Internal Rate of Return [%]	-3.5%	7.2%
NPV Payback in years	> 20	
Cash Payback in years	12.1	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Central Maine Power

Capital Project Business Case

Project Title:	Project Number:
OOB-Scarborough Reinforcement (Saco / Scarborough / Old Orchard Beach)	CMP-06-10

Project Type:	2006 Capital (\$000)	\$500
Growth & Infrastructure	Total Capital Needed to Complete Project:	\$14,000
	Prior Capital Spent:	\$0
	Total Project Capital:	\$14,000

Description of Project:
 This project involves 1) building a new 7 mile long 115 kV transmission line from a tap off of an existing 115 kV line (Sect. 220) to a site in Old Orchard Beach (OOB), 2) building a new 115-to-34.5 kV S/S where the new line terminates in OOB, 3) tying in an existing 34.5 kV sub-transmission line (Sect. 193) that feeds three area distribution S/S's, 4) adding four 34.5 kV circuit breakers, 5) rebuilding the existing 34.5-to-12.47 kV Dunstan S/S (1 of the 3 area S/S's) on a nearby lot and 6) adding a 3rd distribution circuit out of Dunstan S/S.

Summary of Project Justification and Benefits:
 The project will correct a serious contingency and maintenance issue that has developed as load has grown in the Saco / OOB / Scarborough area. S193 has become so heavily loaded that a circuit failure toward either end will result in voltages dropping below Maine PUC minimums at best and a shedding of up to 35 MW of load at worst. High load levels also require that loads on Scarborough S/S be almost entirely switched to other S/S's in order to do maintenance on S193. In addition, by the time this project is completed in 2010, existing transmission capacity will likely be fully loaded. Finally, load growth requires a new distribution circuit out of Dunstan S/S, but the existing S/S cannot be expanded due to physical constraints. The Dunstan S/S rebuild requires extensive coordination with the transmission expansion so is considered to be part of the project.

Budget Year of Expenditures:	2006	Project Life (tax life years)	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$4,862)	\$13,347
Internal Rate of Return [%]	-8.2%	15.9%
NPV Payback in years	14.6	
Cash Payback in years	11.7	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title:	Project Number:
Raymond Area Reinforcements (Raymond/Windham)	CMP-06-13

Project Type:	2006 Capital (\$000)	\$4,306
Infrastructure	Total Capital Needed to Complete Project:	\$5,224
	Prior Capital Spent:	\$0
	Total Project Capital:	\$5,224

Description of Project:
 This project involves 1) expanding the Raymond 115 kV S/S, 2) installing a second 20/37 MVA 115-to-34.5 kV transformer, 3) adding two 115 kV breakers, 4) adding a 5.4 MVar capacitor bank to the 34.5 kV bus, 5) installing SCADA, 6) from the S/S, building 8.2 miles of new 34.5 kV transmission line next to an existing 34.5 kV transmission line, 7) switching over from the existing line to the new line, and 8) tearing down the old line. In anticipation of future upgrades, the new line will be built to 69 kV standards but energized at 34.5 kV.

Summary of Project Justification and Benefits:
 This project involves substantially reducing the risk of needing to shed roughly 18 MW of load if the existing 115/34.5 kV transformer at Raymond 115 kV S/S fails or either of two 115 kV lines feeding the S/S fail. Any such failure would reduce area voltages to less than 70% of standard (Maine PUC minimum is 95%) and would load a 34.5 kV transmission line that feeds several area distribution S/S to 150% of its summer design rating. In order to get area voltages and line loadings back to minimum acceptable levels, load shedding would need to occur (including a Portland Pipeline pumping station). However, shedding would not be immediate as it requires dispatcher intervention. In the meantime, very low voltages would significantly impact customer motor and electronic load and would likely result in substantial claims and

Budget Year of Expenditures:	2006	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$1,335)	\$2,220
Internal Rate of Return [%]	-0.1%	11.5%
NPV Payback in years	16.1	
Cash Payback in years	10.1	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title:	Project Number:
Lovell-Bridgton Area Reinforcement (Lovell / Bridgton)	CMP-06-14

Project Type:	2006 Capital (\$000)	\$2,677
Infrastructure	Total Capital Needed to Complete Project:	\$2,677
	Prior Capital Spent:	\$0
	Total Project Capital:	\$2,677

Description of Project:
 This project involves 1) replacing the existing 58 year old, 10/13 MVA 115-to-34.5 kV transformer at Lovell S/S with a 20/37 MVA 115-to-34.5 kV transformer, 2) expanding the 34.5 kV bay and adding three 34.5 kV breakers at Lovell S/S, 3) installing a control house, SCADA and other protection/control equipment at Lovell S/S, 4) moving an existing breaker and capacitor bank at Bridgton S/S, and 5) adding a 34.5 kV breaker and protection/control equipment at Bridgton S/S.

Summary of Project Justification and Benefits:
 This project will drastically reduce the potential for losing as much as 27 MW of load in the greater Lovell/Bridgton/Fryeburg region in the event of an outage at the Lovell S/S or on the 28 mi. radial 115 kV transmission circuit that feeds the area. The system is particularly vulnerable to the failure of the Lovell S/S transformer given that it is 58 years old. Roughly 17 MW could be fed from alternate sources, but 10 MW could not be fed until the problem was corrected. In addition, the project will allow greater sectionalizing of the region's 23 mi. of 34.5 kV sub-transmission to better isolate outages on that system and reduce the number of customers affected. As a result, the project will significantly reduce the potential for outage-related costs from customer claims, PUC complaints and expedited repairs. (see Business Case Addendum)

Budget Year of Expenditures:	2006	Project Life (tax life years)	20
Exit Year (if applicable)		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value (if applicable)	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	\$409	\$2,672
Internal Rate of Return [%]	11.3%	18.1%
NPV Payback in years	8.1	
Cash Payback in years	6.3	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title:	Project Number:
Maxcys-Bucksport SPS Upgrade (Windsor / Bucksport / other)	CMP-06-32 (R1)

Project Type:	2006 Capital (\$000)	\$2,134
Infrastructure & Req'd by Regulation	Total Capital Needed to Complete Project:	\$2,840
	Prior Capital Spent:	\$0
	Total Project Capital:	\$4,974

Description of Project:
This project involves upgrading and merging two existing Special Protection Schemes (SPS) at Maxcys S/S and Bucksport S/S that, in the event of a loss of portions of the MEPCO 345 kV transmission line, protects CMP's adjacent 115 kV transmission system from severe voltage and line sags. The upgrade will primarily involve installation of a programmable logic controller at Maxcys S/S and redundant communications links between Maxcys S/S, Bucksport S/S and the Maine Independence and Bucksport Energy merchant plants.

Summary of Project Justification and Benefits:
The project will correct shortcomings in the existing SPS that 1) have resulted in unintended trips of the Bucksport Energy merchant plant, and 2) can result in slow response or failure to operate. In the event of a 345 kV line outage, failure to operate properly results in 1) area voltages temporarily dropping below the Maine PUC minimum, and 2) excessive line sags on the adjacent 115 kV circuits so that clearances are less than National Electric Safety Code minimums. The project is on RTO-NE's current list of required system improvements, obligating CMP to complete the project. Eliminating unintended trips and voltage / line sag issues reduce CMP's exposure to outage-related costs from customer claims and regulatory investigations. **THIS IS A REVISION OF CMP-06-32 PREVIOUSLY APPROVED FOR THE 2006 CAPITAL PLAN.**

Budget Year of Expenditures:	2006	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$1,427)	\$1,448
Internal Rate of Return [%]	-1.2%	10.7%
NPV Payback in years	16.2	
Cash Payback in years	10.5	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title:		Project Number:
Section 118 Reconductor	(Berwick / North Berwick)	CMP-06-35

Project Type:	2006 Capital (\$000)	\$618
Growth	Total Capital Needed to Complete Project:	\$618
	Prior Capital Spent:	\$0
	Total Project Capital:	\$618

Description of Project:
 This project involves upgrading 2.25 miles of an existing 34.5 kV subtransmission circuit between Quaker Hill S/S and Bassett S/S by 1) performing some side-trimming to widen the existing ROW, 2) building a new circuit with heavier conductor along a 15 ft offset to the existing circuit, 3) cutting over from the old circuit to the new circuit during a brief outage, and 4) removing the old circuit. The new circuit will be built to 69 kV standards at a very small incremental cost (primarily larger insulators) in anticipation of future capacity upgrades in this ROW-

Summary of Project Justification and Benefits:
 The project will 1) relieve overloading on a critical 34.5 kV radial sub-transmission circuit that feeds two distribution S/S's (2004 summer peak loads were at 102% of the line rating), thus reducing the potential for outage-related costs from customer claims, PUC complaints and expedited repairs, 2) provide additional capacity for future growth. The overloading will be relieved by using a heavier conductor that has a higher capacity. Due to the circuit's status as the single feed to the two S/S's (circuit continues on past Bassett S/S to S. Berwick S/S), it cannot be directly reconducted since that would require a lengthy outage. Thus, the upgrade can only occur by building a new circuit adjacent to the old circuit. The need for the project is driven by the high-margin residential growth in the part of southern York County where the two S/S's are located.

Budget Year of Expenditures:	2006	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	\$935	\$6,514
Internal Rate of Return [%]	32.1%	38.7%
NPV Payback in years	5.0	
Cash Payback in years	4.5	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title: Y138 & Harrison S/S Decommission (Harrison & Other)	Project Number: CMP-06-36
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Project Type:
Infrastructure & Req'd by Regulation

2006 Capital (\$000)	\$501
Total Capital Needed to Complete Project:	\$5,041
Prior Capital Spent:	\$0
Total Project Capital:	\$5,041

Description of Project:

This two-year project involves 1) re-rating 28 miles of 115 kV Section 214 from Kimball Rd S/S to ME/NH border (selective line retensioning & pole replacement), 2) upgrading relays for S214 at S/S, 3) adding 115 kV bus and 115 kV capacitor bank at S/S, 4) adding 115-to-34.5 kV transformer and 34.5 kV bus at S/S, 5) re-routing nearby 34.5 kV circuit in/out of S/S, 6) rebuilding ends of two 115 kV circuits at S/S to provide additional clearance, 7) rerouting 1/4 mile of 34.5 kV circuit from Harrison S/S to Kimball Rd S/S and 8) decommissioning Harrison

Summary of Project Justification and Benefits:

Section 214 currently serves load in PSNH's service territory in NH. PSNH is going to close an existing gap in their system (Y138) in 2006, thus closing a loop that includes S214. That project will affect power flows in CMP's transmission system. As a result, RTO-NE will require CMP to complete steps 1), 2) and 3) described above. In addition, S214 also feeds the 115/34.5 kV Harrison S/S. Loads on that S/S will limit flows across S214 which are projected to increase with the Y138 project. Steps 4) thru 8) will consolidate Harrison S/S with the 115 kV Kimball Rd S/S that feeds S214 (the two S/Ss are only separated by 1/4 mile) so that Harrison S/S loads will be taken off S214, thus increasing allowable flows. It will also eliminate the potential for a S214 outage affecting both Harrison S/S and Lovell S/S which would produce unstable

Budget Year of Expenditures:	2006	Project Life (tax life years)	20
Exit Year (if applicable)		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value (if applicable)	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$1,428)	\$719
Internal Rate of Return [%]	-2.4%	9.2%
NPV Payback in years	> 20	
Cash Payback in years	11.1	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title:	Project Number:
NRI Reinforcements (Lewiston / Windsor / Miscellaneous)	CMP-06-44

Project Type:
Required by Regulation

2006 Capital (\$000)	\$500
Total Capital Needed to Complete Project:	\$2,081
Prior Capital Spent:	\$0
Total Project Capital:	\$2,081

Description of Project:

This project involves 1) adding a 30 MVAR shunt capacitor bank to the 115 kV bus at Gulf Island S/S, 2) replacing a 115 kV breaker at Maxcys S/S with a breaker with a higher short circuit current rating, 3) modifying and adding to existing protection systems and SPS's (Special Protection Schemes), and 4) performing miscellaneous studies and design work. In the event that the Y138 project (CMP-06-36) does not proceed as planned, a 30 MVAR capacitor bank will be required at Kimball Rd S/S (the Y138 project includes a 60 MVAR capacitor bank at

Summary of Project Justification and Benefits:

Bangor Hydro-Electric is currently precuring regulatory permits for a second 345 kV transmission line between Maine and New Brunswick, to be known as the Northeast Reliability Interconnect, or NRI. The project has been approved by ISO-NE and the Maine PUC. System studies have identified the above improvements as needed to maintain system integrity after the new line goes in service in December 2007. Since the project is now on ISO-NE's list of necessary system improvements, CMP is obligated by the RTO-NE participants agreement to complete the work. CMP will perform study and design work in 2006 and construct in 2007. Cost estimates are preliminary pending study results. Some issues of cost responsibility between CMP and Bangor-Hydro have yet to be resolved; some capital costs listed may ultimately be paid by Bangor-Hydro.

Budget Year of Expenditures:	2006	Project Life (tax life years)	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$450)	\$449
Internal Rate of Return [%]	-0.9%	10.6%
NPV Payback in years	16.1	
Cash Payback in years	10.4	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title: Maguire Road 115 kV Switchyard (Kennebunk & other)	Project Number: CMP-06-47
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Project Type: Infrastructure
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2006 Capital (\$000)	\$800
Total Capital Needed to Complete Project:	\$31,200
Prior Capital Spent:	\$0
Total Project Capital:	\$31,200

Description of Project:
 This project involves: 1) relocating the Maguire Rd Switchyard so that it intersects with three 115 kV transmission lines (S140, S163 & S250), 2) adding nine 115 kV breakers to the yard, 3) connecting the three transmission lines to the breakers, 4) adding a 50 MVAR, 115 kV capacitor to the yard, 5) rebuilding 30.5 mi. of 115 kV transmission (S163, S197 & S219), 6) reconductoring 9.3 mi. of 115 kV transmission (S220), and 7) upgrading 115 kV relays at five neighboring S/S's. This project will be completed in conjunction with installing new 345 kV breakers at

Summary of Project Justification and Benefits:
 This major project will substantially reduce the exposure CMP's southern Maine 115 kV transmission system currently has to low voltages (below Maine PUC allowed minimums) and high currents (in excess of the thermal limits of the conductors) that will result from any number of equipment failures and system faults on both CMP's and PSNH's systems. Some failures and faults on CMP's system will also affect voltages on PSNH's coastal system. In some cases, voltages and currents can only be corrected through load shedding. Although each individual failure or fault has a relatively low probability of occurring, there is, in the aggregate, a much higher probability that CMP's system will experience one of the events. The widespread impacts of such an event would be highly publicized, likely resulting in a regulatory investigation and costly

Budget Year of Expenditures:	2006	Project Life (tax life years)	15
Exit Year (if applicable)		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value (if applicable)	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$7,705)	\$8,838
Internal Rate of Return [%]	-2.3%	11.4%
NPV Payback in years	16.1	
Cash Payback in years	10.9	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title: Maine Yankee Breaker Replacement (Wiscasset)	Project Number: CMP-06-21
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Project Type: Infrastructure
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2006 Capital (\$000)	\$392
Total Capital Needed to Complete Project:	\$392
Prior Capital Spent:	\$0
Total Project Capital:	\$392

Description of Project:
 This project involves the replacement of a 35 year old GE type ATB 345 kV air-blast circuit breaker at the Maine Yankee S/S with an ABB type PMI 345 kV SF6 insulated puffer circuit breaker. This will be the seventh and final step of a program to replace old ATB-7 breakers on CMP's 345 kV transmission system. This project was originally approved as CMP-03-02 but has been deferred each of the past several years due to more pressing capital needs.

Summary of Project Justification and Benefits:
 The project will reduce the likelihood of a breaker failure that, due to the unavailability of spare parts, could take as long as 6 months to repair. Breaker failure would require CMP to significantly limit the ability of a two generation sources to transmit power across its EHV transmission system, thus exposing CMP to substantial claims and legal costs as well as costly regulatory actions. The failure of such a critical system component, given the fallout from the blackout in the northeastern U.S. and portions of Canada, would likely create a significant amount of attention from policy makers and regulators. Some may question why a 35 year old mechanical device (expected to have a shorter life than non-mechanical components such as transformers), for which parts are no longer manufactured, is still in service.

Budget Year of Expenditures:	2006	Project Life (tax life years)	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	\$797	\$2,365
Internal Rate of Return [%]	49.1%	51.1%
NPV Payback in years	3.3	
Cash Payback in years	3.0	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title: Winslow SS Relay/Control Upgrade (Winslow)	Project Number: CMP-06-15
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Project Type: Infrastructure
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2006 Capital (\$000)	\$1,779
Total Capital Needed to Complete Project:	\$1,779
Prior Capital Spent:	\$0
Total Project Capital:	\$1,779

Description of Project:
 This project will 1) replace 115 kV oil circuit breakers, add bus CVTs and replace/add foundations, 2) replace existing cables and conduits / duct banks, 3) replace AC and DC station service equipment, 4) add control room HVAC system, 5) add new 115 kV bus differential scheme and CTs, 6) replace primary and back-up relays on two 115 kV circuits, 7) replace all primary and back-up 34.5 kV circuit and 115/34.5 kV transformer relaying, 8) replace 34.5 kV bus differential scheme, 9) replace 12 kV recloser controls, and 10) add SCADA remote terminal unit.

Summary of Project Justification and Benefits:
 The project will replace/upgrade all existing protection/control equipment at Winslow S/S, most of which is 30-50 years old. The S/S has been experiencing operational/maintenance issues with growing frequency due to deteriorating condition of equipment. Problems include old electro-mechanical relays, breakers and other protective devices that fail or do not operate properly, collapsing duct work, significant water leakage and damage, and frayed wiring and damaged cabling. Low voltage situations have resulted although major outages have been avoided. However, Winslow S/S is a critical part of CMP's 115 kV / 34.5 kV transmission system that supports mid-Kennebec Valley area. Such events on CMP's transmission system are highly visible and, as the situation worsens, will likely result in substantial number of claims and regulatory

Budget Year of Expenditures:	2006	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$89)	\$768
Internal Rate of Return [%]	5.9%	12.8%
NPV Payback in years	10.8	
Cash Payback in years	7.8	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title: Topsham Old S/S Rebuild	Project Number: CMP-06-03
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Project Type: Growth	<table border="1"> <tr> <td>2006 Capital (\$000)</td> <td>\$565</td> </tr> <tr> <td>Total Capital Needed to Complete Project:</td> <td>\$565</td> </tr> <tr> <td>Prior Capital Spent:</td> <td>\$0</td> </tr> <tr> <td>Total Project Capital:</td> <td>\$565</td> </tr> </table>	2006 Capital (\$000)	\$565	Total Capital Needed to Complete Project:	\$565	Prior Capital Spent:	\$0	Total Project Capital:	\$565
2006 Capital (\$000)	\$565								
Total Capital Needed to Complete Project:	\$565								
Prior Capital Spent:	\$0								
Total Project Capital:	\$565								

Description of Project:
 This project involves 1) rebuilding an existing bay at the S/S to make room for a larger transformer and adding a bay for a future transformer, 2) replacing the existing 5/7 MVA transformer with a 10/14 MVA transformer, 3) replacing an existing 3-ph 12.47 kV circuit with two circuits with one circuit feeding the southern end of the Topsham Fair Mall, and 4) switching load from an adjacent Topsham 115 kV S/S circuit that is fully loaded to the newly created second circuit to feed the northern end of the Mall and tying those circuits together with a new airbreak switch.

Summary of Project Justification and Benefits:
 The project will 1) remove 2 MVA of load from a circuit that currently feeds the Topsham Fair Mall from the Topsham 115 kV S/S (both the circuit and S/S transformer are already fully loaded and will become overloaded by 1.5 MVA of new load coming on-line in 2005-06), thus reducing the potential for outage-related costs from customer claims, PUC complaints and expedited repairs, 2) provide additional capacity, both for future growth in the growing commercial area surrounding the Topsham Fair Mall as well as areas currently served by the Brunswick Hydro S/S which is also heavily loaded, and 3) provide tie capability between the Topsham Old S/S and Topsham 115 kV S/S circuits to support outage restoration and maintenance.

Budget Year of Expenditures:	2006	Project Life [tax life years]	20
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	\$2,710	\$9,657
Internal Rate of Return [%]	89.3%	89.8%
NPV Payback in years	2.4	
Cash Payback in years	2.3	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			



Capital Project Business Case

Project Title:	Project Number:
Benton 115 kV Switchyard (Benton & other)	CMP-06-48

Project Type:	2006 Capital (\$000)	\$500
Infrastructure	Total Capital Needed to Complete Project:	\$12,000
	Prior Capital Spent:	\$0
	Total Project Capital:	\$12,000

Description of Project:
This project involves: 1) building a new 115 kV switchyard where two 115 kV transmission lines (S83 & S67A) are in close proximity to each other in Benton, 2) installing six 115 kV breakers at the yard, 3) connecting the two transmission lines to the breakers, 4) installing a 20 MVAR capacitor bank at the yard, and 5) re-rating approximately 33 miles of the two 115 kV transmission lines (selectively replacing poles with higher poles and re-tensioning conductor).

Summary of Project Justification and Benefits:
This project will provide a third 115 kV source to the greater Waterville-Skowhegan area by tying a 115 kV transmission line that bypasses the area (S67A) to one of two 115 kV lines that currently supply the area (S83). Loss of either of the lines currently feeding the area will result in area voltages dropping well below MPUC allowed minimums, particularly if one of the generators at the SAPPi-Somerset paper mill is not operating at the time. CMP would need to shed roughly 60 MVA of area load in order to restore system voltages to allowed minimums. Such an event would be highly visible and most certainly result in significant customer claims and a regulatory proceeding with a potentially expensive outcome. The third 115 kV source and capacitor bank prevent that from occurring as well as provide additional voltage support as far as the allowed S/C.

Budget Year of Expenditures:	2006	Project Life [tax life years]	15
Exit Year [if applicable]		Weighted Average Cost of Capital:	7.17%
Effective Tax Rate:	41%	Salvage Value [if applicable]	

Investment Results:	Year 10	Total Project
Net Present Value (\$000)	(\$2,594)	\$4,527
Internal Rate of Return [%]	-1.0%	12.5%
NPV Payback in years	15.5	
Cash Payback in years	10.4	

Project Approvals:	Name	Initials	Date
Project Sponsor	Steve Robinson		
Capital Allocation Team Chair			
Approved by:			
Approved by:			