

Whitepaper: Analysis of Government-Controlled Power in Maine

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1 EXECUTIVE SUMMARY

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Maine is considering the potential government takeover of Maine's investor-owned electric transmission and distribution companies and forming a Maine Power Delivery Authority ("MPDA") (currently referred to by supporters as Pine Tree Power Company). A prudent analysis of such an initiative must include an examination of the key assumptions driving the results and the level of uncertainty surrounding those assumptions.

Concentric Energy Advisors, Inc. ("Concentric") examined the results of the financial model prepared by London Economics International ("LEI") about the cost of forming such a public authority, and Concentric also reviewed a supplemental review of the LEI model made by Dr. Richard Silkman. Based on Concentric's review:

- Dr. Silkman's analysis changes certain assumptions in the LEI model that result in net benefits from government-controlled power; however, his analysis overstates the benefits that would likely result from the formation of a MPDA and fails to capture the uncertainty associated with the assumptions driving his results.
- Based on a review of the LEI financial model and Dr. Silkman's analysis and changes to that model, Concentric identified four key assumptions that significantly affect whether there are projected net savings or net costs to Maine electric customers.
- With realistic alternatives to these four key assumptions, there is a reasonable potential for a *\$4.7 billion net cost* to Maine electric customers associated with government-controlled power over the 30-year forecast period.
- There are also a number of additional factors in Dr. Silkman's analysis that, when properly reflected, would add additional costs to a government-controlled power authority.
- Beyond any projections of net costs or benefits, there are additional challenges to forming a government-controlled power authority that should be considered as part of any decision to form a MPDA. These challenges are apparent when considering the small number of condemnations that have occurred in the past 20 years.

The risks of government-controlled power would be assumed solely by MPDA ratepayers – unlike the current model where risks are assumed by both shareholders and customers. Very few municipalizations have occurred in the past 20 years due to the significant uncertainty, time, litigation and cost, and ultimately there have been more effective resolutions and efficient use of customer resources that can be achieved. Because of this incremental risk of government-owned power, it is in the interest of protecting Maine electric customers to consider a wide range of financial assumptions when examining the risks of a state takeover of the investor-owned electric utilities in Maine. Customers in Maine are not well served by only reviewing the most optimistic scenarios. It is important to provide Maine decision-makers and customers with the full range of potential outcomes as the foundation any decisions.

Background: In the spring of 2019, the Joint Standing Committee on Energy, Utilities and Technology first considered the formation of a Maine power authority – known as LD 1646. This bill contemplated the creation of a government-controlled power authority in Maine through the condemnation of the transmission and distribution assets of Central Maine Power (“CMP”) and Versant Power (formerly Emera Maine) (“Versant”). The Legislature directed the Maine Public Utilities Commission (“MPUC”) to commission an evaluation of the ownership of the power delivery system in Maine, with particular attention on the issue of whether or not it was in the benefit of consumers to create an MPDA. The MPUC retained LEI to conduct this study, which was completed in February 2020.¹ On May 15, 2020, Maine economist Dr. Richard Silkman, on his own initiative, undertook a review of the LEI Report, including the financial assumptions used by LEI, and he offered his conclusions on the potential benefits of creating a MPDA.² Dr. Silkman provided a presentation on July 15, 2020 that included information from the May 15 report as well as selected additional information. On July 29, 2020, LEI submitted a letter in response to Dr. Silkman’s analysis (“LEI Reply Letter”), concluding that Dr. Silkman’s analysis represented “an **overstatement of projected benefits** to ratepayers under MPDA ownership.”³ A recent synopsis of the Silkman Analysis was also prepared by Mr. Bill Dunn on his own initiative (“Dunn Synopsis”).⁴

Concentric has been retained by Avangrid to review the analyses prepared by LEI and Dr. Silkman and to provide an evaluation of the assumptions used in the analyses, as well as offer an understanding of the issues related to condemnation of utility property and the creation of government-controlled electric utilities in the market today.⁵

Four Key Assumptions: Concentric has utilized the LEI financial model and the analysis provided by Dr. Silkman as the basis for the analysis herein; developing a separate model was outside the scope of Concentric’s engagement. Based on a review of the LEI model and Dr. Silkman’s analysis, Concentric identified four key assumptions that significantly affect the projected net savings or net costs to Maine electric customers resulting from a government-controlled utility. These four key assumptions are as follows:



Assumption 1: Annual Management Fee: LEI estimated that the fee for a third-party utility company to manage the operations of MPDA would be \$82 million/year starting in 2024. In contrast, Dr. Silkman’s analysis assumes that the management fee to operate the MPDA would be substantially lower at \$15 million/year, thereby according to Dr. Silkman would result in a savings of \$4.75 billion to customers over a 30-year time period. Dr. Silkman’s analysis is

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- ¹ “Evaluation of the Ownership of Maine’s Power Delivery System,” London Economics, February 15, 2020 (“LEI Report”). For purposes of the analysis herein, all references to LEI’s financial model and results are based on LEI’s Reference Case.
 - ² Dr. Richard Silkman. “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,” May 15, 2020 (“Silkman Analysis”).
 - ³ LEI, Letter to Joint Standing Committee on Energy, Utilities and Technology, July 29, 2020, p. 1 (emphasis in original).
 - ⁴ The Dunn Synopsis does not provide any independent analysis of the issues surrounding the MPDA, but rather summarizes what has been stated in the LEI Report and Silkman Analysis. Therefore, the discussion herein will not evaluate separately the Dunn Synopsis. All of the issues discussed and highlighted in this report regarding the Silkman Analysis, apply equally to the Dunn Synopsis.
 - ⁵ Please note that the analysis herein is based on a best-efforts understanding of the report prepared by Dr. Silkman. However, there are numerous instances in which the modifications or calculations made in that report are not fully explained. The fact that there are issues raised by Dr. Silkman and LEI that are not addressed herein should not be construed as acceptance of those positions.

inconsistent with the experience of Long Island Power Authority ("LIPA"), which currently pays an annual management fee of approximately \$103 million/year. This is particularly important considering that CMP and Versant Power own double the miles of transmission and distribution lines as compared to LIPA. Thus, Dr. Silkman's assumed annual management fee understates the required fee compared to an existing market example for management of extensive utility operations over a broad geographic area. For purposes of Concentric's analysis, LEI's initial management fee of \$82 million/year is conservatively assumed as the Year 1 management fee to be paid by MPDA, and that management fee is then escalated thereafter at the same rate the LIPA management fee has escalated over the previous four years. Thus, all else equal, when using a reasonable management fee to operate the MPDA's electrical system, Dr. Silkman's purported savings associated with the management fee would be eliminated.



Assumption 2: Acquisition Multiple: Both the LEI base case and Dr. Silkman's analysis assume that the acquisition price to acquire the CMP and Versant transmission and distribution assets would be 1.5 times the net book value of the assets at the time of acquisition. Other government takeovers of investor-owned utility systems have reflected acquisition multiples of over 2.0 times the net book value of the assets acquired. A future acquisition multiple to be paid by MPDA is highly uncertain, but this assumption has a significant effect on the results of the analysis, specifically whether there are net costs or net savings to Maine customers of government-controlled power. Assuming only that the acquisition multiple is 2.0 times the net book value instead of 1.5 times, and no other changes are made to the LEI model, increases the acquisition price to Maine customers by \$2.75 billion. As discussed below, this increase in the cost to Maine customers is also understated because it excludes the effect of the additional utility assets that have been placed into service since the time the LEI model and Dr. Silkman's analysis were prepared.



Assumption 3: Start Date: The assumed start date is important because it affects the economics of the MPDA since there are significant capital investments over the next several years that would need to be included in the acquisition price in the likely event that a takeover would occur at a later date than 2024 (two and a half years from now), which was assumed in the LEI model. Dr. Silkman did not change this assumption. Based on past experience, this schedule is extremely aggressive and not likely achievable. Recent experiences of proposed government takeovers of electric systems indicate that such efforts have taken up to a decade to resolve the financial matters and the extensive litigation inherent in the process, and many such processes end without a takeover. In addition, a protracted effort may result in additional legal and consulting fees being incurred during a condemnation proceeding. For purposes of the analysis herein, a start date of 2030 is assumed. If the start date were 2030 rather than 2024, the net cost to Maine electric customers would be \$1.9 billion higher than reflected in the LEI model. Moreover, if this later start date is assumed in conjunction with an acquisition price at 2.0 times the net book value of the assets acquired, the net cost to Maine customers would be \$5.3 billion higher than reflected in the LEI model.



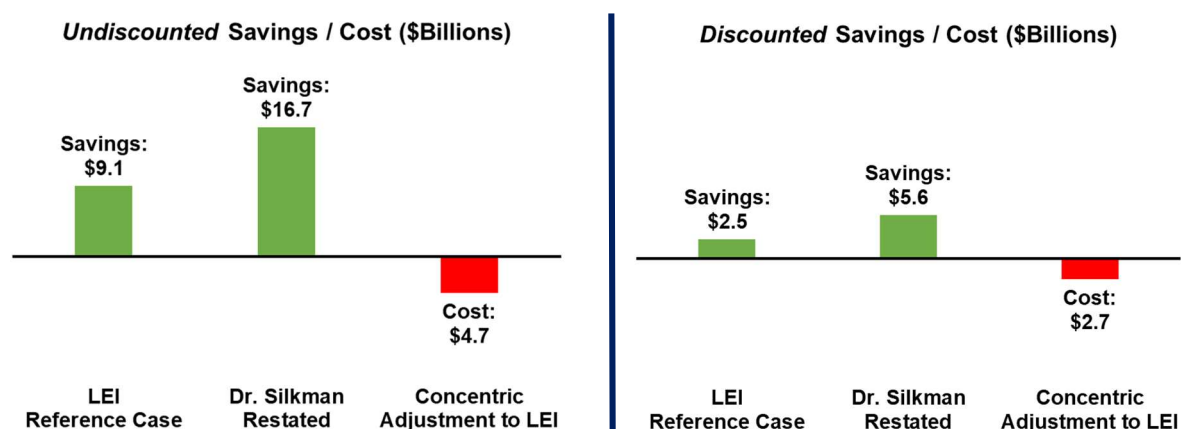
Assumption 4: Transmission Cost of Capital: The LEI Report assumes a cost of capital of 8.00% to be included in the rates that MPDA could charge to transmission customers in Maine and throughout New England. In contrast, Dr. Silkman suggests that a government-owned power authority in Maine could charge higher transmission rates reflecting a 10.15% pre-tax cost of capital – or the equivalent cost of capital for an investor-owned utility. Dr. Silkman's assumption is highly speculative, as it assumes a government-controlled power authority in Maine could reflect both a cost of equity and a capital structure that are not reflective of its actual cost of

equity or capital structure, as well as receive an allowance for income taxes even though it would not pay any income taxes. The result of these assumptions is that New England transmission customers would significantly subsidize Maine residential and commercial distribution customers. The LEI Reply Letter highlighted this same concern with Dr. Silkman's analysis, stating that it does not believe it is reasonable to assume that other New England stakeholders and the federal regulator overseeing the setting of such rates would agree to such subsidization, thus concluding that Dr. Silkman's "estimated benefits for Maine ratepayers are not realistic."⁶

Concentric is not aware of any government-controlled power entity of the scale contemplated by a Maine power authority that has departed from cost-based transmission rates in all three of these respects in the manner suggested by Dr. Silkman. For purposes of Concentric's analysis, it is assumed that a government-controlled utility in Maine could have a cost of capital for transmission rates of 6.64%, which reflects the MPDA's projected capital structure in the LEI and Dr. Silkman financial projections, and a typical investor-owned utility cost of equity. Replacing only this more reasonable cost of capital assumption in the transmission rates eliminates nearly half, or approximately \$8.3 billion, of Dr. Silkman's projected savings for MPDA over a 30-year time period.

Financial Model Results - Adjusting 4 Key Assumptions: Figure 1 reflects the results of the LEI model (as further modified by Dr. Silkman) when the reasonable modifications to the four key assumptions described above are made. As shown in Figure 1, with these reasonable alternative assumptions, government-controlled power in Maine would result in a cumulative net cost of \$4.7 billion to Maine electric customers over the 30-year forecast period ("Forecast Period") on an undiscounted basis, or a net cost of \$2.7 billion on a net present value basis. While the LEI Reference Case suggests net savings to Maine electric customers over time, depending on which assumptions are made, and Dr. Silkman suggests net savings to Maine electric customers immediately, the significant range of variability in the assumptions underscores the potential risks to which Maine customers would be exposed if the MPDA were to take over the transmission and distribution assets of CMP and Versant.

FIGURE 1: COMPARISON OF AGGREGATE ESTIMATED FINANCIAL IMPACTS OF MPDA



⁶ LEI Reply Letter, p. 2.

Additional Cost Considerations: In addition to the reasonable changes to the four key assumptions described herein, there are a number of additional factors that Concentric has identified that would also increase the costs of a government-controlled power authority and thus affect whether net costs or net savings to Maine customers would be expected. We have outlined several of these additional factors here, but there very well could be other factors that would drive up the overall cost of forming a state power authority. If these additional cost factors were considered, the net cost to Maine for government-controlled power would exceed the \$4.7 billion in undiscounted costs shown in Figure 1. These additional cost factors include:

- *Pre-Acquisition/Start-Up Costs:* The LEI and Dr. Silkman analyses do not include costs that would be incurred by a government-controlled power authority, including pre-acquisition costs, such as legal, consulting, and engineering costs, as well as start-up costs that would need to be incurred to consolidate the systems of CMP and Versant and to develop a governance structure to oversee an MPDA. These costs should not be understated given the experience of other, much smaller electric utilities that have municipalized, and the challenges and risks inherent in establishing a new consolidated organization owning large transmission and distribution systems.
- *New England Clean Energy Connect (“NECEC”):* The LEI and Dr. Silkman analyses do not reflect a substantial level of capital expenditures that CMP is expecting to make through 2023 related to the NECEC project that would materially increase the acquisition cost that Maine would need to incur in order to take over the CMP/Versant electric systems.
- *Dr. Silkman Modeling Error:* Dr. Silkman’s estimated savings to Maine customers of a government-controlled power authority are overstated due to an error in his calculation of the value of an MPDA at the end of the 30-year Forecast Period.
- *No Precedent/Risk of Operation:* There have been no government-controlled utilities or power authorities formed in the U.S. over the past 20 years of the size currently being contemplated in Maine, and nor has any state ever authorized the statewide takeover of its largest investor-owned electric companies. The majority of existing government-controlled power authorities are on the municipal or county level, the largest of which were developed many decades earlier as part of rural electrification and supported by federal funding. In addition, there have also been very few instances in the past 20 years in which a municipality or county has taken over the electric system of an investor-owned utility, with just 11 of 64 instances in the U.S. completed since 2000, two of which were ultimately sold back to investor-owned utilities. Indeed, over the past ten years, there have been a number of privatizations where municipal utilities have actually sold back electric system assets to investor-owned utilities.

Conclusion: There are several key assumptions associated with a state takeover of CMP and Versant Power that are highly uncertain and affect whether a government-controlled power authority in Maine would produce net costs or net savings for customers. Realistic changes to a few key assumptions would instead result in net costs to Maine customers. Given that the risks of government-controlled power would be assumed solely by MPDA ratepayers – rather than shared with utility shareholders as is done currently – it is in the interest of protecting Maine electric customers to consider more realistic financial assumptions when examining the risks of a state takeover of CMP and Versant Power.



2 FINANCIAL MODEL REVIEW

2 Financial Model Review

Key Takeaway

Concentric reviewed the LEI financial model and Dr. Silkman's suggested changes to certain of LEI's assumptions. In particular, Concentric evaluated the financial effect of a government-controlled power authority associated with changes to four key assumptions:

- 1) Setting the third-party management fee at a reasonable level;**
- 2) Setting a realistic start date for a government-controlled power authority;**
- 3) Assuming an acquisition multiple of 2.0 times the net book value of the CMP and Versant assets acquired, which is consistent with recent government takeovers; and**
- 4) Assuming that a government-controlled power authority would not be authorized to charge artificially high transmission rates to the rest of New England that subsidize the MPDA.**

These alternative assumptions are based on market benchmarks and other precedents, and if these more realistic assumptions are used, the economics of a government-controlled power authority change substantially, resulting in significant net costs to Maine electric customers.

The foundation of the LEI Report is a financial model that compares the cost of operation under continued utility ownership to the cost of operating the electric delivery system as a government-controlled power authority.⁷ In that model, LEI made certain assumptions about the costs for a state authority to acquire and operate the transmission and distribution system assets. While Dr. Silkman considered many of these assumptions to be reasonable, he made a number of modifications to key variables, and in so doing, concluded that there were significant and immediate savings associated with a government-controlled power authority in Maine relative to LEI's Reference Case.

While Dr. Silkman describes the adjustments that he made to the LEI Report at a conceptual level, his model is not available to be reviewed by stakeholders. Therefore, it is difficult to determine precisely how certain adjustments were made and the implications of the changes to those assumptions. The analysis herein is based on a best-efforts understanding of the analysis discussed by Dr. Silkman in his May 2020 report and July 2020 presentation. The fact that there are issues raised by LEI and Dr. Silkman that are not addressed in this whitepaper should not be construed as acceptance of those positions.

Based on a review of the LEI financial model and Dr. Silkman's analysis, Concentric identified four key assumptions that significantly drive whether there is projected to be net savings or net costs to Maine electric customers associated with government-controlled power:

⁷ LEI's financial model assumed a state-controlled power authority that would be a unit of state government. Concentric used the same assumption in its review.

- 1) The level of the management fees associated with third-party operation of a new government-controlled power authority;
- 2) The acquisition multiple used to value the physical assets that would be acquired from CMP and Versant by a government-controlled power authority;
- 3) The assumed start date for a government-controlled power authority; and
- 4) The weighted average cost of capital that MPDA would be authorized to charge transmission customers in New England.

Concentric has not independently developed its own financial model to study the potential costs or benefits of a government-controlled power authority, but rather has utilized the LEI model and the changes to that model described by Dr. Silkman as the basis for the analysis herein.

2.1 FOUR KEY ASSUMPTIONS

2.1.1 Annual MDPA Management Fee

The LEI model assumes that there would be a management agreement established between the MPDA and a third-party utility management company for the operation of the power delivery system, which would have an annual fee of approximately \$82 million beginning in 2024. Dr. Silkman disagrees with LEI's assumption and instead estimates a substantially lower annual management fee of \$15.3 million in 2024.

Dr. Silkman's assumed annual management fee is extremely low and is inconsistent with existing market experience for the management of extensive electric utility operations in the northeastern United States.

Dr. Silkman's analysis begins with an estimate of the management fee for CMP whereby he compares CMP labor costs from two different time periods:

- 1) An estimate of labor costs for CMP prior to the acquisition by Energy East (now named as Avangrid) in 2001, inflated to current dollars (approximately \$160 million); and
- 2) An estimate of the current cost of labor for CMP and the full-time equivalent employees required from Avangrid for the provision of centralized management functions of the business such as accounting, regulatory, finance and legal costs (approximately \$148 million).

Dr. Silkman states that the difference between these two cost estimates represents a proxy for a management fee for CMP, to which he then adds \$2.6 million related to insurance and governance costs for CMP, plus an undisclosed scaling adjustment to account for Versant, in order to arrive at an estimated annual management fee of \$15.3 million for the MPDA in total. Based on the difference between LEI's estimated management fee starting at \$82 million in 2024 and Dr. Silkman's estimate of \$15 million, Dr. Silkman claims that there are incremental savings to Maine customers relative to LEI's Reference Case of approximately \$4.75 billion over the 30-year Forecast Period.

As an initial matter, it is important to understand that Dr. Silkman's analysis is not an estimate of the actual market cost of contracting for an independent operator of a utility system. Rather, the analysis conducted by Dr. Silkman of the difference in the continued cost to operate CMP prior to its merger as compared to its current costs is, at best, an estimate of the synergy savings produced by Energy East's acquisition of CMP in 2001.

Further, Dr. Silkman’s estimated management fee of approximately \$15 million is extremely low and is inconsistent with existing market experience associated with third-party management of government-controlled electric utilities in the northeastern United States. Putting the management fee into context, Concentric reviewed the management fee under the operating agreement that the Long Island Power Authority (“LIPA”), a government-controlled electric utility in New York, has executed with Public Service Electric and Gas (“PSEG”) to operate the LIPA electrical system. The management fees paid to PSEG include three components: an annual management fee; a performance incentive; and funding the retirement benefits for PSEG-LIPA employees. As shown in Figure 2, the total annual cost of the LIPA/PSEG management agreement was nearly \$103 million in 2019 and is subject to escalation each year.

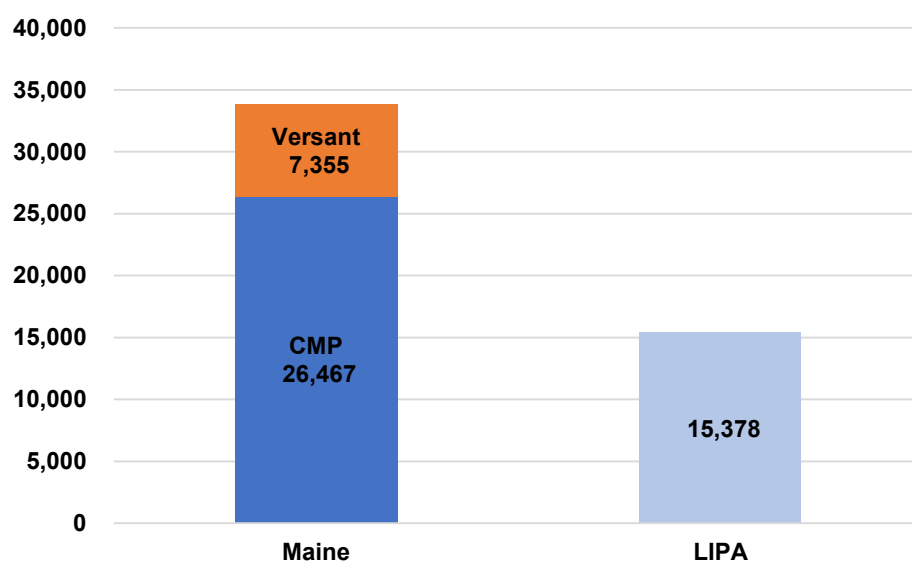
Figure 2: PSEG Long Island Management Fees, 2016-2019⁸

(in \$Millions)

Description	2016	2017	2018	2019
<i>LIPA Expenses (\$M)</i>				
Management Fee	62.0	64.0	64.0	65.0
Incentive Fee	9.0	9.5	9.7	9.8
Pension Funding	28.1	35.0	40.0	28.0
Subtotal	99.1	108.5	113.7	102.8

There are likely differences between operating an MPDA system and operating the LIPA system that would affect the level of a future third-party management fee. However, as shown in Figure 3, one key difference between CMP/Versant and LIPA is that the combined CMP and Versant transmission and distribution systems in Maine have more than double the mileage of electrical lines to manage and maintain.

Figure 3: Mileage of Transmission and Distribution Lines in Service Territory



⁸ LIPA Financial Statements, 2016-2019.

Thus, while there may be differences between operating the MPDA system if it were established and operating the LIPA system, the management fee associated with the current LIPA/PSEG agreement suggests that the \$15.3 million management fee assumed by Dr. Silkman in 2024, which is also 5 years later than the most current management fee reflected in Figure 2, is well below the cost of a market-based management fee that the MPDA would incur. As such, LIPA's management fee payments to PSEG demonstrate that the management fee LEI assumes for the MPDA is likely quite conservative.

In addition, as observed in the LEI Report, there are “only a limited number of operators in the world that have the capability and experience to operate a T&D system reliably and are willing to operate under a contractor model,” and the competitive solicitation process for procuring a contractor to operate the electric system can be quite lengthy and potentially costly.⁹ Consequently, the LEI Report expects that a management agreement for an MPDA would have material performance incentives and penalties, and thus the management fee it assumes in the model could be even higher than 1% of assets under management (which is what LIPA's current contract with PSEG reflects), not substantially lower as suggested by Dr. Silkman.¹⁰

For purposes of the analysis herein, Concentric assumes the same starting annual management fee to operate an MPDA as estimated by LEI (i.e., \$82 million), but assumes an escalation of the management fee of 1.75%, which is consistent with the change in the LIPA management fee over time. Notably, this escalation is lower than the escalation assumed in the LEI model.

As noted, Dr. Silkman suggests that his recalculated management fee results in incremental savings associated with a government-controlled utility of approximately \$4.75 billion over the 30-year Forecast Period relative to the LEI Reference Case. However, as shown in Figure 4, that cannot be the case considering that the total management fees over 30 years in the LEI model are less than \$4.75 billion.

⁹ LEI Report, p. 46. Concentric is also aware of the experience of Cross Texas Transmission, LLC (“Cross Texas”), an electric utility in Texas that sought a third-party operator of its system, that corroborates LEI's conclusion. Cross Texas “found it difficult to find existing utilities that were willing to take on the additional risks and responsibilities associated with operating our system.” Cross Texas ultimately decided to operate its own system after the third-party operator it initially identified, South Texas Electric Cooperative, Inc., exercised its right to terminate the operator agreement. (Public Utility Commission of Texas, Docket No. 43950, Direct Testimony of Lawrence J. Willick, at 17).

¹⁰ *Id.*

FIGURE 4: UNDISCOUNTED VALUE OF MANAGEMENT FEE OVER 30-YEAR FORECAST PERIOD (\$BILLIONS)



2.1.2 Acquisition Price / Acquisition Multiple

LEI and Dr. Silkman assume that the acquisition price of the CMP and Versant transmission and distribution assets would be 1.5 times the net book value of the assets. The magnitude of the acquisition premium is an important driver in determining whether a government-controlled power authority would produce net costs or net savings. For example, just a 10% increase in the acquisition multiple (i.e., to 1.65 times the net book value) decreases the projected savings by \$555 million.

The acquisition multiple that may be paid by MPDA to CMP/Versant for the takeover of their transmission and distribution systems is highly uncertain and would not be determined for many years if Maine were to pursue condemnation. However, prior transaction data for negotiated condemnation proceedings indicates that a premium of 1.5 times the net book value of the assets acquired may be low. Figure 5 summarizes acquisition multiples for three previous government takeovers of investor-owned utility property for which data is publicly-available. Based on publicly-available information regarding these transactions, the acquisition multiples exceeded 2.0 times the net book value of the assets acquired.

FIGURE 5: RECENT MUNICIPALIZATION ACQUISITION MULTIPLES

Municipality	Utility	Year	Acquisition Price (\$M)	Net Book Value (\$M)	Acquisition Multiple
Hermiston, OR	Pacific Power & Light	2001	\$8.0	\$3.8	2.1x
Winter Park, FL	Progress Energy Florida	2005	\$43.1	\$7.8	5.5x
Jefferson County, WA	Puget Sound Energy	2013	\$109.3	\$46.7	2.3x

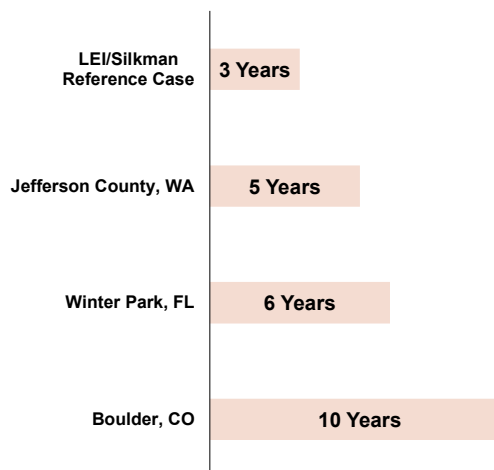
For purposes of evaluating the potential net impact of government-controlled power herein on Maine customers, an acquisition premium of 2.0 times the net book value of the assets acquired is assumed.

2.1.3 Start Date of MPDA

The LEI Report assumes that a transaction would occur and the MPDA would begin operations in 2024, which, as of the preparation of Concentric's analysis, is just two and half years from now. Dr. Silkman also assumes a 2024 start date for a state power authority. A start date of 2024 suggests that the

entire process for legislation approval, condemnation and associated legal challenges would be concluded in approximately two and half years. Based on recent history, this schedule is quite aggressive and not likely achievable, particularly considering the fact that CMP and Versant would be expected to vigorously challenge such condemnation given the billions of dollars at stake. For this reason, condemnation proceedings have historically been lengthy proceedings resulting in extensive negotiations and, in many cases, protracted lawsuits. LEI indicates that the process of selecting an independent third-party operator to operate the MPDA's system alone could take more than 3 years as the solicitation process is established, proposals are evaluated, and contract negotiations are finalized.¹¹

Recent efforts of municipal governments to take over investor-owned utility electric transmission and/or distribution assets have been much longer than two and half years, even though the systems involved were smaller, local systems and not a statewide takeover as contemplated for Maine. For example, Jefferson County Public Utility District (PUD) in Washington, which is the most recently formed municipal utility, began its efforts to municipalize in 2008 and ultimately purchased the assets of Puget Sound Energy five years later in 2013. After a six-year condemnation process, the city of Winter Park, Florida established a municipal electric utility in 2005. The city of Boulder, Colorado conducted its initial study evaluating the feasibility of taking over



the distribution assets of Xcel Energy in the early 2000s. The effort by Boulder to condemn the electric distribution assets began in 2011, and yet after incurring nearly \$30 million in litigation and other costs (with an estimated additional \$5 to \$20 million to be incurred in litigation costs to reach a final purchase price), reached an agreement with Xcel in July 2020 to abandon its efforts to take over the utility's distribution property, and the city voted in November 2020 to end its municipalization effort.¹²

Based on prior condemnation experience, assuming a later start date for MPDA is reasonable. If the start date of a government-controlled power authority in Maine were to be later than 2024 as assumed in the LEI/Dr. Silkman analyses, it is important to realize that, based on the LEI model, the price at which Maine would acquire the CMP/Versant assets would also increase. The acquisition price for Maine would increase because CMP and Versant are expected to continue to make significant capital investments to maintain and expand their systems until the time that their electric systems would be taken over, resulting in a larger net utility plant balance to be acquired, and thus a larger acquisition price.

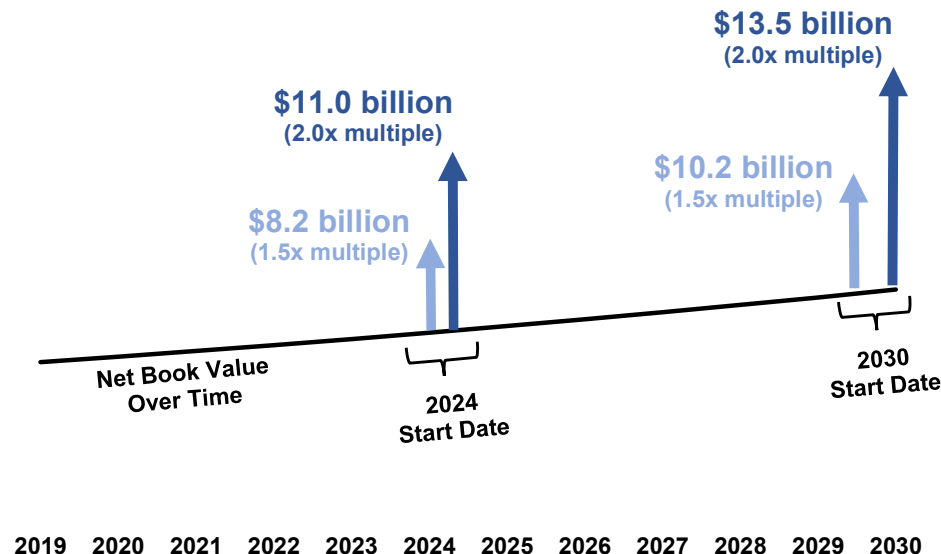
Figure 6 shows the increase in the acquisition price using the LEI Reference Case if the start date is increased to 2030, or approximately the same time frame that it took from the start to the end of the recently terminated condemnation effort in Boulder, Colorado. As shown in Figure 6, the incremental cost to Maine customers to take over the electric systems of CMP and Versant associated with a delay

¹¹ LEI Report, p. 46.

¹² Best, Allen, "As costs rack up in Boulder's push to split with Xcel, voter to have the final say," Energy News Network, October 27, 2020; Sakas, Michael Elizabeth, "Boulder Ends Decade Long Pursuit of City-Owned Power Utility," Colorado Public Radio, November 20, 2020.

in the start date could be an additional \$2.0 billion (assuming a 1.5x acquisition multiple) to \$2.5 billion (assuming a 2.0x acquisition multiple).

**FIGURE 6: DELAY IN A MPDA START DATE EQUATES TO AN INCREASE IN THE ACQUISITION PRICE
(LEI REFERENCE CASE)**

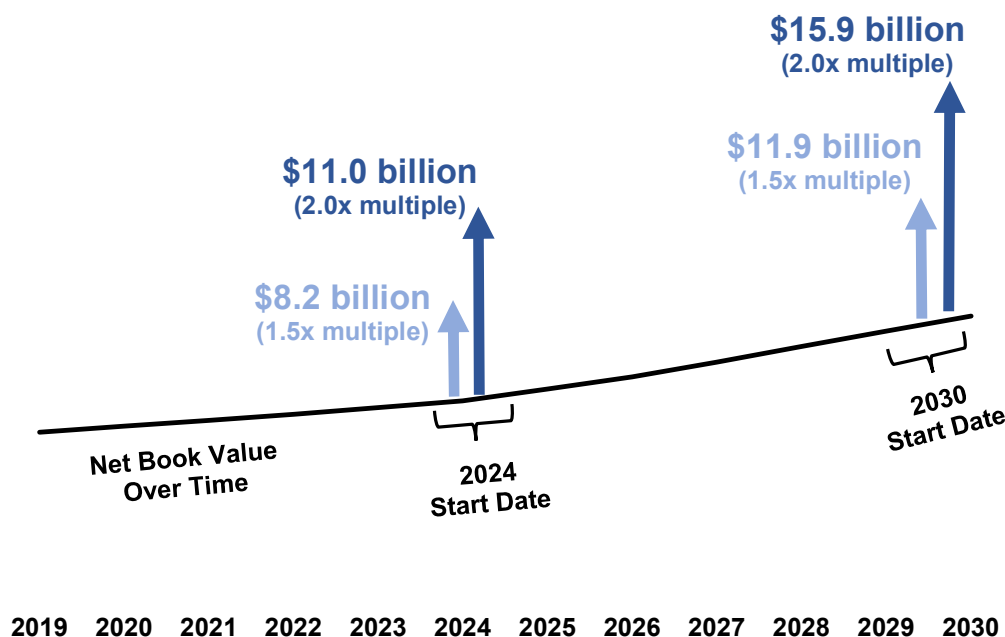


While both LEI and Dr. Silkman recognize the need for substantial capital investment over the 30-year Forecast Period, Dr. Silkman proposes an alternative and more aggressive future capital expenditure schedule that reflects expenditures: (1) required to maintain the existing grid; and (2) to expand the grid to enable beneficial electrification and the decarbonization of electric generation. Dr. Silkman's analysis assumes much greater capital expenditures in the early years of the Forecast Period as compared to the LEI model.¹³

All else equal, the price to acquire the CMP/Versant assets becomes substantially greater relying on Dr. Silkman's higher capital expenditure assumption *and* a start date that is later than 2024. As shown in Figure 7, under Dr. Silkman's future capital expenditure assumption, a delay in the start would further increase the cost to Maine customers to acquire the utilities' transmission and distribution assets by approximately \$3.7 billion (assuming a 1.5x acquisition multiple) and \$4.9 billion (assuming a 2.0x acquisition multiple).

¹³ Dr. Silkman also states that the impact on the overall cost/benefit of his revised future capital expenditure assumptions are small and do not account for any of the differences in ratepayer savings between the LEI model and Dr. Silkman's revised results. However, this does not appear to be accurate. All else being equal and changing nothing else in the LEI model, Dr. Silkman's CAPEX assumption materially increases the projected savings to Maine customers, more than doubling the savings reported by LEI to \$1.3 billion.

**FIGURE 7: DELAY IN A MPDA START DATE EQUATES TO AN INCREASE IN THE ACQUISITION PRICE
(LEI REFERENCE CASE AS ADJUSTED FOR DR. SILKMAN'S RECOMMENDED CAPITAL EXPENDITURES)**



2.1.4 Transmission Cost of Capital

The LEI Report assumes that CMP and Versant will continue to charge transmission rates that reflect their currently authorized pre-tax weighted average costs of capital (“WACC”) of 9.86% and 10.15%, respectively. However, in comparison, LEI indicates that estimating the transmission WACC for the hypothetical MPDA is more uncertain because it is the subject of an uncertain ISO New England (“ISO-NE”) ratemaking process. Specifically, LEI states that this uncertainty is, “a problem that is complex and time consuming to solve.”¹⁴ Ultimately, the LEI Report assumes that the MPDA would be allowed to charge transmission rates that reflect an 8.00% WACC, which is the same WACC that is currently used for ratemaking purposes by other municipal transmission owners in ISO-NE.

In contrast, Dr. Silkman assumes that the MPDA would be able to charge transmission rates that reflect a 10.15% WACC, which as noted above, is Versant’s existing pre-tax WACC for transmission rates.¹⁵ While Dr. Silkman admits that there is uncertainty regarding what the newly formed MPDA would be allowed to set as its WACC for transmission ratemaking purposes, he suggests that there is “good precedent” for the MPDA to continue reflecting the WACC of the investor-owned utilities it replaces; however, he does not specify the precedent to which he refers.

It is a long-standing principle of utility ratemaking that rates should reflect the cost of providing service. For investor-owned utilities such as CMP and Versant, those costs include a return on capital invested in the provision of utility service and an allowance for income taxes since they are subject to federal and

¹⁴ LEI Report, p. 44.

¹⁵ Silkman Analysis, p. 3.

state income tax. Investor-owned utilities typically fund transmission investments using both debt and equity. Accordingly, the weighted average cost of capital is calculated by summing (i) the actual cost of debt multiplied by the proportion of debt in the utility's capital structure;¹⁶ and (ii) the cost of equity authorized by the regulator multiplied by the proportion of equity in the utility's capital structure.

Importantly, by assuming that a government-controlled power authority would be able to charge transmission rates that reflect a pre-tax WACC of 10.15%, Dr. Silkman's analysis also assumes that the MPDA would be allowed to charge transmission rates that are divorced from its cost of providing service in three different respects, which as discussed below, Concentric does not believe is realistic:

- Capital Structure: First, LEI states that CMP's and Versant's capital structures reflect approximately 50% debt and 50% equity. In contrast, the MPDA's capital structure in the LEI model reflects almost 100% debt in the first year of operation (i.e., 2024), and at no point during the 30-year Forecast Period reflects less than 70% debt in the capital structure. Dr. Silkman's transmission WACC implicitly assumes that the MPDA would be allowed to charge transmission rates that are premised on Versant's actual capital structure, or in other words, a capital structure that is more heavily weighted toward equity than is reflected in the LEI model or otherwise consistent with a government entity without equity shareholders. While Dr. Silkman does not indicate that he assumes a MPDA could instead use a hypothetical capital structure for transmission ratemaking purposes, it should be noted that the Federal Energy Regulatory Commission ("FERC") recently rejected the use of a hypothetical capital structure for a non-FERC-jurisdictional generation and transmission cooperative that proposed a capital structure largely reflecting the capital structure of other large investor-owned utility transmission owners in the power pool.¹⁷
- Cost of Equity: Second, LEI indicates that municipal transmission owners ("MTOs"), "do not have equity and therefore the FERC approved return on equity does not apply to MTOs."¹⁸ However, Dr. Silkman assumes that the MPDA will be allowed to charge transmission rates that include the same return on equity as FERC has authorized for Versant, an investor-owned utility.
- Income Taxes: Third, Dr. Silkman's assumed 10.15% WACC is equivalent to Versant's *pre-tax* WACC, meaning it is higher than an *after-tax* WACC to account for the fact that income taxes would be required to be paid on the return earned on the transmission assets owned. However, as a government entity, the MPDA would not pay income taxes. Therefore, Dr. Silkman presumes that the MPDA would be allowed to recover an allowance for income taxes through its transmission rates, even though it would not pay income taxes.

Concentric is not aware of any government-controlled power entity of the scale contemplated by a Maine power authority that has departed from cost-based transmission rates in the manner suggested by Dr. Silkman in all three of these respects. The premise of Dr. Silkman's assumptions is that other New

¹⁶ "Capital Structure" is a financial term that refers to the proportion of debt and equity capital used to finance a company's operations.

¹⁷ *Midwest Independent Operator, Inc.*, 170 FERC ¶ 61,265 (2020), PP. 30-37; *Midwest Independent Operator, Inc.*, 172 FERC ¶ 61,242 (2020), PP. 11-17. In these decisions, the Commission reiterated that, "rates are intended to provide utilities the opportunity to recover their costs of providing service, including the cost of capital, and the Commission's default preference is to base rates on a company's actual capital structure."

¹⁸ "Evaluation of the Ownership of Maine's Power Delivery System," London Economics, February 15, 2020 ("LEI Report"), p. 43.

England transmission customers would pay Maine for transmission service at a rate that is substantially higher than the MPDA's underlying cost for such transmission services, thus subsidizing the MPDA. Concentric does not believe that Dr. Silkman's assumptions are realistic, as other New England customers and stakeholders would surely challenge the reasonableness of paying transmission rates that are higher than the MPDA's cost of providing the service.

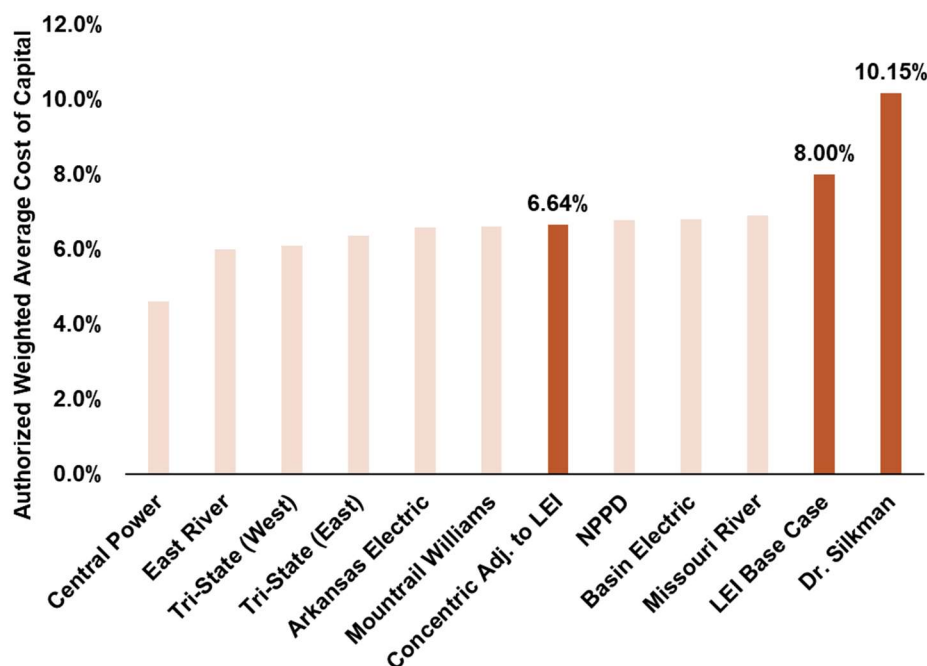
Accordingly, Concentric has estimated a reasonable alternative to the transmission WACC that Dr. Silkman and LEI assume in their analyses. As detailed in Figure 8, Concentric's alternative transmission WACC reflects: (i) the capital structure of MPDA in the LEI model that is much more heavily weighted with debt than equity; (ii) the base cost of debt for MPDA assumed in the LEI model, and (iii) conservatively, a pre-tax return on equity for an investor-owned utility such as assumed by Dr. Silkman – *even though a government-controlled power authority in Maine would not pay income taxes*. As shown in Figure 8, the transmission WACC under more realistic future assumptions is significantly below both Dr. Silkman's and LEI's assumed WACC.

**Figure 8: Calculation of More Realistic Transmission WACC
for a Government-Controlled Power Authority**

	Pre-Tax Cost		Capital Structure		Wgtd. Avg. Cost of Capital
Equity	15.4%	x	15.0%	=	2.3%
					+
Debt	5.1%	x	85.0%	=	4.3%
					6.64%

To evaluate the reasonableness of the various transmission WACC assumptions, Concentric analyzed the transmission WACCs recently authorized by FERC for a variety of government-controlled and cooperative utilities. The results of that survey are illustrated in Figure 9. As shown, the WACCs assumed by Dr. Silkman and LEI for a MPDA are significantly higher than these other government-controlled and cooperative electric utilities.

Figure 9: Recent Authorized Transmission WACCs¹⁹



The level of the transmission WACC assumed for a Maine power authority has a significant effect on the projected costs of a state takeover of CMP and Versant Power. Changing Dr. Silkman's WACC assumption from 10.15% to a more traditional cost-based WACC of 6.64% alone eliminates \$8.3 billion of estimated savings associated with a state power authority, or nearly one-half of the total undiscounted savings Dr. Silkman attributes to a government-controlled power authority.

2.2 CONCLUSION OF FINANCIAL REVIEW

As shown in Figure 10, reflecting the reasonable modifications to the four key assumptions described above in the LEI model would result in a cumulative net cost of \$4.7 billion to Maine electric customers associated with a MPDA over the 30-year Forecast Period on an undiscounted basis, or a net cost of \$2.7 billion on a net present value basis. While the LEI Report projects net savings to Maine electric customers over time and Dr. Silkman suggests immediate and substantial savings to customers, the significant range of variability in the assumptions associated with the takeover by a state authority underscores the potential material risks to which Maine customers would be exposed if the MPDA were to take over the transmission and distribution assets of CMP and Versant.

¹⁹ Information obtained from various FERC filings and utility Attachment O documents; utilities with gross revenue requirements of less than \$1 million per year are excluded from the analysis.

FIGURE 10: COMPARISON OF AGGREGATE ESTIMATED FINANCIAL IMPACTS OF MPDA

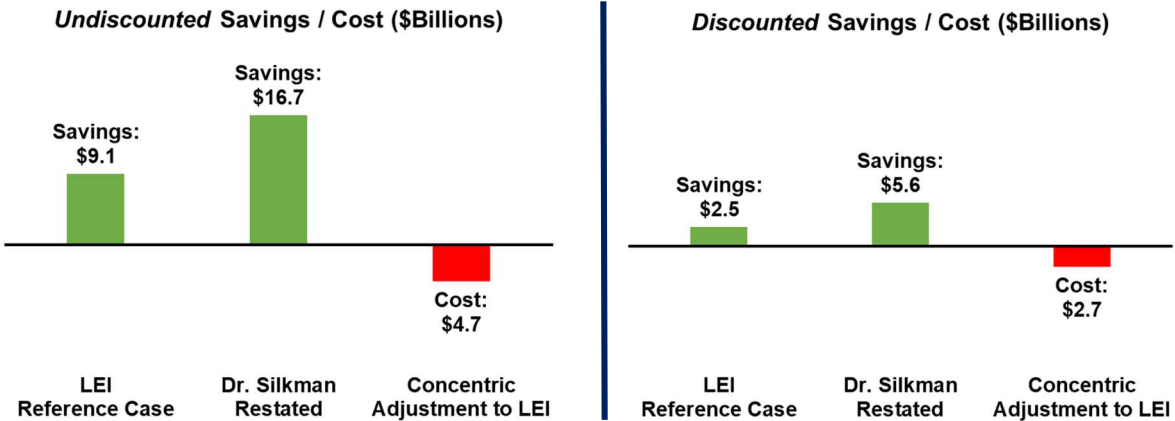


Figure 11 presents a comparison of the breakdown in the estimated net costs or net savings on an undiscounted basis, with the “red” boxes representing estimated net costs to Maine customers over the Forecast Period and the “green” boxes representing estimated net savings. These are the same three components discussed previously as reflected in Dr. Silkman’s analysis: (i) the difference in the estimated revenue requirement over the Forecast Period under MPDA ownership as compared to continued CMP/Versant ownership; (ii) the value of MPDA at the end of the 30-year Forecast Period as measured by the difference in the projected sale price of MPDA at that time less the amount of outstanding debt at that time; and (iii) the value of the accumulated cash reserves and the interest on those cash reserves at the end of the Forecast Period.

FIGURE 11: COMPARISON OF AGGREGATE ESTIMATED FINANCIAL IMPACTS OF A GOVERNMENT-CONTROLLED POWER AUTHORITY IN MAINE (UNDISCOUNTED)

	Concentric Adjustment to LEI	VS.	LEI Base Case	Dr. Silkman Scenario
Rate Savings/Costs Over 30 Yrs	- \$4.298 billion		\$0.650 billion	\$1.723 billion
	+		+	+
Sale Value of MPDA After 30 Yrs	- \$1.544 billion		\$2.037 billion	\$7.528 billion
	+		+	+
Cash Reserves + Accum. Interest of MPDA thru 30 Yrs	\$1.157 billion		\$6.446 billion	\$7.718 billion
Net Benefit/Cost of MPDA →	- \$4.685 billion		\$9.133 billion	\$16.696 billion

For purposes of Figure 11, Concentric has not modified the assumption made by Dr. Silkman that the cash reserves in a MPDA, and the interest accumulated on those reserves over time, would be a benefit to a MPDA. However, Concentric notes that this value to Maine customers can only be monetized if the MPDA were sold, which is antithetical to one of the reasons put forth by advocates for a MPDA – local control.

2.3 ADDITIONAL SOURCES OF COST INCREASES ASSOCIATED WITH GOVERNMENT-CONTROLLED POWER NOT REFLECTED IN THE LEI/SILKMAN ANALYSES

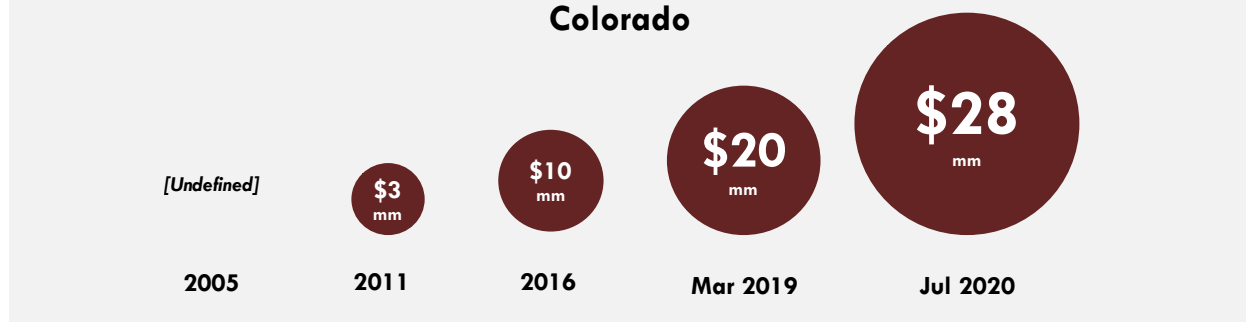
In addition to the four key assumptions discussed in the prior section, there are multiple additional cost factors that could further diminish the value to Maine customers of a government-controlled power authority that should be carefully considered by stakeholders. If these additional issues were further studied and quantified, it is very possible that Concentric's estimate of \$4.7 billion in cumulative net costs over 30 years to Maine electric customers associated with a government-controlled power authority could be even higher.

2.3.1 *Exclusion of Additional Costs Associated with a MPDA*

As part of the upfront costs of forming a government-controlled power authority, the LEI model includes the cost associated with financing an acquisition of the CMP/Versant assets (known as flotation or issuance costs). LEI's assumption is based on the percentage of such costs from LIPA and the New York Power Authority. However, not only would a state power authority face flotation costs, but it would also face additional costs not included in the LEI model or in Dr. Silkman's analysis— incremental costs that would further reduce the value of a state power authority. For example:

- Startup Costs: Neither the LEI Report nor Dr. Silkman's analysis includes startup costs for a MPDA. It is reasonable to expect that there would be costs to begin operation as a government-controlled power authority, including costs to consolidate and integrate the CMP and Versant operations. These consolidation costs are unique to this proposal because, unlike prior government takeovers such as LIPA, which involved a single entity, the proposal in Maine would be combining two completely separate utilities with different systems and different operations. For example, the information technology, billing, customer support and other systems, processes and functions of CMP and Versant would need to be standardized across the consolidated entity. In addition to consolidation costs, a MPDA would also incur costs to establish a governing body that would oversee the government utility. These costs would need to be incurred either directly by the MPDA or the third-party operator, and if the latter, such costs would undoubtedly be reflected in the management fee. A reasonable cost estimate of government-controlled power in Maine needs to include these significant start-up costs.
- Pre-Acquisition Transaction Costs: There would be additional costs that would be incurred by Maine prior to a condemnation of the utilities' assets that are necessary to execute such a transaction, including legal, engineering and consulting costs. As discussed previously, the process to acquire the utilities can be prolonged and result in significant costs in each of these categories. For example, since 2012, the city of Boulder, Colorado has incurred nearly \$30 million in legal, engineering, and consulting fees associated with taking over its local utility, even though Boulder represents a single utility within the boundaries of a single municipality, whereas the takeover proposal for Maine would involve two separate utilities encompassing an entire state. This cost has been borne by taxpayers in Boulder through a rider collected on local property taxes.

Condemnation Costs Incurred Over Time by Boulder, Colorado



2.3.2 New England Clean Energy Connect Excluded from Acquisition Cost

As discussed previously, LEI's Reference Case assumes that Maine would acquire CMP and Versant's electric assets as of 2024, and the cost to acquire those assets would be 1.5 times the net book value of the utility plant at the time of the acquisition. In his analysis, Dr. Silkman does not modify these assumptions.

The net book value of the utility plant assumed to be acquired by Maine in the LEI model reflects projected capital expenditures for both CMP and Versant to 2024. However, the LEI model does not reflect the substantial capital expenditures by CMP related to the New England Clean Energy Connect ("NECEC") project that is scheduled to be placed into service in 2023. The NECEC project will bring renewable Canadian hydropower into Maine's electric grid and is estimated to cost approximately \$1 billion to construct. Consequently, if a state authority were to take over the CMP/Versant electric assets, the change to the acquisition price related to this project alone reasonably could be up to an additional \$2 billion more than the cost to acquire the assets assumed in the LEI and Dr. Silkman analyses (i.e., the \$1 billion in net plant value for NECEC multiplied by a 2.0x acquisition multiple).

2.3.3 Effect on Maine Industrial Customers

The additional savings suggested by Dr. Silkman's changes to LEI's model are largely the result of his assumption that, as discussed previously, a government-controlled power authority would be able to reflect a transmission cost of capital in its transmission rates that is higher than its actual cost of capital. According to Dr. Silkman, "[a]djusting the WACC [weighted average cost of capital] 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."²⁰ As recognized by Dr. Silkman, his assumption means that not only will ratepayers in the other New England states pay transmission rates for MPDA that are higher than MPDA's actual cost to provide the service, but such assumed cross-subsidization means that Maine's largest industrial customers that only take transmission service and not distribution service may not benefit from Dr. Silkman's claimed savings or the establishment of an MPDA. Accordingly, these larger Maine transmission-only customers would be similarly-situated as other New England electric ratepayers and, under Dr. Silkman's assumption, may be required to subsidize Maine residential and commercial electric customers.

²⁰ Silkman Analysis, p. 3.

2.3.4 Inaccurate Savings Estimate

LEI's Reference Case suggests there may be savings of \$232 million on a net present value basis over the 30-year Forecast Period resulting from a government takeover and formation of an MPDA, whereby Maine electric customers pay more under MPDA ownership in the first part of the Forecast Period and ultimately pay less in the latter part of the Forecast Period. In contrast, Dr. Silkman concludes that LEI's Reference Case actually suggests approximately \$9.1 billion in cumulative savings (undiscounted) over the 30-year Forecast Period, and that such savings accrue immediately upon the formation of a MPDA. Dr. Silkman suggests that this substantial difference in savings is because LEI has failed to include what Dr. Silkman refers to as "balance sheet effects" of the takeover. To calculate his claimed savings, Dr. Silkman sums three components:

- (i) The difference in the estimated revenue requirement over the Forecast Period under MPDA ownership as compared to continued CMP/Versant ownership;
- (ii) The value of MPDA at the end of the 30-year Forecast Period as measured by the difference in the projected sale price of MPDA at that time less the amount of outstanding debt at that time; and
- (iii) The value of the accumulated cash reserves and the interest on those cash reserves at the end of the Forecast Period.

Dr. Silkman terms the value estimated in components (ii) and (iii) above as "balance sheet effects."

Based on our review of Dr. Silkman's analysis as described in his report, there is an error in Dr. Silkman's estimation of savings associated with a government-controlled power authority as of 2054, or the end of the Forecast Period. Specifically, in calculating component (ii) described above, Dr. Silkman compares the projected net book value of a MPDA in 2054 to the projected outstanding debt of MPDA in 2052 – or a mismatch between the book value and the outstanding debt. As reflected in the LEI model, MPDA would have a higher outstanding debt balance as of 2054 than in 2052. Deducting the debt balance in 2054 from the net plant value as of the same year, the savings would be lower than claimed by Dr. Silkman by \$660 million. Consequently, Dr. Silkman's suggested savings associated with a government-controlled power authority are overstated by \$660 million due to the mismatch of years in this calculation.

2.4 ADDITIONAL FACTORS FOR STAKEHOLDER CONSIDERATION

The relative economics of operating a government-controlled power authority are clearly important. However, there are several additional factors that also should be considered by stakeholders when making an informed decision as to whether to proceed with forming an MPDA:

- Capability to Execute: Maine will want to make a realistic assessment of the ability of an MPDA to execute on its obligations to provide safe and reliable electric service at levels that approximate or exceed the level of service provided by CMP and Versant. This includes the ability to manage the day-to-day operations (or effectively manage the outsourcing of such operations), address and manage cybersecurity, outages, and emergencies, and the ability to plan for and successfully implement required future system investments.
- Sharing of Risk: The risks of owning and operating an electric utility are currently shared between the shareholders of CMP and Versant and its customers; however, those same risks

after a condemnation and formation of a MPDA would be borne entirely by the electric customers in Maine.

- Governance/Oversight: There has been no discussion of the governance structure to perform the functions that are currently provided by the Maine Public Utilities Commission in order to ensure that the MPDA continues to provide safe and reliable service in an efficient manner.
- Past Experience: There have been no government-controlled utilities or power authorities formed in the past 20 years, and prior examples of takeovers involved single municipal or county systems, not multiple utility systems. Moreover, at no point in history has a state ever sought to take over and combine its largest utilities. The vast majority of existing government-controlled power authorities were developed many decades earlier, many of which initially developed in order to electrify rural regions and benefited from federally-funded generation. In addition, there have been very few instances in the past 20 years in which a municipality or county has taken over the electric system of an investor-owned utility, with just 11 of 64 electric utility municipalizations in the U.S. completed since 2000, with two communities later selling back the assets to the investor-owned utility. Indeed, over the past ten years, there have been a number of privatizations where municipal utilities have sold back electric system assets to investor-owned utilities.
- Scale: The formation of an MPDA, of the scale that is currently proposed is an additional challenge. The formation of LIPA, which represents a much smaller geography and is only a single utility, is the most recent example of the formation of a regional power authority. Independent management of LIPA has been subject to significant challenges that eventually resulted in the state ordering that more of the management responsibility be turned over to a private, third-party operator, and less of the oversight rest with government officials.