Review, Assessment and Restatement of the Financial Model Used by London Economics International, LLC in its Report to the Maine Legislature on the Creation of a Consumer-Owned Public Utility

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Abstract

LEI has seriously misstated the financial consequences to Maine ratepayers that would result from a municipalization of Maine's two investor-owned utilities (CMP and Emera Maine) through the creation of the Maine Power Delivery Authority. In its Reference Case, LEI calculates those financial benefits to have a net present value of $232 million over 30 years. When this estimate is corrected to include Balance Sheet assets held by the MPDA in 2053, additional revenues to the MPDA in the form of interest earned on cash balances and a higher weighted average cost of capital on its transmission rate base, and significantly lower management fee expenses, the net savings differential is 3.7 times larger at $858 million, and the total value of the MPDA to ratepayers is just over $5.6 billion in net present value terms. Further, in 2054 and for the years thereafter, the savings to Maine ratepayers will exceed $150 million annually, adjusted for inflation.

The question of whether Maine should create a new consumer-owned public electric utility by acquiring the assets and operations of Maine's two investor-owned utilities (CMP and Emera Maine or IOUs) came before the legislature in the spring of 2019 in the form of LD 1646. After considerable debate, on July 2, 2019 the Governor approved a legislative resolve that directed the Maine Public Utilities Commission (MPUC or Commission) to retain a consultant to provide more detailed evaluation of, among other things, whether the creation of a consumer-owned public electric utility – referred to in the legislation as the Maine Power Delivery Authority (MPDA) - would provide financial benefits to Maine electric ratepayers. London Economics International, LLC, (LEI) a Boston-based economic and energy consultancy, was retained by the Commission. LEI issued its report on February 15, 2020 entitled "Evaluation of the Ownership of Maine's Power Delivery System" (Report).

The Report focused on a set of issues posed by the legislature in its resolve. One of those issues is whether Maine electric ratepayers could expect to realize short- and/or long-term savings through the acquisition of CMP and Emera Maine by a newly formed MPDA. LEI developed a detailed financial model to address this issue. LEI provided an electronic copy of its financial model to the public a month after issuing its Report – "LEI impact assessment model (public)" (the LEI Model).

My purpose in preparing this paper is to provide a detailed review and assessment of the LEI Model and a restatement of the LEI Model where I believe there are errors or where a better set of assumptions or parameters should be incorporated. I focus on what LEI refers to as the Reference

Case. This is defined as the financial comparison over the period 2024 through 2053 between continued operations of the two IOUs versus operations of a newly created MPDA that begins operations in 2024. The key result from this comparison is shown graphically as Figure 1 in the Report. I have reproduced it here as Figure 1 for the Reference Case only from the LEI Model – see Worksheet "Dashboard" in the LEI Model.

This graph shows that LEI estimates the establishment of the MPDA is expected to cost Maine ratepayers more during each of the first nine years following its creation than continued operation of CMP and Emera Maine. However, after this period, LEI estimates the MPDA will provide savings to ratepayers over the next 21 years and beyond. The net present value of the costs/savings stream from this Reference Case over the 30-year period from 2024 through 2053 is $232 million. (See [Model D200][1].)

Figure 1   **Reference Case Comparison from LEI Model**
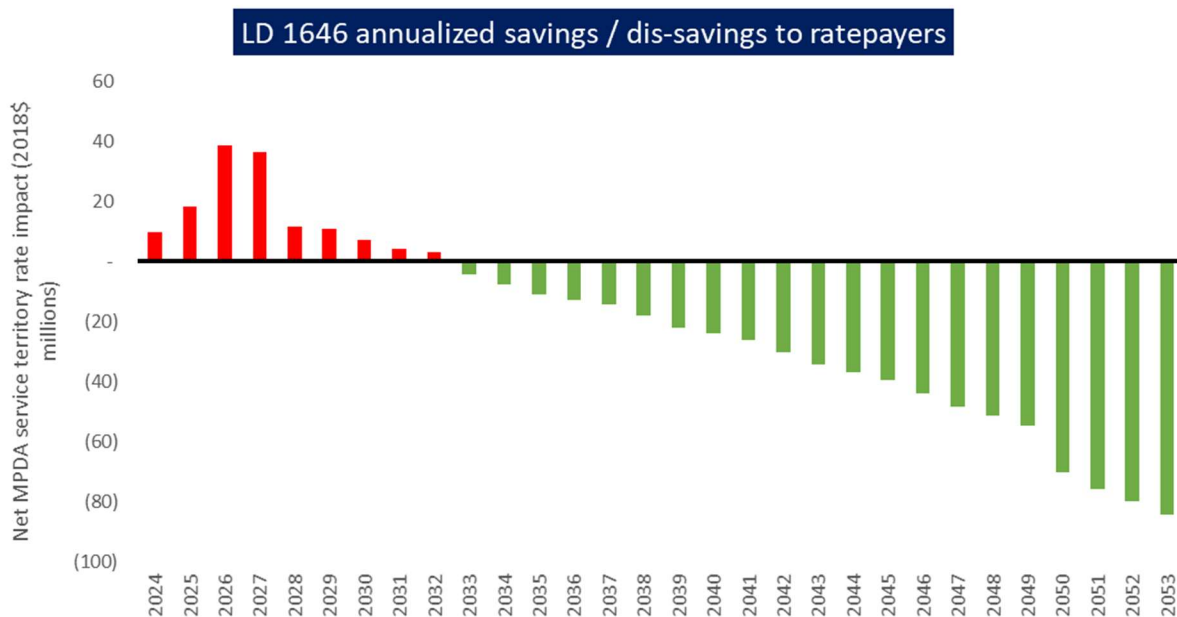
With all complex financial models, a model's design, its embedded assumptions, and specific parameters can all have major impacts on the results of the model. The LEI Model is no exception. My review of the LEI Model found that much of its design, assumptions, and parameters are reasonable and should be retained. However, I also found a number of calculation errors,

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[1] I have adopted the following notation for referencing the LEI Model. All references are enclosed in brackets. The name of the worksheet appears first followed by the cell reference. For example, [Model D200] points to the worksheet "Model" and cell D100.

methodological flaws, and unreasonable assumptions that when modified and the LEI Model restated result in very different conclusions from those reached by LEI and presented in its Report.

I have chosen to organize my review and assessment of the LEI Model around items that would normally be found on Statements of Income and Cash Flow and Balance Sheet. I believe that this provides a more intuitive context for my review, especially for readers who may be less familiar with the design and operations of these types of financial models. The reader should assume that where I do not discuss an element of the LEI Model, I have found that element to be reasonable, or if altered to not have any material impacts on the results.

Income Statement

Revenues:

- **WACC for Transmission**

The weighted average costs of capital (WACC) for transmission rate bases for CMP and Emera Maine in the LEI Model are 9.86% and 10.15%, respectively. LEI assigned a WACC for the MPDA of 8%, citing 2002 NEPOOL Interpretive Guidance as support for this position – see Dashboard C22. This is significantly below the WACC of the two IOUs the MPDA would replace.

While there is some uncertainty regarding what ISO-NE and FERC would permit a newly formed municipally owned transmission owner in New England to set as its WACC for purposes of its Open Access Transmission Tariff (OATT), there is good precedent in FERC decisions since 2002 for the MPDA to utilize the WACCs of those IOUs it is replacing. This is important, because the difference between the allowed WACC and the actual cost of debt for the MPDA is an important contributor to the savings Maine ratepayers will realize through the establishment of the MPDA. By setting the rate at the lower 8% level, the LEI Model underestimates those savings. Adjusting the WACC upward results in an increase of roughly $4 billion in revenues to the MPDA over the 30 year period, the majority of which is paid for by ratepayers in the other five New England states.

- **Interest Income on Cash Balances**

As discussed in more detail in later sections, because of restrictions imposed on the use of the MPDA's net cash flows for either paying down debt or offsetting CapEx in the LEI Model, the MPDA builds up significant cash balances on its Balance Sheet over the period 2024 – 2053. Typically, these cash balances would be invested in some sort of interest bearing financial instrument, and the interest earned treated as income or revenues on the Income Statement. The LEI Model does not do this. As a result, the LEI Model understates revenues and therefore savings to Maine ratepayers resulting from municipalizing Maine's IOUs through the creation of the MPDA.

Expenditures:

- **Operating Expenses (OpEx)**

LEI begins by developing a 30 year forecast of operating expenses for CMP and Emera Maine by looking at the historic 5 year relationship between the growth of each IOU's operating expenses and its rate base. The assumption is that operating expenses of the utilities are driven by capital investments in their electric grids. This assumption may be true for some aspects of an electric utility's operations (for example, repair or replacement of poles and wires); however, it is decidedly not true for other aspects of its operations such as management, billing, and customer services. Regardless, there is a calculation error in the LEI Model. Please refer to [Historic OpEx growth H24]. The value shown is 127%. There is an error in this calculation. That value takes the average of a number of specific annual changes, some of which are negative. This is methodologically incorrect. For example, any starting value that doubles the first year, then halves the second year will return to its original starting value. Yet, the average of the two annual changes of 100% and -50% is +25%. If we look at the starting and ending values in [Historic OpEx growth H24 row 22] and compute the CAGR over this period, we see that the value is around 2%. Since LEI uses the same value for both the IOU and MPDA cases, this error does not impact its savings estimate. It does, however, lead to much higher OpEx costs over the 30 year period, as shown in Figure 2. The LEI Model forecasts IOU operating costs adjusted for inflation to be more than 500% higher in 2053 than they are today. This is not reasonable.

In addition to this error in the calculation, LEI ties OpEx to the size of the rate base. While there is an intuitive relationship between the physical electric grid and the costs to operate and maintain that grid, the actual relationship between OpEx and rate base is more nuanced. The first problem is that the IOU rate bases will grow as a result of simply replacing worn out equipment. The reason for this is that the equipment being replaced is, on average, 33 years old and paid for originally in dollars at the time the investment was made. Given even modest inflation rates, the new investment (what I refer to as maintenance CapEx) will be much larger in today's dollars than the value on the books of the equipment it is replacing. This will lead to an increase in rate base, even though the physical components of the grid have not changed. There is no reason to believe that real OpEx will increase in this case.

The methodology I have used to estimate future OpEx is based on a division of CapEx into maintenance CapEx and expansion CapEx. Maintenance CapEx, as noted above, consists of repairs and renewals to the existing grid and related equipment. Expansion CapEx, on the other hand, relates to the physical expansion of the capacity of the grid, expansion driven by load growth from beneficial electrification and interconnection requirements for zero-carbon, renewable generating resources. (See the next section for further discussion of this.)

I assume that OpEx is 65% labor costs (including IOU employees, shared services agreements and contractor activities) and 35% equipment and supplies. Since all dollar values in the LEI Model are based on 2018 dollars – that is, they are adjusted for inflation, I assume that the 35% share of OpEx that is non-salary related remains constant in real terms over the 30 year period. On the other hand, I assume that real labor costs increase at an assumed rate of productivity growth of 0.50%. Next, I adjust this maintenance level OpEx upwards by the share of rate base tied to expansion driven CapEx. This ties OpEx to rate base as was done in the LEI Model, but only to that portion of rate base that is incremental to the maintenance rate base as that exists today.

The second aspect of OpEx that warrants attention is what LEI calls the Management Fee. LEI has added a Management Fee to MPDA OpEx to address the fact that the MPDA will be a stand-alone entity unlike the IOUs, which are part of larger corporations that share management and other overhead and operating services. LEI ties its estimate of such fees to the size of the MPDA's rate base. As that rate base increases, management fees increase proportionately. These fees begin at approximately $82 million in 2024 and increase to $225 million (measured in 2018$) by 2053. To put this figure in perspective, the $82 million represents just over 16% of the total OpEx of the combined IOUs in 2018, a figure which already includes an allocation of each IOU's parental company management costs to the IOUs through shared services agreements.

An alternative approach for estimating the costs of management for the MPDA is to recreate the IOUs as they existed prior to their acquisitions by Energy East and Emera for CMP and Bangor Hydro, respectively. I have done this for CMP based on historic information and various filings CMP has made at the Commission. Prior to its acquisition by Energy East in 2001, CMP employed 1,575 FTE, including a complete C-suite of eleven officers.[2] Its total payroll costs in 2001 were $113 million, inclusive of an administrative loading factor of 52.1%. It was a fully self-contained company, providing its own management functions.

Figure 2   Comparison of OpEx – LEI Model v. Restated Model

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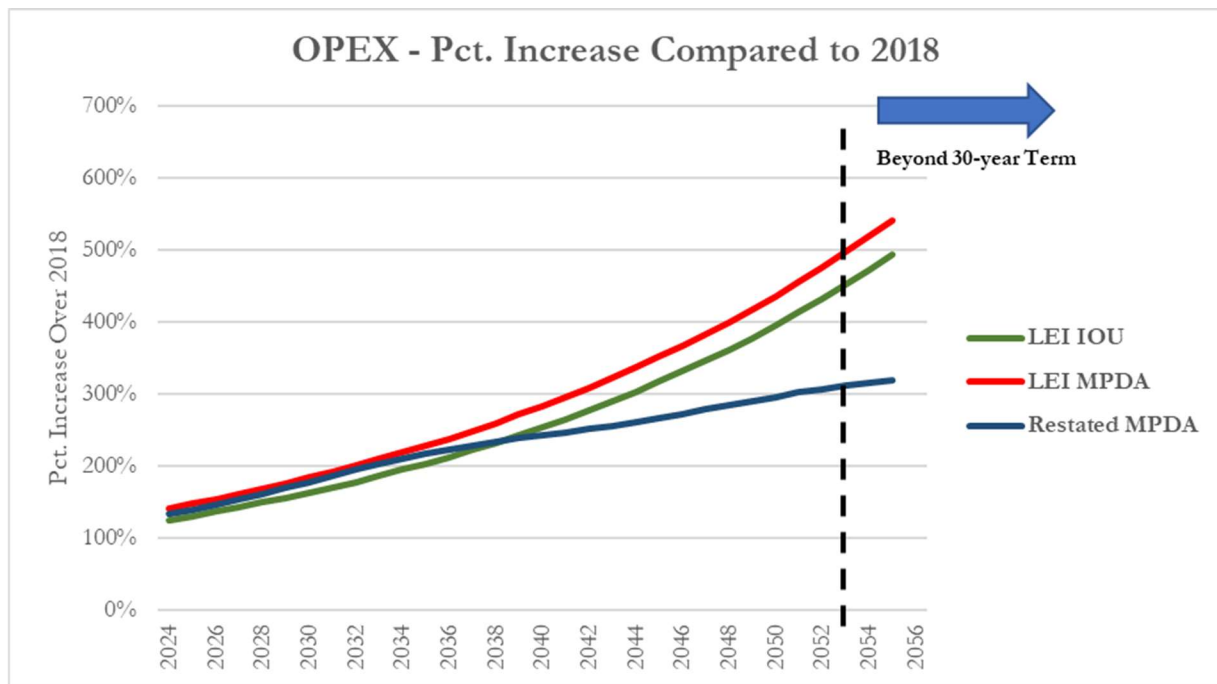
[2] These officers are Chairman, President & CEO, Exec. Vice President, four Senior Vice Presidents, three Vice Presidents and a Treasurer.

Had CMP not been acquired by Energy East and had it been able to achieve productivity increases consistent with those embedded in its regulatory structure, CMP would have 1,289 FTEs today, including the full complement of 11 officers in its C-suite noted above. Total personnel costs for these employees would have been just under $160 million in today's dollars, including a higher administrative loading factor of 62.9%.

Instead, as a unit of Avangrid, CMP has 883 FTEs. This lower employee count is supplemented by services provided to CMP by Avangrid under a shared services agreement. CMP is charged by Avangrid under this shared services agreement the cost equivalent of about 409 FTEs at Avangrid providing management, administrative and other centralized operating functions (e.g., accounting, billing, regulatory, financings, legal). Total personnel costs for the 883 FTE CMP employees are $101 million and for the 409 FTE Avangrid employees $47 million, both inclusive of an administrative loading factor of 62.7%. The difference between the total personnel costs of a reconstituted CMP and CMP as it stands today (inclusive of the shared services agreement) is $11 million. In addition, CMP in its filings has identified about $1 million in additional insurance coverage costs plus an additional $1.6 million in governance costs that it would occur but for its shared services agreement with Avangrid.

These calculations indicate that reconstituting the CMP that existed prior to its acquisition by Energy East would require an additional $13.5 million of revenues to cover the additional administrative personnel and governance costs the stand-alone company would incur, compared to its costs as an affiliate of Avangrid. If I scale this up proportionately to include Emera Maine, total incremental management costs are $15.3 million in 2024. This is far below the $82 million LEI builds into its Model. This difference in management fee over the 30-year period from 2024 – 2053 is roughly $4.75 billion. To put the management fee structure LEI has built into its Model in perspective, the average annual management fee over the 30-year period is about $10 million more than the total amount CMP spent on wages and salaries for its 883 FTEs plus 100% of the total affiliate charges to CMP by Avangrid in 2018 under its shared services agreement.

Figure 2 shows real OpEx for MPDA under the LEI and Restated Models. LEI's OpEx assumptions result in an increase in real terms of over 500% from 2018 to 2053. By comparison, my assumptions in the Restated Model put the increase at just over 300%.

Cash Flow Statement

- **Capital Expenditures (CapEx)**

The LEI Model calculates capital expenditures in the Reference Case as a fixed percentage (6.54%) [Dashboard C6] of rate base, based on the historic relationship between these two values and on CMP and Emera Maine forecasts of near-term capital needs. This approach may not provide a level of investment necessary to maintain the physical transmission and distribution grid in good working order consistent with prudent utility practices. To the extent that either IOU is influenced by the cash flow requirements of their parent companies or the need to expand rate base to, for example, utilize fully tax credits associated with renewable wind development by its affiliates, basing a 30-year

forecast of CapEx on a five year historical record may result in an under- or over-investment in the grid.

An alternative approach is to consider two components of CapEx that comprise the whole – (1) those necessary to maintain the existing grid and (2) those necessary to expand the grid to enable beneficial electrification and the decarbonization of electric generation. A reasonable proxy for the first type of investment is to tie it to the physical depreciation of the existing rate base. As the various components of the grid age, they need to be replaced. The depreciation schedules adopted by the IOUs are designed to track such physical wear and tear. As noted by LEI, the average depreciation rate for the IOUs' rate bases is 3%.

Capital expenditures to maintain the grid, however, cannot be simply set equal to depreciation. The reason for this is that the rate base is expressed in the value of the dollar at the time each investment occurred. Accordingly, the physical plant depreciating this year, for example, has had on average a 33 year life, meaning it was paid for on average using 1987 dollars. If we assume an average rate of inflation rate over this period of 3.0%, the value of this year's depreciation in 2020 dollars is about 2.73 x the actual depreciation expense recorded on the books. Thus, to replace each dollar of book value depreciation requires $2.73 today. The value of next year's depreciation will be 2.65 x the actual depreciation expense, and so on. I use this approach for estimating the annual capital expenditures required to maintain the existing transmission and distribution grid at its current level in its current condition.

The second type of investments are those necessary to expand the capacity of the grid to accommodate increased electricity usage associated with beneficial electrification and the expansion of renewable generation facilities to decarbonize Maine's generation mix. I use the estimates of such investments from my report "A New Energy Policy Direction for Maine: A Pathway to a Zero-Carbon Economy by 2050". As described in that report, these values are also expressed in 2020 dollars, so they are roughly comparable with all dollar values in the LEI Report. Figure 3 shows the breakdown in the restated Model of total CapEx into maintenance and expansion CapEx, assuming for simplicity that all maintenance CapEx relates to the grid as it exists today and does not include wear and tear on plant and equipment that has been added to the grid to accommodate its expansion.

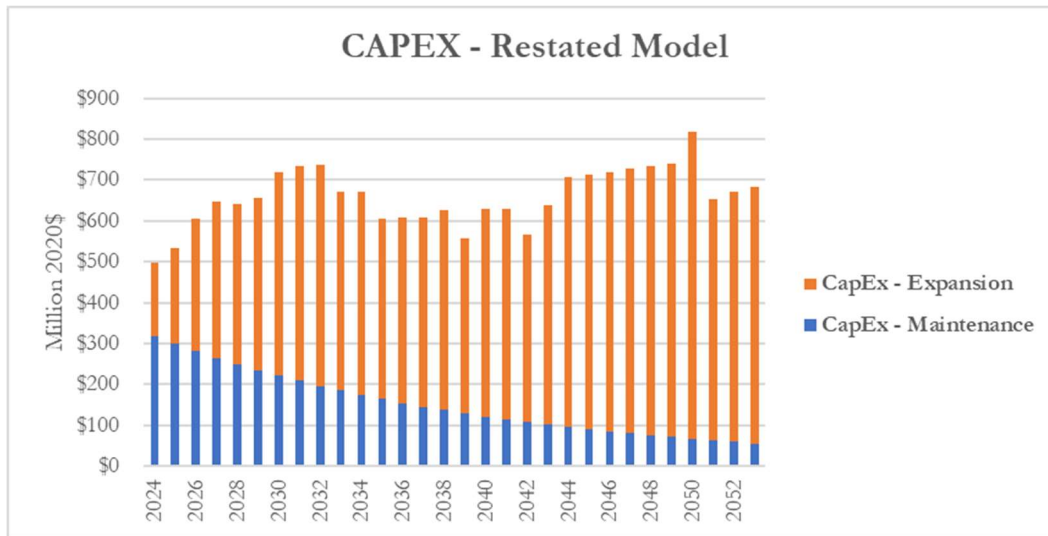**Figure 3   Breakdown of CapEx in Restated Model**

Figure 4 shows CapEx amounts annually and cumulatively over the period 2024 through 2053 from the LEI and Restated Models. My values are higher through 2040, then fall below those used by LEI.   I believe that part of the reason for this is that my decarbonization requirements drive grid investments in the first half of this period to accommodate the buildout of distributed solar PV generation. They are also higher in the early years to fund investments to meet the physical depreciation of the existing grid, something that I do not believe the forecasts from CMP and Emera Maine fully meet.[3] A the end of the 30-year period, the CapEx amounts are very close.

Since the total 30 year CapEx values in the LEI and Restated Models are roughly the same, only a very small percent of the difference in net ratepayer savings discussed later is related to assumption regarding CapEx.

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[3] I do not mean to suggest that either IOU is disinvesting in its electric grid. It may be that the actual physical deterioration of the various components of the grid is not as aggressive as is reflected in the 33 year average depreciation schedule. If this is the case, the depreciation schedules should be modified, which would reduce the amount of CapEx in my model – especially over the first 10 years of the period.

Figure 4   Comparison of CapEx – LEI Model v. Restated Model
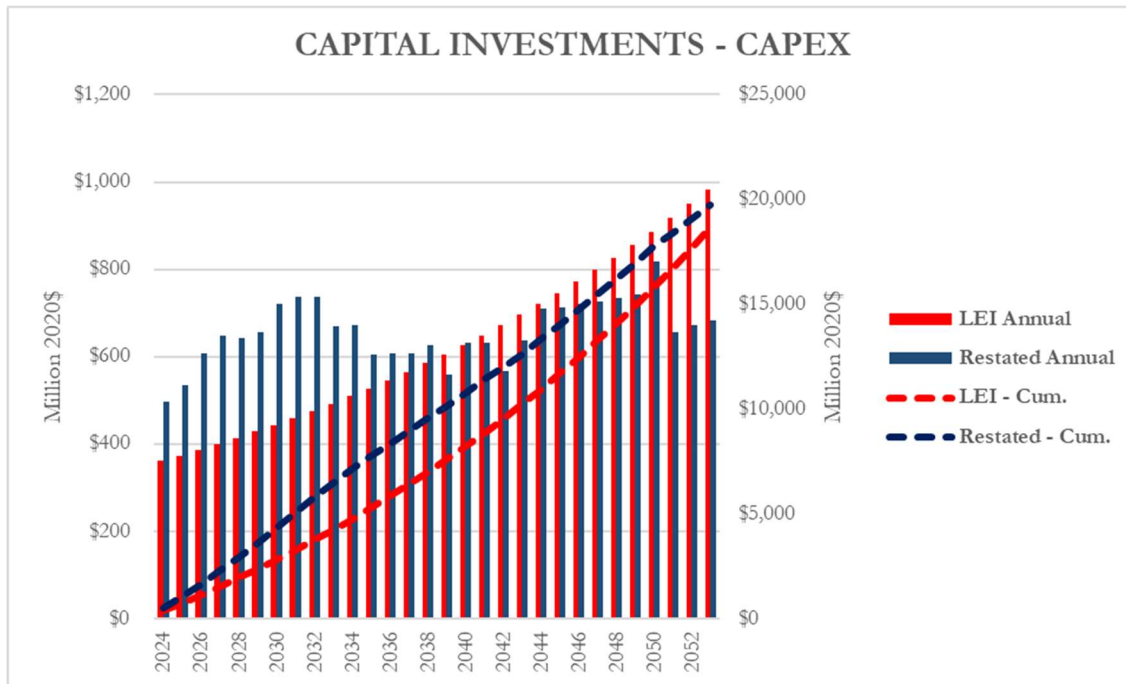
Balance Sheet

Figure 1 shows LEI's estimate of the financial savings to Maine ratepayers achievable by converting Maine's two IOUs into the MPDA. These estimates relate strictly to the Income Statement. There is no consideration paid to the MPDA's Balance Sheet.[4] This oversight is most unfortunate. and, as I discuss below, the LEI Report grossly understates the value of the MPDA to Maine ratepayers.

Consider the year 2053 – at the end of the thirty year analysis period. At this point in the future, the rate bases in the LEI Model for the combined IOUs and for the MPDA cases are identical – that is, the physical structure of distribution and transmission grids are the same. Further, based on the assumptions LEI has made, we expect that the operations of electric grid under the two cases – IOUs v. MPDA – to have been essentially identical over the thirty year period from 2024 through 2053. The difference between the two cases lies in the ownership of the rate base in 2053. In the

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[4] LEI indicated that it "… monitored the debt-to-capitalization ratio of the MPDA, to ensure a reasonable buildup of patronage capital (which is achieved through accumulation of earnings, when there are 'leftover' revenue amounts after payment of expenses)" (LEI Report – page 60). LEI recognized that the MPDA would have assets on its Balance Sheet other than its rate base and would accumulate and hold equity as well as debt. Nevertheless, in considering the value of the MPDA to Maine's ratepayers, LEI completely overlooks the MPDA's Balance Sheet.

IOU case, the $15.5 billion rate base [Model AM51 + AM52] is owned by CMP and Emera Maine; in the MPDA case, it is owned by Maine ratepayers acting through the MPDA.

Now, consider that Maine ratepayers decided to acquire the two IOUs in 2053 and form an MPDA at that time. Presumably, the price would still be on the order of 1.5x rate base or roughly $23 billion. The MPDA would do this by taking on $23 billion in debt in 2053. The IOU case is, in effect, made identical to the MPDA case in 2053 by having Maine's ratepayers acquire the IOUs at that time. Once acquired, Maine ratepayers would own the grid and have $23 billion in debt.

By comparison, under the case in which Maine ratepayers acquired the IOUs and established the MPDA in 2024, Maine ratepayers own the grid and hold $21.3 billion in debt [Model AM70+AM77+AM82] in 2053. Therefore, in 2053 Maine ratepayers will better off under the MPDA case. In order to recreate their position in 2053 under the MPDA, they would need to incur roughly $1.2 billion more debt than the MPDA would have had it begun operations in 2024.

This is not the full story, however. The MPDA also has $5.16 billion in cash on its Balance Sheet [Model AM129] in 2053. When added to the $1.2 billion above, Maine ratepayers from a balance sheet perspective are $6.4 billion better off under the MPDA case in 2053 – or in net present value in 2020, about $2.7 billion, or $2,000 for each resident of Maine in 2024. The Balance Sheet consequences are 12 times larger than the $232 million net present value calculated by LEI [Model D200].[5]

Viewed from a different perspective, if Maine decided to privatize the MPDA in 2053 by selling it at a price equal to 1.5 x its rate base, thus reversing the municipalization the established the MPDA in 2024, the MPDA would receive $23 billion. It would use these proceeds to pay off 100% of its debt, which would leave it with a "profit" of $1.2 billion. This, plus the $5.16 billion in cash, brings the total to cash held by the MPDA to $6.4 billion. If the MPDA distributed that money back to Mainers, each of the 1.3 million Mainers would receive the equivalent of $5,000 in today's dollars. They would receive this "dividend" despite not having invested a penny to establish the MPDA and having paid $650 million less in rates for their electricity to the MPDA than they would have paid to CMP and Emera Maine.

The reason why the Balance Sheet consequences are so much larger than the savings estimate is a function of the model structure LEI uses. The LEI Model limits the amount of free cash the MPDA can use to either paydown debt or offset CapEx requirements. As a result, total debt increases over time by more than it would increase if the cash balances were used in full to offset new debt requirements. With higher debt, comes higher interest payments and therefore higher

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[5] Another way of viewing this is to note that the total of the first nine years of dissavings of $139 million represents only 15% of the cash balance at the end of the 9th year. The MPDA could have compensated Maine ratepayers for the dissavings (the red bars shown in Figure 1) by issuing a "dividend" so-to-speak and still have had $760 million in cash left over.

revenue requirements to cover those payments. These, in turn, reduce the savings related to conversion of the IOUs to the MPDA that are captured on the Income Statements.[6]

This treatment is not necessarily inappropriate. Investors in the MPDA debt will view accumulating cash balances on the MPDA's Balance Sheet as reducing risks associated with holding the MPDA debt. This, in turn, will help the MPDA maintain a favorable credit rating and attractive interest rates. What is inappropriate is that LEI did not include any discussion of this in its Report.

Restatement of the LEI Financial Model

I have revised the LEI Model to correct the errors identified and to incorporate the changes discussed above. Specifically, I have made the following changes:

1. Revised IOU OpEx values by setting the labor share equal to 65% and inflating this by 0.5% (productivity growth factor) and by setting the equipment share to 35% and inflating this by the growth rate in rate base, as noted above
2. Reduced the Management Fee for the MPDA by eliminating a third-party management company and replacing it with an internal management structure that mirrored that of CMP prior to its acquisition by Energy East in 2001
3. Modified the CapEx investments as described above
4. Adjusted the weighted cost of capital in the MPDA revenue requirement calculation permitted under FERC precedent from 8% in the LEI Model to 10% - the average of CMP and Emera Maine WACCs.
5. Included interest earned on cash balances as a source of revenues for the MPDA

The results of my restatement of the LEI Model are shown graphically in Figure 5. The LEI savings values are the same as those shown in Figure 1. These have a net present value (at 3.5%) of $232 million over the 30 year period from 2024 – 2053 [Model D189]. When the LEI Model is restated by making the corrections and modifications noted above, the net present value of total savings to Maine ratepayers increase by more than 350% to $858 million. Further, in all 30 years, the savings are positive.

Figure 5 looks only at the savings related to the revenue requirements of the two IOUs compared to that of the MPDA under the model structure. These savings relate only to differences that appear on the Income Statements of the IOUs and the MPDA. Table 1 adds those elements that appear on the Balance Sheets of the IOUs and the MPDA in 2053. The first row shows the savings in revenue requirements taken from Figure 4. The next row shows the rate bases in 2053 from the LEI Model

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[6] I note that this reduction in the MPDA-related savings would be less of a concern if the LEI Model also reflected interest income from these cash balances as income, thus reducing the MPDA's revenue requirement from its ratepayers.

and for my restatement of that model. Because cumulative CapEx levels are nearly identical in the two models, the rate bases are very similar at the end of thirty years.

The next set of data in Table 1 show the amounts of debt and cash balances for the MPDA in 2053 under the LEI and Restated Models. As discussed earlier, the LEI Model imposes restrictions on the use of free cash flows to pay down debt or reduce borrowings to fund CapEx. As a result, cash balances accumulate, leaving the MPDA with a cash balance of more than $5 billion and outstanding debt of close to $21.3 billion by 2053. If we assume that the cash balance is used to pay down debt at that time, the "net debt position" of the MPDA would be $16.14 billion in 2053 in the LEI Model. In contrast, in the Restated Model, total debt is $6 billion lower at $15.5 billion, the cash balance is $2.6 billion higher at almost $7.7 billion, leaving the "net debt position" at just over $7.7 billion.[7]

Figure 5   Comparison of Ratepayer Savings – LEI Report v. Restated Models
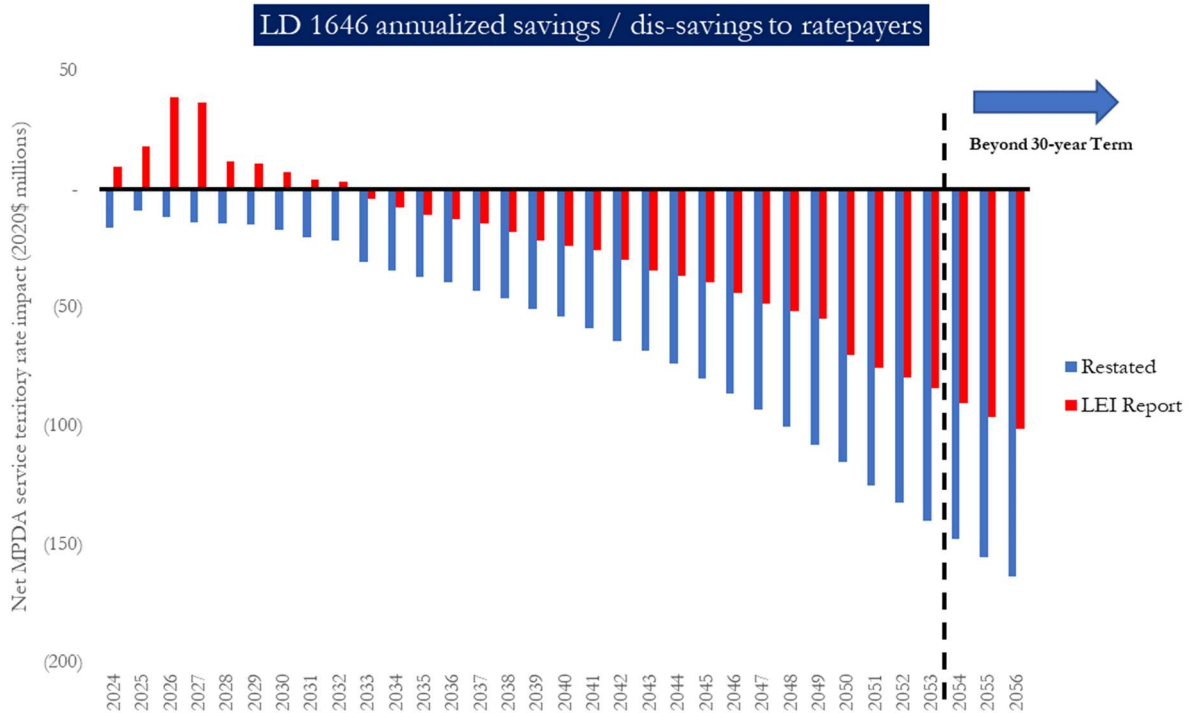
To repeat, in the Restated Model, under the MPDA case in 2053, the MPDA would own and have total responsibility for operating the electric grid; Maine ratepayers would have realized a net present value savings of $858 million between 2024 and 2053; the MPDA would have $15.5 billion in debt

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[7] The Restated Model maintains the debt pay down and cash investment structure of the LEI Model. The reduced debt and higher cash positions in the Restated Model derive from the other modifications that are incorporated.

on its books and have $7.7 billion in cash in its accounts, which if it used to paydown its debt would leave it with $7.8 billion in debt. In contrast, had Maine <u>not</u> established the MPDA at the beginning of this period, by 2053 the IOUs would own and operate the grid, and Maine ratepayers would face annual electricity costs around $150 million higher, with this amount increasing each year beyond 2053.

The final figures in the box at the bottom of Table 1 show the savings in real 2020 dollars from the Income Statements under each model through 2053. These are $650 million under the LEI Model and $1.7 billion under the Restated Model. If the analysis time period is extended an additional three years, Maine ratepayers will realize savings of an additional half a billion dollars if the MPDA is established in 2024. This is an important point. The financial benefits to Maine ratepayers through the MPDA continue post-2053. Further, outstanding MPDA debt levels off under the Restated Model (see Figure 6), while cash balances continue to accrue, reaching $9 billion by 2056. The post-2053 savings and cash positions that are shown in the LEI Model are not included in any of the graphs and tables presented in the LEI Report that depict ratepayer value.

Table 1   Comparison of LEI and Restated Models

		LEI Financial Model	
		LEI Report	Restated
		($million)	($million)
Savings - Rev. Req. Differential	npv 2020	$232	$858
Rate Base w/ Acquisition premium	2053	$18,362	$18,285
Rate Base w/o acquisition premium	2053	$15,556	$15,353
Balance Sheet			
Debt			
Balance of Initial Debt	2053	$8,165	$2,638
New Taxable Debt	2053	$520	$884
New Tax-Free Debt	2053	$12,612	$11,925
Total Debt	2053	$21,298	$15,448
Cash Balance	2053	$5,161	$7,718
Net Balance Sheet Position	2053	$16,137	$7,730
2053 Acquisition of IOUs	2053	$23,335	$23,030
Acquisition Multiple of Rate Base	1.5		
MPDA Debt Position - 2053	2053		
IOU Acquisition in 2053	2053	$23,335	$23,030
IOU Acquisition in 2024	2053	$16,137	$7,730
Ratepayer Benefit of 2024 MPDA	2053	$7,198	$15,300
NPV of Ratepayer Benefit to 2020	3.5%	$2,235	$4,750
Savings - Rev. Req. Differential	2053	$232	$858
Value of MPDA to Maine Ratepayers	**npv 2020**	**$2,467**	**$5,608**
Savings - Rev. Req. Differential	2053	$650	$1,723
Savings - Rev. Req. Differential (2054-56)	2056	$288	$467

Figure 6   Comparison of Debt - 2053