



On-going Economic Benefits of the Maine Power Reliability Program

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**MAINE POWER
RELIABILITY PROGRAM**
A CENTRAL MAINE POWER COMPANY PROGRAM

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Dr. Charles Colgan, economist with the University of Southern Maine, has analyzed the economic impacts of the Maine Power Reliability Program during the four years of its projected construction timetable – an average of 2,100 new jobs each year with a peak of 3,327 jobs in the second year; \$60 million annually in new wages and \$72 million annually added to the state’s Gross Domestic Product (GDP); and an infusion of \$18 million over the four years in new income and sales taxes to the state’s coffers.

In addition to the stimulus provided by this significant construction project, the Maine Power Reliability Program also has on-going economic benefits to Maine customers over the life of the project. These economic impacts have been estimated by Central Maine Power (CMP) and are depicted in the tables and spreadsheets that follow.

Costs: The Maine Power Reliability Program will provide reliability benefits to all the utilities in New England. By virtue of Maine’s membership in the regional transmission system through ISO-New England, the vast majority of Maine Power Reliability Program costs will be shared among all New England electric customers; approximately 8% to Maine customers and 92% to other New England electric customers.

The total capital cost of the Maine Power Reliability Program is estimated at a 95% confidence level to be \$1.5 billion. New England electric customers will pay off this amount over a forty year period. CMP estimates that Maine’s share of these capital costs, during the first fifteen years of the project’s life (2013-2027), will average \$18 million per year.

These average annual costs of \$18 million per year must be compared to the benefits.

Benefits: The benefits of the Maine Power Reliability Program are measured in three components:

1. New property taxes paid to Maine municipalities

The total new property taxes from the Maine Power Reliability Program transmission investments is estimated to be in the order of \$25 million per year by the year 2013 when the project is completely

built. These costs are socialized among all New England utilities, with Maine customers paying \$2 million of these increased property taxes, resulting in a net benefit to Maine of \$23 million per year.

The property tax benefit alone offsets Maine's share of the Maine Power Reliability Program's capital costs, which on average will be \$18 million per year.

2. Reduction in system losses

The physical nature of the electrical grid causes some electricity to be "lost" as it flows across the electrical grid from generators to customers. Losses increase as loads grow absent system improvements. Electricity suppliers charge higher prices to cover these losses.

The Maine Power Reliability Program will reduce losses by substantially increasing the load-carrying capacity of the transmission system. As a result, electricity suppliers will be able to charge less for losses.

LaCapra Associates estimates that the value of the reduction in losses in Maine will be roughly \$4 million in 2013, increasing to \$10 million by 2027, and averaging \$7 million per year over the fifteen year period. The actual amount will be highly dependent on the future price of electricity.

3. Reallocation of existing operations and maintenance costs to regional rates

Prices that New England customers pay for the transmission of electricity are set by a formula approved by the Federal Energy Regulatory Commission (FERC). The formula allocates transmission operations and maintenance costs between regional and local transmission rates based on the book value of certain categories of transmission assets.

The addition of the Maine Power Reliability Program's assets to CMP's balance sheet will result in the shifting of operations and maintenance costs from local rates to regional rates. CMP projects that up to \$7 million per year of existing transmission costs for operations and maintenance could be shifted from CMP customers to the customers of other New England electric companies by 2013, increasing to almost \$11 million by 2027, and averaging \$9 million per year over the fifteen year period.

Other On-going Benefits

There are other significant benefits associated with the Maine Power Reliability Program that are impossible to quantify.

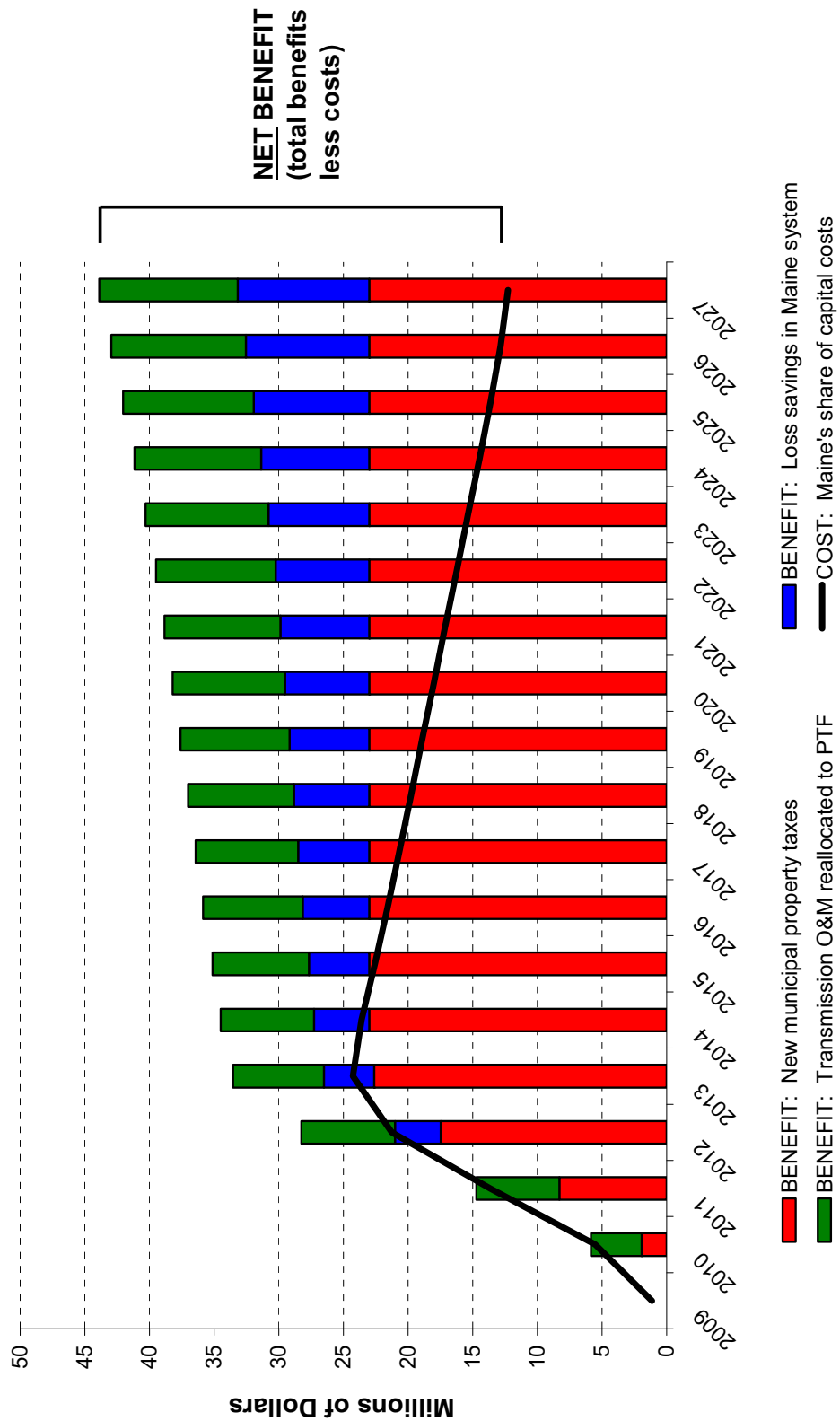
Reliability: Assurance of a reliable source of electricity to power our businesses and homes is an economic benefit that is impossible to put a number to, although the economic impact of the 2003 blackout that affected 50 million customers in the eastern U.S. and Canada is estimated between \$4 and \$10 billion to the U.S. economy alone. This is the most important benefit of the Maine Power Reliability Program to Maine customers, and the fundamental reason for the project being proposed.

Reduction in greenhouse gases: Future development of renewable energy resources in Maine will require a reliable transmission grid. The Maine Power Reliability Program will assist the development of projects that are already being planned and even more renewable energy projects that will reduce Maine's dependence on oil and natural gas for producing most of our electricity.

Conclusion: The quantifiable annual on-going benefits of the Maine Power Reliability Program over the first fifteen years of its existence average \$39 million per year and substantially exceed the projected average on-going capital-related cost of \$18 million per year. Yet, perhaps the largest on-going impact to Maine's economy will come from a reliable source of electricity, an impact that would be more difficult to quantify.

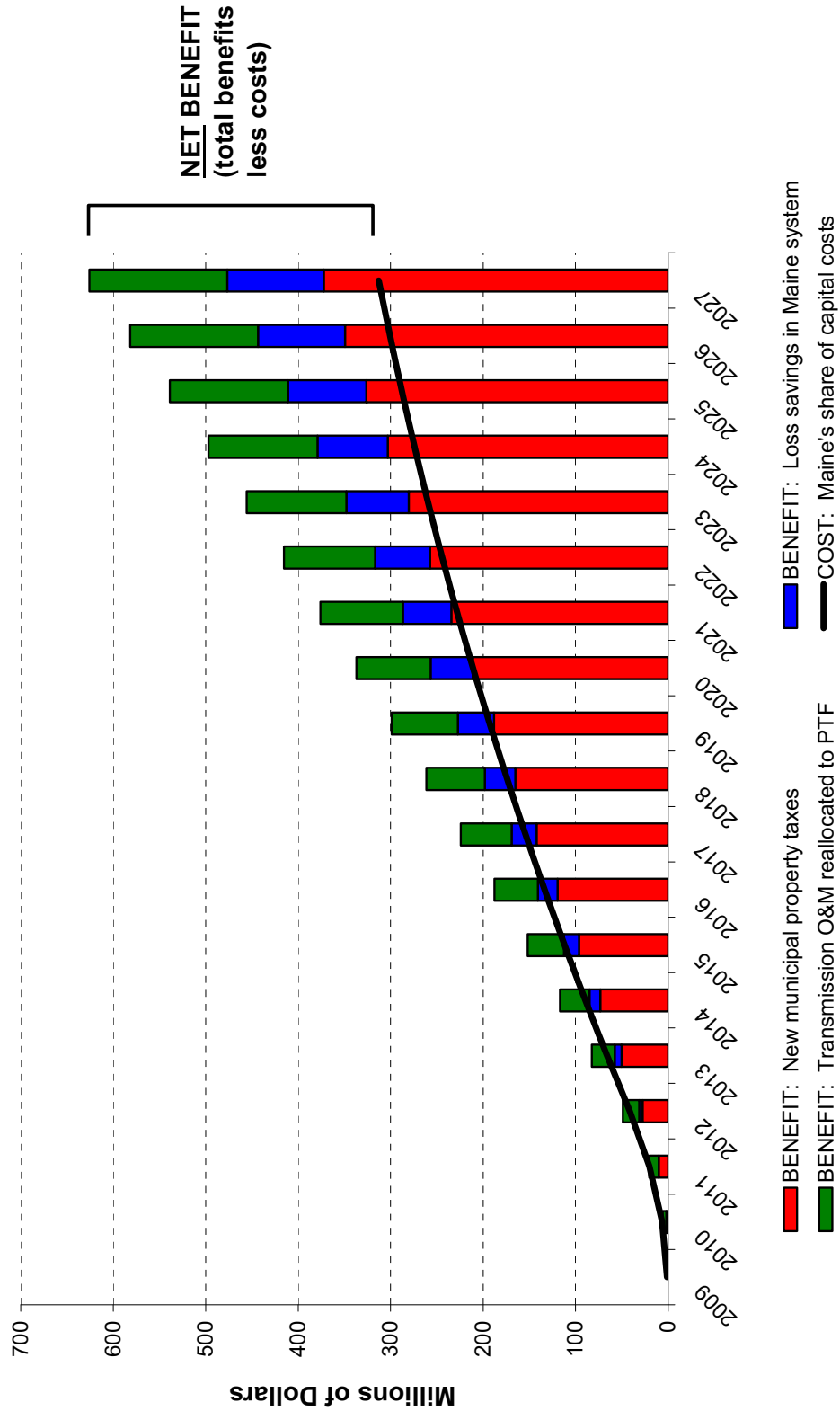


Estimated Annual Costs & Benefits to Maine of MPRP (excluding reliability, jobs, GDP, and State sales & personal income tax benefits)





Estimated Cumulative Costs & Benefits to Maine of MPRP (excluding reliability, jobs, GDP, and State sales & personal income tax benefits)





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**Estimated Costs and Benefits to Maine of MPRP
Excluding Reliability, Job, GDP and State Sales & Personal Income Tax Benefits**

Units	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
1 Annual MPRP capital expenditure	91.0	465.0	525.0	385.0	51.8															
2 Amount placed in service each year		280.0	599.0	639.0	52.0															
3 Maine's share of RNS costs	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Maine's share of MPRP capital costs																				
4 Book depreciation	3.3	14.0	29.5	38.1	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
5 Income taxes	3.5	15.7	37.0	55.2	61.5	59.3	56.2	53.2	50.4	47.7	45.1	42.4	39.7	37.0	34.3	31.7	29.1	26.7	25.0	25.0
6 Debt interest	2.5	11.4	26.9	40.2	45.0	43.4	41.1	38.9	36.9	34.9	33.0	31.0	29.0	27.1	25.1	23.2	21.3	19.6	18.3	18.3
7 Earnings on common equity	5.0	22.8	53.7	80.1	89.3	86.1	81.5	77.2	73.2	69.3	65.4	61.5	57.6	53.7	49.8	45.9	42.2	38.8	36.3	36.3
8 Total capital revenue requirement	11.0	53.3	131.7	204.9	233.9	227.5	217.5	208.1	199.3	190.7	182.1	173.6	165.1	156.6	148.0	139.5	131.2	123.9	118.3	118.3
9 Portion paid by Maine customers																				
10 Through regional transmission prices	0.9	4.2	10.3	16.0	18.2	17.7	17.0	16.2	15.5	14.9	14.2	13.5	12.9	12.2	11.5	10.9	10.2	9.7	9.2	9.2
11 Through local transmission prices	0.3	1.4	3.4	5.3	6.0	5.9	5.6	5.4	5.1	4.9	4.7	4.5	4.3	4.0	3.8	3.6	3.4	3.2	3.1	3.1
12 Total	1.1	5.5	13.7	21.3	24.3	23.6	22.6	21.6	20.7	19.8	18.9	18.0	17.1	16.2	15.4	14.5	13.6	12.9	12.3	12.3
MPRP contribution to Maine property taxes																				
13 New property taxes for Maine municipalities	2.1	9.0	19.0	24.6	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
14 Portion paid by other New England customers	1.9	8.3	17.5	22.6	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
MPRP reduction in cost of system losses																				
15 Maine system peak load	2,031	2,073	2,120	2,167	2,216	2,266	2,317	2,369	2,422	2,476	2,532	2,589	2,647	2,707	2,768	2,830	2,893	2,958	3,025	3,025
16 Reduction in peak hour losses																				
17 as a % of peak load	n.a.	n.a.	n.a.	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
18 in MW	n.a.	n.a.	10.8	11.1	11.3	11.6	11.8	12.1	12.4	12.7	12.9	13.2	13.5	13.8	14.1	14.5	14.8	15.1	15.4	15.4
19 Reduction in energy losses	42.6	42.6	43.5	44.5	45.5	46.5	47.6	48.7	49.8	50.9	52.0	53.2	54.4	55.6	56.9	58.1	59.4	60.7	62.0	62.0
20 Forward capacity market price	49.2	54.0	48.8	46.8	63.3	79.8	96.3	112.8	129.3	132.5	135.8	139.2	142.7	146.3	149.9	153.7	157.5	161.5	165.5	165.5
21 Maine LMP projections	68.6	68.8	69.0	69.2	70.9	72.6	74.3	77.7	77.7	80.9	84.0	87.2	90.4	93.5	99.4	105.3	111.1	117.0	122.8	122.8
22 Value of loss reduction																				
23 Capacity	n.a.	n.a.	0.6	0.8	1.0	1.3	1.5	1.8	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.9	2.9
24 Energy	n.a.	n.a.	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.2	4.4	4.7	4.7	5.0	5.4	5.9	6.3	6.8	7.3	7.3
25 Total	3.5	3.5	3.9	4.3	4.7	5.2	5.5	5.8	6.2	6.5	6.9	7.3	7.3	7.8	8.4	8.9	9.5	10.2	10.2	10.2
MPRP impact on allocation of O&M to PTF																				
26 Cost inflation	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
27 CMP transmission O&M / A&G / property tax																				
28 Without MPRP	23.0	23.6	24.2	24.8	25.4	26.1	26.7	27.4	28.1	28.8	29.5	30.2	31.0	31.7	32.5	33.3	34.2	35.0	35.9	35.9
29 With MPRP	23.0	25.7	33.2	43.8	51.1	52.2	52.9	53.6	54.3	55.0	55.8	56.5	57.3	58.1	58.9	59.8	60.7	61.6	62.5	62.5
30 FERC allocation to non-PTF																				
31 Without MPRP	10.8	11.1	11.4	11.7	12.0	12.3	12.6	12.9	13.2	13.5	13.9	14.2	14.6	14.9	15.3	15.7	16.1	16.5	16.9	16.9
32 With MPRP	10.8	6.9	4.4	3.8	4.3	4.4	4.5	4.6	4.6	4.6	4.7	4.8	4.8	4.9	5.0	5.1	5.1	5.2	5.3	5.3
33 Amount re-allocated to PTF from non-PTF	-	4.3	7.0	7.9	7.7	7.9	8.1	8.4	8.6	8.9	9.2	9.5	9.7	10.0	10.3	10.7	11.0	11.3	11.6	11.6
34 Re-allocated costs paid by other N.E. customers	-	3.9	6.4	7.2	7.0	7.2	7.5	7.7	7.9	8.2	8.4	8.7	9.0	9.2	9.5	9.8	10.1	10.4	10.7	10.7
Maine's share of MPRP benefits, less																				
35 Annual	(1.1)	0.3	1.1	7.0	9.3	10.9	12.6	14.3	15.8	17.2	18.7	20.2	21.7	23.2	24.9	26.7	28.4	30.1	31.6	31.6
36 Cumulative	(1.1)	(0.8)	0.2	7.2	16.5	27.4	40.0	54.2	70.0	87.2	105.9	126.1	147.8	171.0	196.0	222.7	251.1	281.2	312.8	312.8

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