Jim Hanley
The Wishcamper Companies
January 9, 2024

Senator Lawrence,
Representative Ziegler,
Members of the EUT Committee,

My name is Jim Hanley. I am the President of The Wishcamper Companies, Inc., a Maine-based affordable housing developer since 1978 with ownership in approximately 7,000 affordable housing units in Maine and throughout the United States. In 2019, we started developing rooftop solar for affordable housing and then expanded to schools and municipalities as a natural extension of our business; in 2022, we purchased two NEB-eligible projects that provide energy to schools, hospitals, and municipalities.

My testimony today will demonstrate why it is critical for the PUC to conduct the cost and benefit study set forth in LD 1986 before making substantive changes to the NEB program.

By way of background, I am a certified public accountant, and I have served as the chief financial officer and chief executive officer of a real estate development and finance company for over 20 years. Having spent most of my career in accounting, finance, and financial modeling, I came away from the legislative process last summer questioning the NEB cost estimates. In response, our company commissioned Daymark, an energy consulting firm, to review the PUC filings.

Daymark's study estimates significantly lower NEB costs in 2025. Daymark corrected formula errors in Maine utilities' stranded spreadsheets, updated electricity market assumptions, and adjusted MW installed and capacity factor based upon additional research. I will summarize these four key points.

1. Daymark found spreadsheet errors, including misapplication of LD 634 fixed rate to projects that commenced construction after 9/1/22. LD 634 is significant because it imposes a fixed rate for projects that will come online in 2024.

2. Daymark updated the standard offer and wholesale rates for current market conditions. Note that in last year's filings, CMP and Versant did <u>not</u> anticipate a significant decrease in energy prices from 2023 to 2025. CMP's model used a $.232 rate in 2024, but the actual rate is approximately $.172 rate, a 25% decrease.

3. Daymark and coalition partners carefully analyzed the projected MW placed in service by the end of 2025. This included a comparison of stranded cost projected MW to the Monthly Utility NEB Reports and Chapter 324 Level 4 Public Queue. This also considered the 12/31/24 deadline for project completion to be eligible for NEB. Based upon this work, the projected MW in the Tariff program will be reduced from 753 MW to 657 in 2025, a 15% decrease over projections.

4. The final point is capacity, the percentage of the year projects generate power. CMP assumed 20%, but when we looked at actual data from 15 sites in operation, the average capacity factor was 17.9%. A two-percentage-point decrease in the capacity factor reduces the total cost of the Tariff program by 10%.

The result of the spreadsheet corrections, updated market information, and refinement to the assumptions for MW and capacity is a reduction in NEB program cost from $185 million to $122 million in 2025, a 34% decrease. Of that total, the Tariff program is reduced from $165 million to $100 million, a 39% decrease in the projected NEB tariff program.

Finally, as an expert in project finance, I foresee a substantial decrease in MW placed in service in 2024 and 2025 for several reasons. First, interest rates are 3% to 4% higher than 2021 interest rates. The increased finance cost makes it difficult for projects to meet the bank's underwriting requirements. Second, the 12/31/24 deadline for final completion doesn't leave any margin for delays from site cost or transformer delivery, and I doubt many lenders or investors will take the risk that they will not meet this deadline. Third, the easy sites with lower interconnection costs are already in service, leaving more costly and challenging sites to develop. The landscape will come into focus over the next several months on MW installed, and I believe that Maine will see much less distributive solar energy than previously imagined, and a return to conventional behind-the-meter rooftop solar. This is another reason to give LD 1986 time to examine the MW's installed more thoroughly.

This material difference highlights the need for an accurate study by the PUC as set forth in LD 1986.

I thank you for your time and for allowing me to share this information.

DAYMARK® ENERGY ADVISORS

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MAINE NET ENERGY BILLING PROGRAM: INDEPENDENT TECHNICAL REVIEW

JANUARY 9, 2024

PREPARED FOR

The Wishcamper Companies

PREPARED BY

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AC	Alternating Current
BHD	Bangor Hydro District
CMP	Central Maine Power
CO2	carbon dioxide
EPC	Engineering Procurement and Construction
GW	gigawatt
GWh	gigawatt hour
kW	kilowatt
kWh	kilowatt hour
LD	Legislative Document
MMBtu	Million British thermal units
MPD	Maine Public District
MW	megawatt
MWh	megawatthour
NEB	Net Energy Biling
NYMEX	New York Mercantile Exchange
PPA	Power Purchase Agreement
PUC	Public Utility Commission
S&P	Standard and Poor
CO_2	carbon dioxide
GW	gigawatt
GWh	gigawatt hour
kW	kilowatt
kWh	kilowatt hour
MMBtu	Million British thermal units
MW	megawatt
MWh	megawatthour

DISCLAIMER

The analyses supporting the results presented here involve the use of assumptions and projections with respect to conditions that may exist or events that may occur in the future. Although Daymark Energy Advisors has applied assumptions and projections that are believed to be reasonable, they are subjective and may differ from those that might be used by other economic or industry experts to perform similar analysis. In addition, actual future outcomes are dependent upon future events that are outside Daymark Energy Advisors' control. Daymark Energy Advisors cannot, and does not, accept liability under any theory for losses suffered, whether direct or consequential, arising from any reliance on this presentation, and cannot be held responsible if any conclusions drawn from this presentation should prove to be inaccurate.

I. SUMMARY

Daymark Energy Advisors (Daymark) was retained by The Wishcamper Companies (Wishcamper) to provide an Independent Technical Review of 2023 Stranded Cost Filings by Maine Utilities (Versant[1] and Central Maine Power [CMP][2]). These filings allow CMP and Versant to recover costs from Maine's net energy billing (NEB) program. Maine's 'NEB programs allow customers to offset their electricity billing using the output from small renewable generators'.[3] There are two programs under NEB:

1. kWh Credit Program
    a. Available to all electric utility customers and provides kWh credits on participating customer's electricity bills.[4]
2. Tariff Rate Program
    a. Available to non-residential customers and provides dollar credits on participating customers' electricity bills, where rates are determined annually by the Public Utility Commission (PUC). [5]

The 2022 LD 634 established a new set of rules for the Tariff rate under this legislation. Under LD 634, distributed generation resources that commence construction after September 1, 2022, would receive a capped tariff rate based upon the 2020 tariff rate, plus a 2.25% annual increase for inflation.[6]

The 2023 filings estimated the annual impact of the NEB program to be approximately $186 million in 2025, with $164 million accounting for the Tariff program.

1 Maine PUC, Docket No. 2022-00356.

2 Maine PUC, Docket No. 2022-00341.

3 Maine PUC, Net Energy Billing, https://www.maine.gov/mpuc/regulated-utilities/electricity/neb

4 Id.

5 Id.

6 State of Maine, L.D. 634.

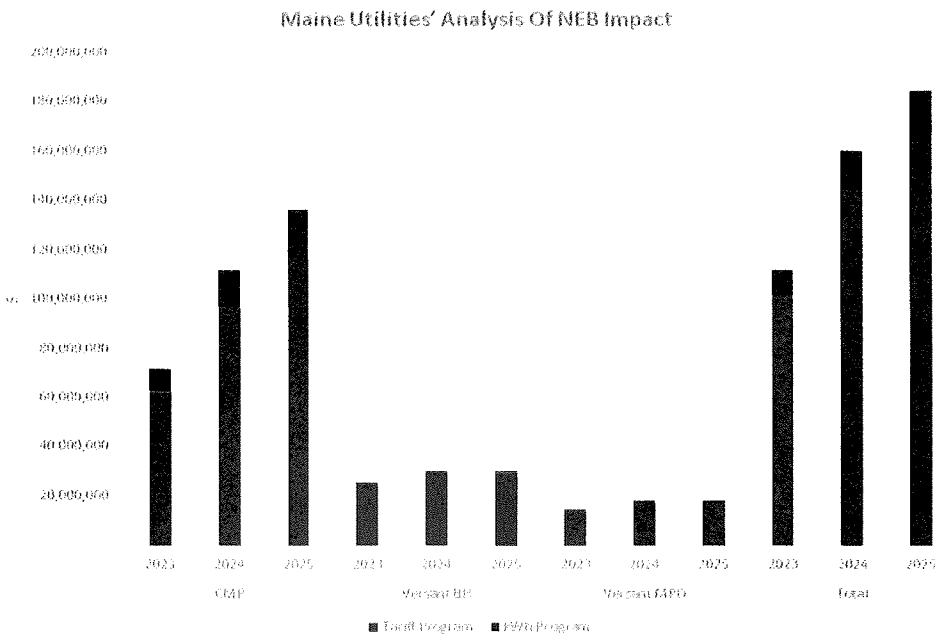

Figure 1. Maine Utilities' NEB program costs.

Given the size of the Tariff program as indicated above (Figure 1), Daymark's review was primarily focused on the Tariff program. The Tariff program net cost is the sum of the resale revenue generated from the wholesale market, and the expense total produced from the payments or credits made by the utility at the approved compensation rate reduced by the resale revenue generated each utility is forecasted to receive from selling the Tariff program energy into the wholesale market. The compensation rate is set to be 75% of the distribution rate plus 100% of the standard offer rate. Daymark found that the annual impact across Maine utilities' to be approximately $122 million and the Tariff program being $100 million of it (Figure 2). This represents a 39% decrease in the projected NEB tariff program.

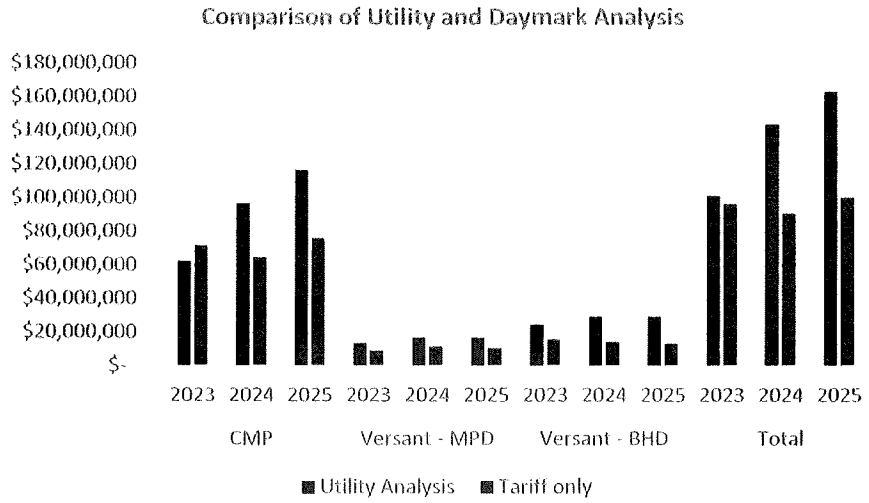

Figure 2. Daymark and Utilities' Analysis of NEB Tariff Program

As a part of the Tariff program, projects require a power purchase agreement (PPA) with off-takers. Developers offer a discount to incentive these off-takers to sign, which is typically 15%. When the 15% discount is applied to the Tariff program, the projected benefit to the off takers is $25 million in 2025. After the 15% discount, the revised NEB cost is $97 million, which represents a 40% decrease in the utilities' estimated NEB program costs.

Maine utilities currently collect the forecasted three-year net cost of the NEB programs over three years 2023-2025, in a three-year averaged rate within the stranded cost charge made to customers. Daymark first calculated and shows below what the three-year rates for each utility would drop to, given the Daymark analysis derived net costs. Then Daymark shows how the remaining years charge needs to drop in order to achieve daymark's estimate of net costs, since our analysis shows the 2023 rates will prove to be set too high. Some degree of adjustment was expected to occur for 2024 and 2025 whether it be upward or lowering the net cost as the programs evolve. Daymark used the utilities stranded cost filings as an approximation of the three-year effect.

In addition to the net decrease in NEB costs Daymark identified, note in Figure 2 there is a dip in NEB costs from 2023 to 2024. This year over year decrease, decreases the three-year standard cost charge (Table 1). Based on Daymark's analysis, CMP's three-year stranded cost charge would go from $6.11 per month to $4.85. The new lower value

would result in CMP needing to collect $4.40 in the following two years. Versant – MPD would go from $5.47 per month to $3.75. Given the new $3.30 value, Versant would need to collect $2.78 in the following two years to achieve that average. Versant – BHD would go from a charge of $8.77 a month to $4.95. Given the new $2.47 value, Versant would need to collect $6.76 in the following two years to achieve that average.

Table 1. Maine Utilities' NEB Program Stranded Cost Rate Impact ($/month)

UTILITIES' ANALYSIS	CMP	VERSANT – MPD	VERSANT – BHD
NEB only **	$6.29	$5.37	$8.20
Total Stranded Cost charge **	**$6.11**	**$5.47**	**$8.77**
DAYMARKS ANALYSIS	**CMP**	**VERSANT – MPD**	**VERSANT – BHD**
NEB only **	$5.03	$3.64	$4.38
Total Stranded Cost charge **	**$4.85**	**$3.75**	**$4.95**
2023 Over collected charge	$1.26	$1.73	$3.82
Adjusted charge for 2024/2025	$4.40	$2.78	$2.47

** *these values apply to 2023, 2024, and 2025 based on the utility analysis and setting the cost at the beginning of 2023.*

A. Daymark Scope & Approach

As mentioned in the Summary, Daymark's Independent Technical Review primarily focused on Tariff program of Maine's NEB program. Included in this review, Daymark was to verify the tariff rate assumptions, specifically certifying if the utilities included the LD 634 rate cap for projects commencing after September 1, 2022. In addition, Daymark was tasked with verifying the tariff rate standard offer and wholesale rate assumptions that informed 2024 and 2025 projections.

Daymark's analysis was broken down into three categories:

1. Correcting for the apparent errors that the utilities performed in their evaluation of the NEB costs filed.
2. Using the utilities original assumptions (e.g. MWs, % allocated to fixed rate), updating the wholesale power prices, actual and current industry forwards, standard offer rate, and utility distribution rate projections to reflect data that would be used if the utilities were to perform the evaluation of NEB costs today.

3. Applying estimates provided by Wishcamper derived from their analysis of the NEB solar development activity on installed capacity and MW placed in service, and a lower projection for the capacity factor that will be realized by NEB solar installations, to the prior two categories.

B. Daymark Detailed Analysis

Corrections to Utilities Analyses

Based on CMP's filings, they are assuming that after September 2023, there will be a monthly addition of 10 MW of capacity added to the Tariff Program.[7] CMP further determines the percent of projects that receive the alternative price by dividing 5MW by the growing cumulative total of MW added to the program.[8] This indicates that while MW are continued to be added to the program, less are receiving the alternative pricing structure. This is likely an oversight given that an entity which started on-site physical work after September 2022 is eligible to the LD 634 capped rate. To adjust for this error, we applied the assumption that all MWs added to the NEB program in 2024, would be subject to the LD 634 capped rate. Daymark then took the percent of LD 634 MWs compared to the total MW in the program and applied the LD 634 rate and standard offer rate accordingly.

Versant correctly assigned the LD 634 capped rate; however, for both Versant – MPD and Versant – BHD, their power resale prices appeared to be off by two months based on Daymark's wholesale price analysis. Versant's resale prices showed price spikes in October and November, whereas when compared to the S&P power forwards[9] the price spikes were seen in January. To adjust for the two-month gap, we moved the monthly resale prices back two months.

Updated Power Price Outlooks

Tariff Resale Revenue

Using the utilities same assumptions, with the aforementioned corrections, Daymark used updated power forwards to adjust NEB costs. Daymark first determined the implied market price forwards embedded in each utility's forecast for 2023 through 2025. Based on the filings, for CMP we assumed 1/5/23 NYMEX power forwards and for Versant we

7 Docket no. 2022-00341. 2023-02-22 CMP Response to PO Attachment 2. MPUC_01_1B

8 Ibid.

9 As of 11/15/23.

assumed 2/1/23 NYMEX power forwards. These S&P NYMEX forwards[10], and ISO-NE actual power prices were used to calculate an adjusted price from the pricing data CMP and Versant provided. We then applied a nodal spread to account for locational differences.

The below graph compares the utilities implied market price forward with the NYMEX forwards Daymark pulled (Figure 3). CMP, the 1/5/23 NYMEX forwards are in alignment with CMP's implied market price forwards; however, the 11/15/23 NYMEX forwards are lower, which decreases CMP's estimated resale revenue.

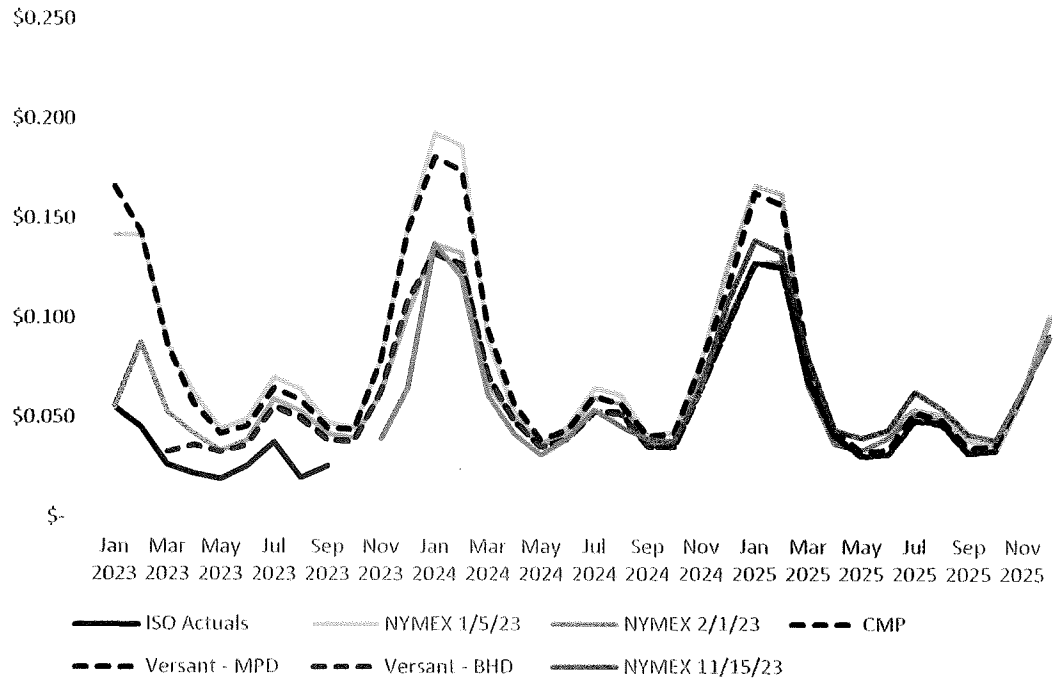

Figure 3. Comparison of power price outlooks

Tariff Expenses

Updates to the distribution rate and the standard offer rates create an impact on NEB tariff program expenses. The compensation rate, which informs the tariff expense is 75% of the distribution rate plus the standard offer rate.

[10] 1/5/23 and 2/1/23.

To estimate the 2025 standard offer rates, we calculated a ratio of the yearly 11/15/23 power forwards to the actual standard offer rates from 2019 through 2024 and then averaged the ratio. We then add the 11/15/23 forward for 2025 to the 2024 average ratio just calculated (Figure 4). Given that Maine Public Utility Commission (PUC)'s updated standard offer rates[11] for 2024, we only used projected standard offer rates for 2025.

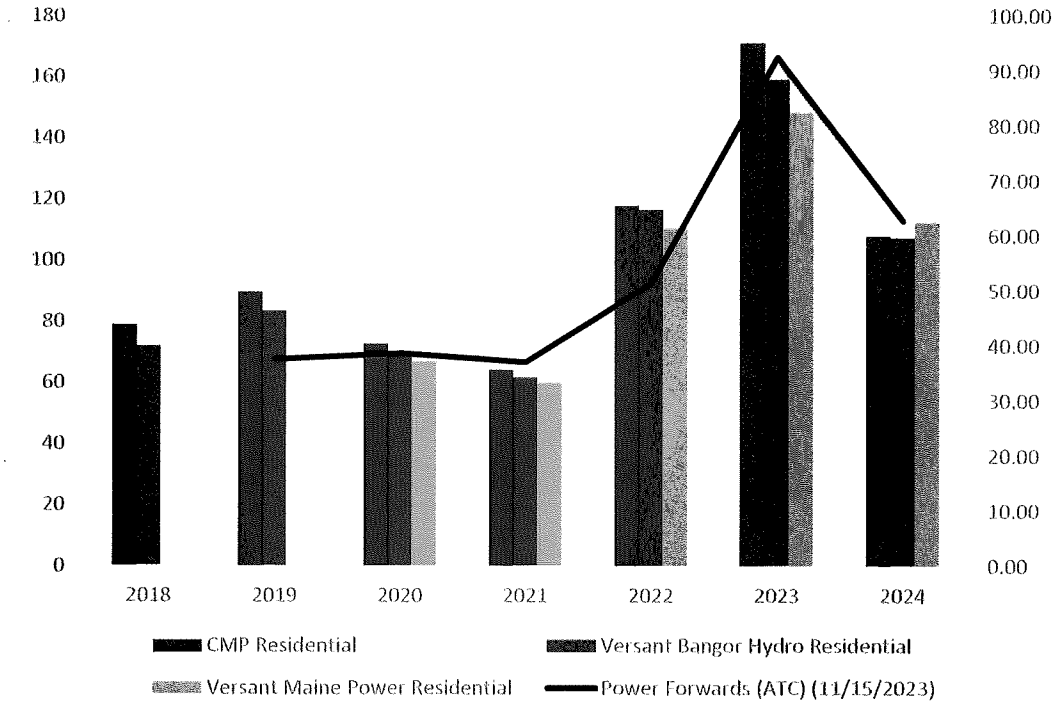

Figure 4. Historic standard offer rates and power forwards used to inform 2025 projections for the residential class.

In CMP's analysis, they did not assume that the distribution rates increased from 2023 through 2025, when based on Daymark's analysis, it had an overall increase of 18.5% over the three years.[12] Versant did assume an increase in distribution rates in August

[11] Maine PUC, "COMMISSION ACCEPTS STANDARD OFFER ELECTRICITY SUPPLY BIDS FOR CUSTOMERS OF CMP AND VERSANT- MAINE PUBLIC DISTRICT FOR 2024", November 2023. https://www.maine.gov/tools/whatsnew/index.php?topic=puc-pressreleases&id=12135912&v=article088

[12] 2022-00152, Item No. 212 Attachment 15, Tabs "Rate A Bill Impacts P1", "Rate A Bill Impacts P2", "Rate A Bill Impacts P3", "Rate A Bill Impacts P4"

2023 of about 30% when there was actually an increase of 14.3% effective July 1, 2023, and another 12.5% increase effective January 1, 2024.[13]

Figure 5 below shows the compensation rate that Daymark calculated with the updated standard offer (Figure 4) and distribution rates to inform the tariff program expenses. The blue fixed line denotes the LD 634 capped rate as a comparison.

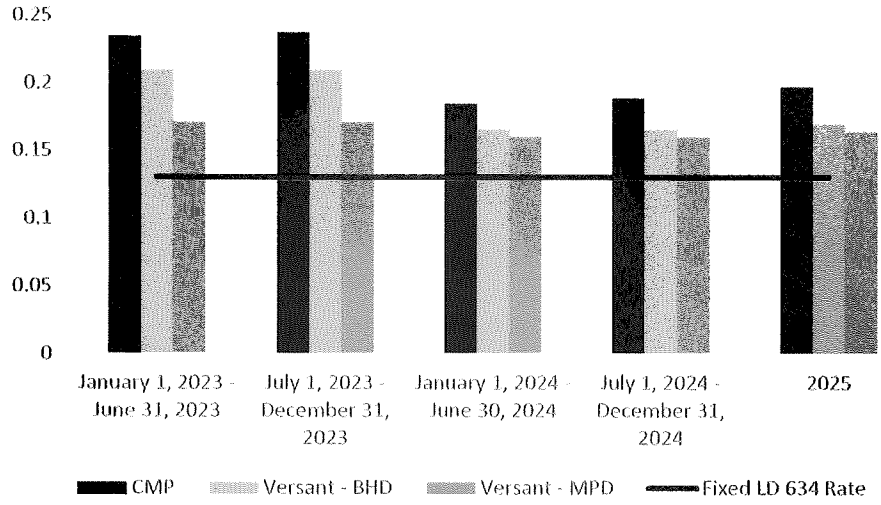

Figure 5. Compensation rate Daymark used to calculate Maine's NEB Tariff program expenses.

MW Installed

The number of MW added to the NEB program was only changed for CMP and Versant – BHD and it was adjusted based on information provided to Daymark from Wishcamper. Versant – MPD was not changed because it was believed that the current PUC reporting reflects achievable numbers by 2025.

For CMP, Wishcamper analyzed the Level 4 report was analyzed on a cluster-by-cluster basis to determine the number of projects in the Tariff Program. Wishcamper adjusted for the derate factor in Cluster 3, which curtailed the total capacity that could be installed in that cluster and assumed that the MW installed in clusters would not be

2022-00152, Item No. 212 Attachment 17, Tabs "SGS Bill Impacts Per1 1P", "SGS Bill Impacts Per2 1P", "SGS Bill Impacts Per3 1P", "SGS Bill Impacts Per4 1P", Lines 52. 2022-00152, Item No. 212 Attachment 18, Tab "MGS-S Rate Design", Line 16

[13] 20222-00255, Item No. 144, Attachment "Order Approving Stipulation", Pg. 3

ready for distributive generation prior to December 31, 2024[14] and reduced the project size to less than one (1) MW as required to be eligible under the program. Wishcamper also assumed that any projects with I9 approval would qualify for the program at the stated capacity. For projects in the level 4 report that were not identified to a specific structure in the NEB program (kwh v tariff) Wishcamper allocated according to the active operational split and used the above methodology. Additionally, Wishcamper received direct input from various developers with intimate project detail. In total, this reduced the total MW installed in the CMP territory from 538 MW to 471 MW by the end of 2025.

Versant – BHD's estimate of 128 MW by 2025 assumes that 100% of the projects in the queue would be built. Based on the MW's installed as of 11/30/2023, this number is an unrealistic expectation based on the rate at which projects are coming online. Our conservative estimate assumes 99 MW will be online in 2025, representing a 23% discount.

Capacity Factor

The Wishcamper assumptions included changing the solar facility capacity factor and the number of MWs added to the NEB program. To determine the new capacity factor, actual production from fifteen active solar projects were collected across the state (Table 2). The average AC capacity factor was calculated and determined to be 17.9%, which is a significant decrease from the 20% filed by the utilities. These 15 projects were developed and constructed by two of the State's most respected EPC/development firms. Additionally, the geographic location of these projects gives a solid sample to reflect actual conditions throughout the State.

Table 2. Capacity Factor Sample Analysis

PROJECT IDENTIFIER	AC POWER KW	AC POWER MW	ANNUAL AC CAPACITY FACTOR
1	2,625	2.6	19.9%
2	1,500	1.5	15.4%
3	2,400	2.4	18.2%
4	1,020	1.0	20.0%

[14] State of Maine Senate 131st Legislature, L.D. 1347, "An Act to Eliminate the Current Net Energy Billing Policy in Maine", pg. 2.

5	2,375	2.4	18.4%
6	2,125	2.1	16.7%
7	3,450	3.5	15.6%
8	2,000	2.0	18.9%
9	3,900	3.9	17.7%
10	9,200	9.2	17.6%
11	7,200	7.2	18.1%
12	5,000	5.0	19.2%
13	20,000	20.0	15.7%
14	6,000	6.0	16.6%
15	5,000	5.0	20.1%
AVERAGE			**17.88%**

C. Conclusion

In conclusion, Daymark found computational errors of the Maine utilities' stranded cost filings, used updated market information, and informed assumptions to determine a revised estimated NEB program cost of $122 million in 2025. The analysis demonstrates that this is a 34% decrease from the utilities analysis. The decrease in program cost would inherently reduce CMP, Versant – MPD, and Versant – BHD monthly standard offer rates. Maine utilities currently collect the net cost of the NEB programs over three years, and since Daymark's analysis shows 2023 rates were too high, an adjustment would be expected to occur for 2024 and 2025. CMP would be estimated to need to be $4.40 per month for stranded cost, which equates to a 25% decrease from the utilities filed stranded offer rate. Versant – MPD would be estimated to need to be $2.78 per month, equating to a 48% decrease and lastly, Daymark estimates Versant – BHD at $2.47 per month, resulting in a 87% decrease.