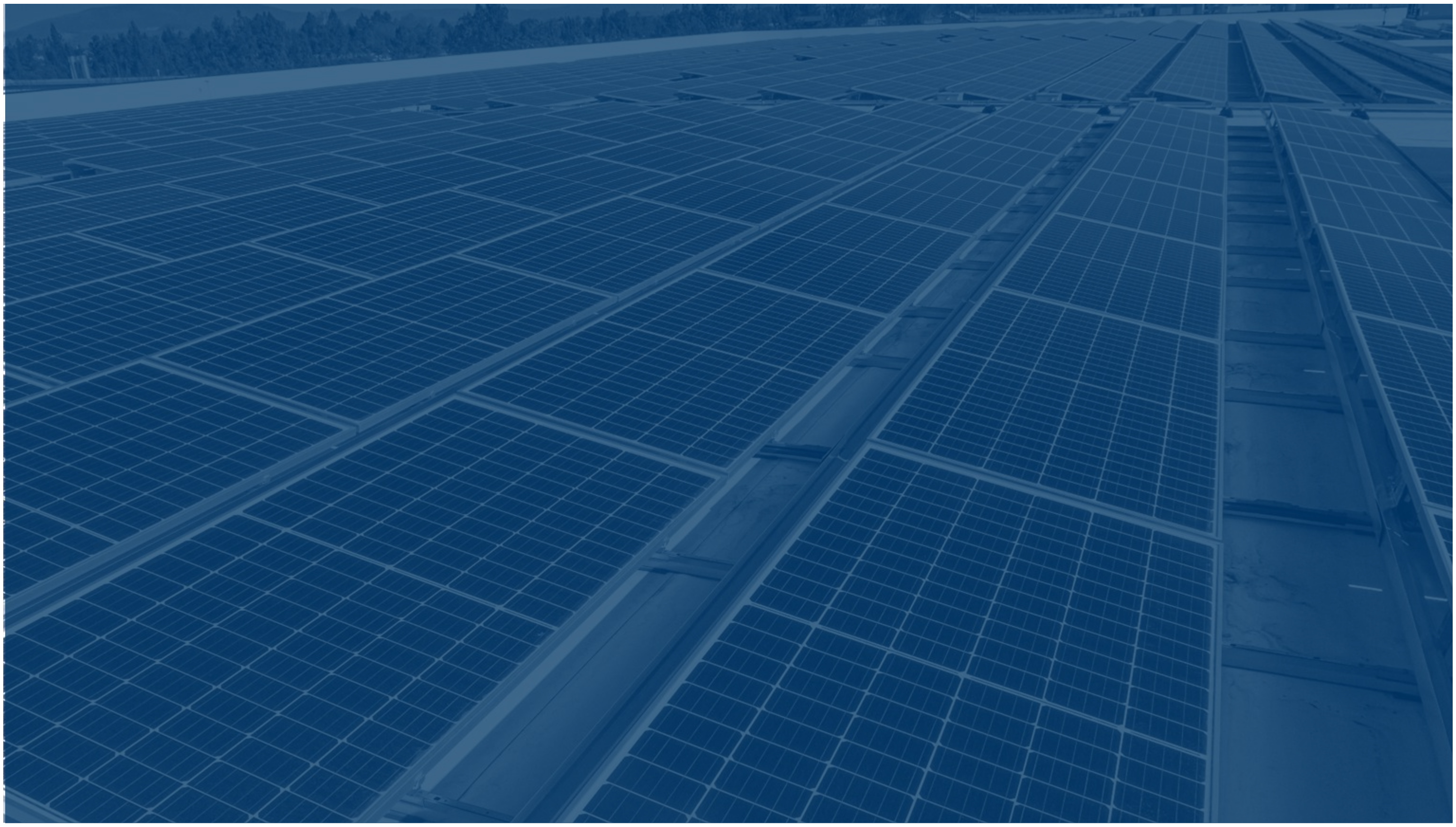

New Hampshire Value of Distributed Energy Resources

Addendum:
Update to RBI Assessment Results

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List of Acronyms

AESC	Avoided Energy Supply Costs
BTM	Behind-the-Meter
CO_2	Carbon dioxide
DER	Distribution Energy Resource
DG	Distributed Generation
DRIPE	Demand Reduction Induced Price Effect
FCA	Forward Capacity Auction
FCM	Forward Capacity Market
GHG	Greenhouse Gas
HE	Hour Ending
HLGS	High Load Growth Scenarios
ISO-NE	Independent System Operator – New England
kWh	Kilowatt-hour
LGHC	Large Group Host Commercial
LGS	Large General Service
LMP	Locational Marginal Price
LNS	Local Network Service
LSEs	Load Serving Entities
MRVS	Market Resource Value Scenario
MW	Megawatt
NEM	Net Energy Metering
NO_x	Nitrogen oxide
PTF	Pool Transmission Facilities
PUC	Public Utilities Commission
RGGI	Regional Greenhouse Gas Initiative
RNS	Regional Network Service
ROC	Rest of Criteria
RPS	Renewable Portfolio Standard
SGS	Small General Service
SO_2	Sulfur dioxide
T&D	Transmission and Distribution
VDER	Value of Distributed Energy Resources

1 RBI Assessment Updated Results

1.1 – Introduction

During the internal review of the Rate and Bill Impact (RBI) Assessment results during the technical sessions in preparation of DOCKET DE 22-060 in the matter of "Electric Distribution Utilities Consideration of Changes to the Current Net Metering Tariff Structure, Including Compensation of Customer-Generators," an error in the RBI Assessment model was identified by the Dunsky team. This resulted in a mistreatment of the Demand Reduction Induced Price Effect (DRIPE) and Avoided Capacity costs in assessing the Generation Rate impacts in the model. This Addendum provides updated RBI Assessment results reflecting the impact of the model correction. Overall, the corrected values show a minor reduction in the bill impacts resulting from newly added net metered DG capacity, but do not change the overall conclusions of the RBI Assessment.

As seen in the table below, the updates to the RBI assessment are reflected as follows:

Table 1: Comparison of Rate and Bill Impact results between the VDER Study Report and the updated values after the DRIPE and Capacity Cost treatment correction

Utility	Customer Class	Volumetric Rate Impact[1]		Non-CG Bill Impact		CG Bill Impact	
		Report	Update	Report	Update	Report	Update
Eversource	Residential	1.21%	0.65%	1.01%	0.55%	-92.3%	-92.3%
	Small General Service	0.58%	0.26%	0.46%	0.31%	-93.6%	-93.6%
	Large General Service[2]	0.66%	0.21%	0.52%	0.56%	-41.5%	-41.6%
Liberty	Residential	1.77%	1.33%	1.51%	1.12%	-90.6%	-90.6%
	Small General Service	1.09%	0.70%	0.97%	0.63%	-93.8%	-93.8%
	Large General Service	1.13%	-0.01%	2.62%	1.69%[3]	-31.3%	-32.0%
Unitil	Residential	1.85%	1.22%	1.52%	0.99%	-87.4%	-87.4%
	Small General Service	0.26%	0.11%	0.29%	0.17%	-92.3%	-92.3%
	Large General Service	0.20%	0.07%	0.31%	0.20%	-4.23%	-4.34%

[1] Combined impact of forecasted added Customer Generators on Generation Rates, Transmission Rates, and Distribution Rates
[2] Since the filing of the rebuttal testimony, for the Eversource LGS customer an averaging error was realized in the output sheets and has now been corrected.
[3] It is noted that despite a minor overall reduction in volumetric rates for Large General Service customers, they experience a slight increase in their bills. This is due to increased demand charges resulting from fixed costs, and program costs spread over a reduced customer class peak demand.

1.2 – Rate and Bill Impacts Assessment Methodology

The Rate and Bill Impact Assessment provides high-level insight into the impact of DG deployment in New Hampshire on ratepayers, considering the benefits received and the costs incurred by the utilities as a result of incremental net metered DG additions (which, for the purpose of this analysis, are limited to solar PV systems), and considering how those values are passed on to ratepayers.

The assessment aims to provide a future-looking estimate of the direction and magnitude of the rate and bill impacts of net metered DG deployment and to identify any potential cost-shifting between customers with and without DG. It is <u>not</u> intended to represent an exact projection of future electricity rates and utility cost recovery. Instead, it serves as a future-looking approximation of the impacts on ratepayers attributable to net metered DG deployment in New Hampshire.

The rate and bill impacts methodology can be summarized by four high-level steps, outlined below:

1. Define DG system archetypes → 2. Develop DG and no-DG Load Forecasts → 3. Assess changes to rates → 4. Assess changes to bills

1.2.1 – Define DG System Archetypes

For this analysis, solar PV system archetypes are defined for each utility (Eversource, Unitil, and Liberty) and for representative rate classes (residential, small commercial, and large commercial). System archetypes are defined by the PV system size as well as the percentage of energy produced that is consumed behind-the-meter based on the load patterns of a typical customer in that rate class.

The assumptions used for each are calculated using *utility-specific* interconnection data, resulting in average system size assumptions that vary by utility. The archetypes used for this analysis are summarized in Table 2 below.

Table 2. Rate and Bill Impacts Analysis Solar PV Archetype by Rate Class and Utility

Rate Class	Eversource	Unitil	Liberty	% Self-Consumed
Residential	7.6	12.2	10.1	72% (Monthly Netting)
Small Commercial	24.5	43.0	41.3	65% (Monthly Netting)
Large Commercial	329.2	47.2	209.6	99% (Hourly Netting)

1.2.2 – Develop DG and no-DG Load Forecasts

To assess the impacts of net metered DG, a 'no-DG' scenario is required to serve as a baseline. The 'no-DG' scenario is a hypothetical illustration of the system outlook in the absence of projected *new* net metered DG capacity additions and is used as a comparison to evaluate the impact attributable to future incremental net metered DG deployment. The no-DG load forecast is developed by multiplying the forecast of customer counts for each rate class by the expected electricity sales.

The DG scenario reflects the impacts associated with future net metered DG deployment forecasted by ISO-NE, which assumes that 140 MW of additional net metered DG (predominantly solar PV) will be deployed in New Hampshire between 2021 and 2030; that amount is above and beyond the existing 120 MW already deployed today. Using insights from historical utility interconnection data, we estimated the expected distribution of future net metered DG deployment among the three utilities and three rate classes.

Using the forecasted level of net metered DG uptake, our team then estimated the corresponding hourly energy production and used that to estimate the expected impacts of net metered DG deployment on annual energy consumption (GWh) and peak load (MW) for each utility and rate class. The impacts were calculated at the customer meter/distribution system, transmission system, and bulk system, using assumptions on system losses as well as the peak coincidence factor between the different levels.

Beyond the utility/rate class level load forecast, our team computed the average monthly electricity consumption (i.e., kWh consumed per month), as well as the annual non-coincident peak demand (i.e., kW peak demand used for the purpose of demand charges), for each of the three archetype rate classes across the three utilities for three representative customer types:

- **Typical net metered DG customer:** a customer assumed to install the defined archetype net metered DG system and experiencing a corresponding reduction in the customer's energy consumption and peak demand.
- **Typical non-DG Customer:** assumed to have the same consumption profile as the average utility customer in the no-DG scenario.[4]
- **Average utility customer:** computed as the total consumption divided by the number of customers across each rate class and utility.

1.2.3 – Assess Changes to Rates

The future deployment of net metered DG is expected to create upward pressure on rates (due to lost utility revenues and program cost recovery) and downward pressure on rates (due to avoided utility

[4] The consumption profile of all three customer types is assumed to be the same in the hypothetical no-DG scenario, equivalent to the energy consumption and peak demand of the average customer in that rate class.

costs).[5, 6] Additionally, rates are also impacted by reduced system throughput. The figure below highlights the theoretical framework that was used to assess the rate impacts of net metered DG.[7]

Figure 1. Theoretical Framework Used to Assess the Rate Impacts of net metered DG

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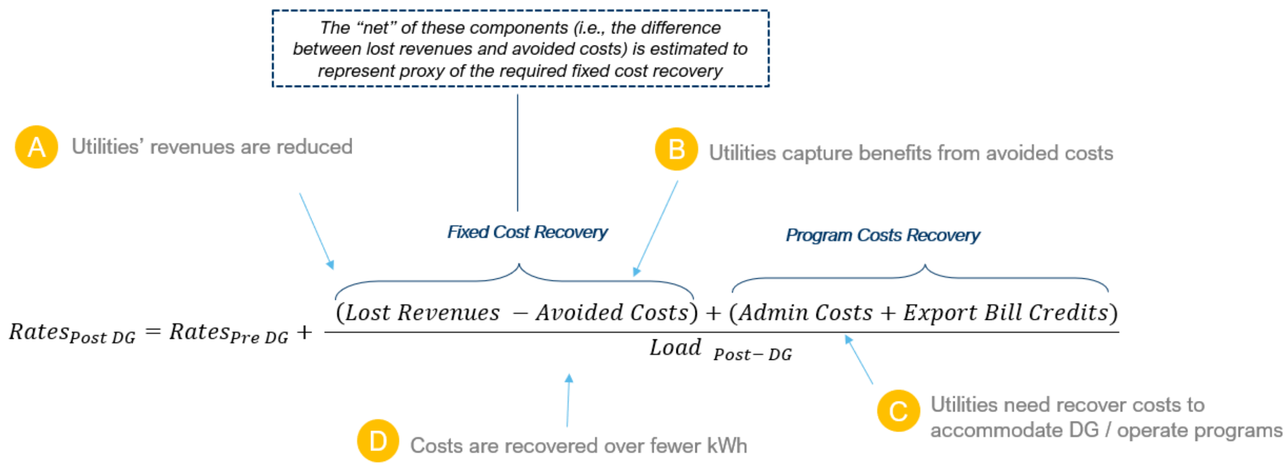

Specifically, the framework captures several key impacts of net metered DG deployment on rates[8]:

A. Lost utility revenues due to reductions in electricity consumption.
B. Avoided costs, as indicated and quantified by the Value Stack assessment.
C. Program administration[9] and system costs, including compensation for net DG exports, incurred by utilities to accommodate net metered DG.

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[5] Utility revenues are reduced because of reduced retail sales. These retail sales reductions are equivalent to the energy production by DG systems that is consumed behind-the-meter. Reduced retail sales create upward pressure on rates by increasing the share of utility fixed costs that must be covered by each unit of energy that is sold. Program costs refer to the costs required to administer DG-specific programs and compensate for exports. Utilities must recover the costs of running programs through rates. Again, as retail sales volumes are reduced, the share of program costs that must be covered by each unit of energy sold must be increased.
[6] Utilities also realize value as retail sales are reduced, avoiding the costs that would have been required to serve loads if they were not being served by behind-the-meter DG.
[7] This approach is largely in-line with that applied to evaluate the Rate and Bill Impacts of Energy Efficiency Programs in New Hampshire.
[8] The results of the rate impact assessment are based on the relative changes in the volumetric portion of the rates post-DG. The fixed charges and non-bypassable charges are assumed to be unchanged in the post-DG scenario.
[9] The assumed program administration costs include the costs for FTE (Labor), Engineering, Management, IT Support, Metering, and Installation. The administration cost projections were based on the forecasted number of installations across the three rate classes for each utility.

D. System costs that are recovered over lower energy sales.

Impact on Generation Rates: In the RBI model, generation rates are assumed to be impacted by the fixed costs, which is estimated to be the difference between the lost revenue and the avoided costs. The generation avoided costs include energy, capacity, line losses, risk premium, ancillary, Renewable Portfolio Standard (RPS) compliance benefits and Demand Reduction Induced Price Effects (DRIPE). To estimate the fixed cost impact of adding DG to the system, the study uses an approach that is consistent with the method previously developed by Synapse Energy Economics Inc. (Synapse) in the "New Hampshire Rate, Bill, and Participation Impact Analysis" study.
Under this approach, all avoided cost components are treated as a pass-through from the market to the utility customers, except for DRIPE and avoided capacity costs, which is assumed to be embedded in the generation rates. Thus, the generation rate impacts can be assessed using the sum of DRIPE and Avoided Capacity costs as a proxy.

- **Impact of DRIPE**: DRIPE is a market effect that results in lower market clearing prices for energy and capacity. This price suppression benefit is ultimately passed on to market participants and their customers through reductions in the generation rate.
- **Impact of Avoided Capacity:** For capacity costs, as DGs are added to the system, the utilities reduce the amount of generation that they need to purchase, but not the associated variable charge portion of the generation rates. However, this does lead to reduced capital costs in the future, which should then lead to a reduction in generation rates, as is captured in the model.

Treatment of Energy and Demand Rate Components: Distribution and transmission rates for small and large generation service customers typically include an energy and demand component. We assume that the distribution of the revenue requirement between energy and demand buckets remains constant pre and post -DG. Thus, when it comes to calculating the energy rates post-DG, energy-related revenue is allocated across a reduced volume of energy sales, while for demand rates post-DG, the demand related revenue is allocated over the new post-DG customer class demand.

The rate at which exported net metered DG electricity output is compensated impacts rates for all utility customers. To illustrate the impacts of different potential net metered DG program designs on ratepayers, changes to rates were assessed under two scenarios for net metered DG compensation:

1. **NEM Tariff Scenario:** Assumes net metered DG exports are compensated at a rate that is in alignment with current NEM compensation rates in the state.[10]

[10] The current alternative NEM tariff structure compensates systems under 100 kW at 100% of the generation and transmission rate components and 25% of the distribution rate component through monetary bill credits for monthly net exports. For systems over 100 kW, the export bill credit is equivalent to 100% of the generation rate component based on hourly net exports over the billing month.

2. **Avoided Cost Value Stack (ACV) Tariff Scenario**: Assumes that net metered DG exports are compensated at an avoided cost rate that is in alignment with the calculated value stack assessment.[11]

Net metered DG compensation impacts rates by changing the 'export bill credits' portion of the program cost recovery value (item C above). All other factors remain constant between the two scenarios.

1.2.4 – Assess Changes to Bills

Simply considering rates does not tell the whole story. Analysis of effects on customer bills, which are calculated using volumetric rates ($/kWh and $/kW) and consumption (kWh and kW peak), as well as fixed charges, provides a better indication of the overall impact on customers.

Representative monthly bills were computed for each of the utility/rate class permutations under the no-DG scenarios. Bills were then recalculated for each of the three representative customer groups described above (i.e., typical net metered DG, typical non-DG customer, and average utility customer) under the assumed level of future net metered DG deployment. Evaluating changes in bills of customers with net metered DG and those without net metered DG provides insights into the degree of cost-shifting between customer groups (i.e., the degree to which non-DG customers will see bill increases as a result of rate impacts from net metered DG installations). Additionally, the estimated impacts on monthly bill for the average utility customer pre- and post-DG highlight the extent to which utility customers on average are better or worse off as a result of future net metered DG uptake.

Changes to bills are assessed under two scenarios: the NEM scenario and the ACV scenario described above. The results are largely focused on presenting the average per cent increase/decrease in customers' monthly bills attributable to net metered DG over the period 2021 to 2035 for each of the typical customer archetypes to indicate the long-term impacts of net metered DG on utility customers.

1.3 – Updated Rate and Bill Impact Assessment Results

The Rate and Bill Impacts analysis provides high-level insights into the impact of future net metered DG deployment in New Hampshire on ratepayers. The goal of the assessment is to provide a future-looking estimate of the direction and magnitude of the impacts of net metered DG deployment on all ratepayers and to identify any potential cost-shifting between customers with and without net metered DG. The Rate and Bill Impacts assessment is not intended to be a projection of future electricity rates and cost recovery, but it serves as a future-looking approximation of the impacts of future net metered DG adoption on retail electricity rates for New Hampshire customers.

The reported results[12] in this study analysis are predominantly focused on two key metrics:

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[11] The analysis **does not** consider the impact that the transition to an Avoided Cost Value Stack compensation model would have on DG economics and deployment trends in New Hampshire (i.e., the same level of future DG deployment is assumed to occur under both scenarios).

[12] The results do not assume inflationary effects and consider only real impacts.

- **Rate impacts** are presented as the average annual percentage increase/decrease in rates relative to a no-DG scenario over the period 2021 to 2035 for each rate class and each utility.[13]
- **Bill impacts** are presented as the average annual percentage increase/decrease in customers' bills relative to a no-DG scenario over the period 2021 to 2035 for each rate class, each utility, and each customer type – those with net metered DG and those without net metered DG.

To illustrate the impacts of different potential net metered DG program designs on ratepayers, the analysis is conducted under two different scenarios for net metered DG compensation: a **NEM Tariff Scenario**, which assumes that net metered DG exports are compensated under the current NEM tariff structure, and an **Avoided Cost Value Stack (ACV) Tariff scenario,** which assumes that net metered DG exports are compensated at rates equal to the calculated avoided cost value stack.[14] The ACV scenario illustrates the impacts on rates and bills of a net-metering export tariff that is aligned with the avoided cost value stack, and therefore representative of actual values achieved from the perspective of the utility system.

1.3.1 – NEM Scenario

This scenario reflects the net-metering program that is currently in effect in New Hampshire (effective as of September 2017).[15] The export credit rate is based on the alternative net metering tariff, under which monthly net exports from residential and small general service customer net metered DG (i.e., those with net metered DG facilities up to 100 kW) are compensated at 25% of the distribution rate component and 100% of the generation and transmission rate components. For exports from customers with net metered DG greater than 100 kW, hourly net exports are compensated at 100% of the generation rate component only.

1.3.1.1 – Rate Impacts

Under the current NEM Tariff scenario, forecasted net metered DG adoption is expected to result in slight rate increases relative to a no-DG scenario over the study period (2021-2035), as shown in Figure 2. Across the three utilities, residential customers experience the highest increase (0.7%-1.3%) in rates among the rate classes, followed by small (0.1%-0.7%) and then large (0.0%-0.2%) general service customers.

This variation in retail rate increases across the rate classes is a by-product of sector-specific retail rate designs (rates and tariff structures) and NEM program administration costs, as well as the assumed proportion of solar exports relative to the overall customer load. Customers with net metered DG exports are compensated through monetary credits at the rates applicable under the current alternative net metering tariff. Rate classes that exhibit a higher proportion of net exports receive greater compensation through export bill credits. This will increase the utility's program costs which in

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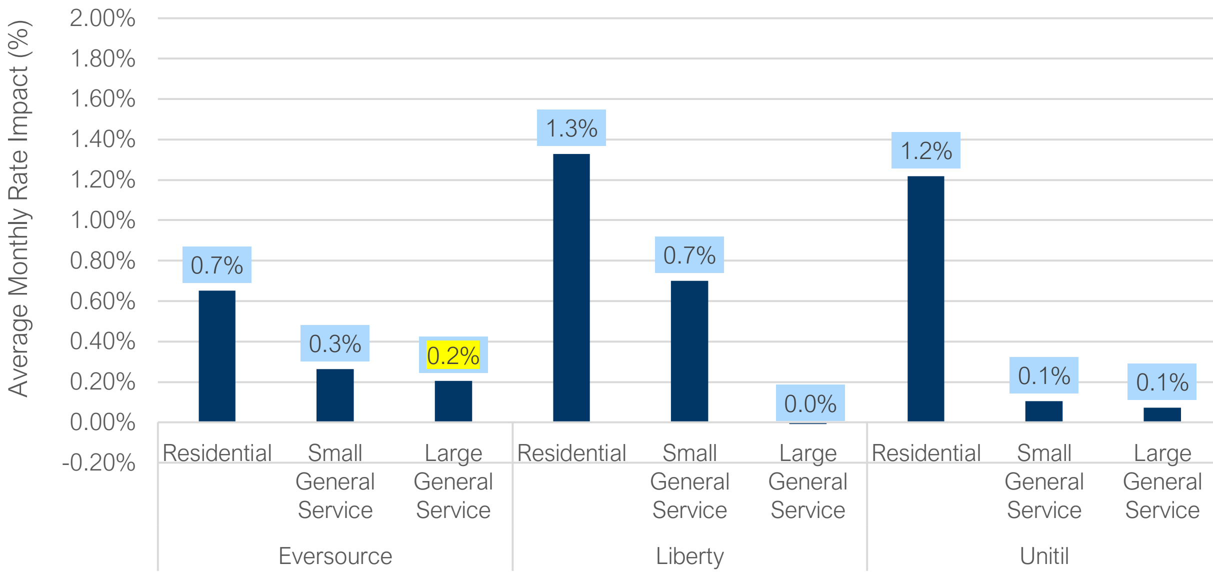
[13] The no-DG scenario is defined as a scenario that assumes no incremental future deployment of DG in New Hampshire post-2021.
[14] NEM 2.0 Tariff adopted September 2017
[15] New Hampshire Public Utilities Commission. (2020). Net Energy Metering Tariff. Available online: https://www.energy.nh.gov/sites/g/files/ehbemt551/files/inline-documents/sonh/net-metering-tariff-2023-overview.pdf

turn will be recovered from the retail customer class. Additionally, the proportion of net metered DG production that is self-consumed will reduce the consumption that is registered behind the meter and result in lost revenues for the utilities. Both the export bill credits and the lost revenues increase the utility costs that need to be recovered, increasing rates. Statewide, average monthly rate increases across the study period are found to be 1.07% for residential customers, 0.36% for small and 0.09% for large general service customers. Variation is also observed among utilities as a result of differences in system archetype definitions, net metered DG forecast assumptions, and individual utility rate designs.[16,17]

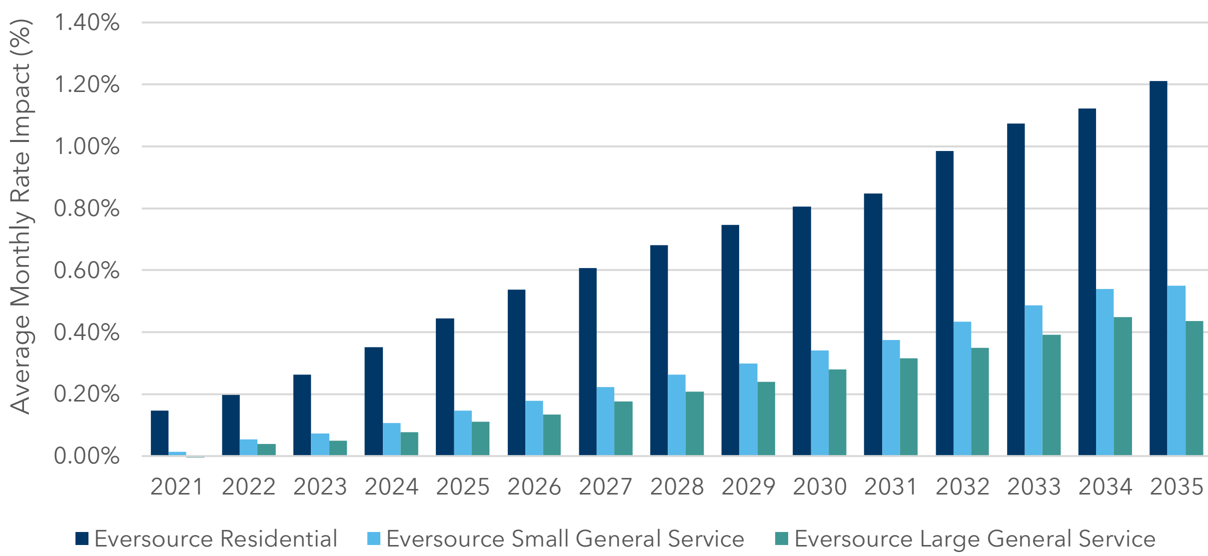
Figure 2. Average Monthly Rate Impact for Average Utility Customer (2021-2035) under NEM Compensation Scenario (Relative to no-DG Scenario)



As shown in Figure 3, the average monthly rate impact for utility customers in Eversource's service territory increases gradually over the study period, with residential customers experiencing the greatest increase (0.7% - 1.2%) followed by small general service customers(0.1% to 0.7%) and then large general service customers (-0.01% to 0.2%).

[16] System archetype definitions are described in methodology section 1.2.1 – Define DG System Archetypes section
[17] DG forecast assumptions are described in methodology section 1.2.2 – Develop DG and no-DG Load Forecasts

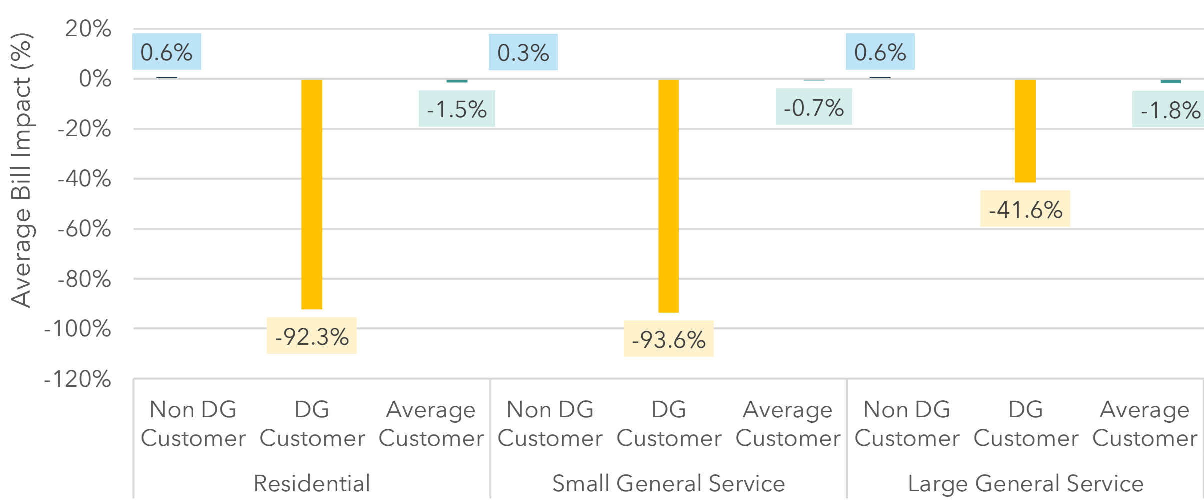
Figure 3. Average Monthly Rate Impact for Utility Customers in Eversource Territory Under NEM Scenario (Relative to no-DG scenario)



1.3.1.2 – Bill Impacts

Among customers with net metered DG, customers without net metered DG, and the average utility customer, net metered DG customers will experience the largest reduction in monthly bills. Figure 4 below illustrates the findings for customers in Eversource's service territory as an example.[18]

Figure 4. Average Monthly Bill Impacts Across Rate Classes in Eversource Territory Under NEM Scenario (Relative to no-DG Scenario)[19]



[18] This reflects monthly bills and does not include the costs of installation and ownership of solar PV systems.
[19] Averaged across the study period

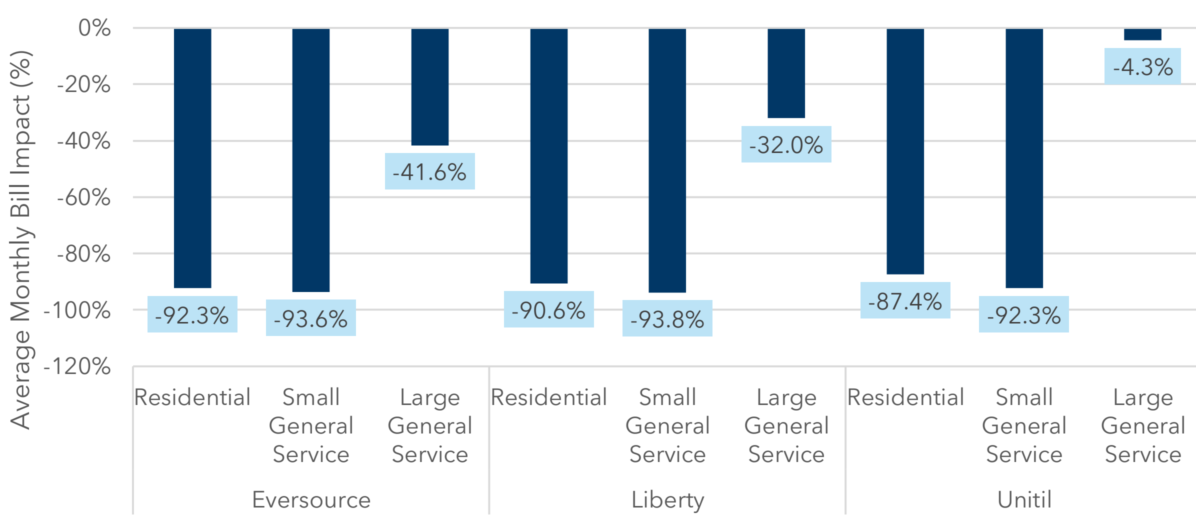
In the example above, for the system archetypes defined for this analysis, residential and small general service net metered DG customers who adopt behind-the-meter solar see an average reduction of 93% in monthly bills. Large general service net metered DG customers see an average reduction of 42% in monthly bills. Customers who do not adopt net metered DG see a slight increase in monthly bills (~0.6% for residential, 0.3% for small general service and 0.6% for large general service customers). Overall, however, the average utility customer in each rate class would experience a reduction in monthly bills from 0.7% to 1.5%.

The following sections present the bill impacts for each customer archetype – net metered DG customer or non-DG customer – as well as the overall average customer impact across the residential and general service customer classes in each utility service territory.

DG Customers

As shown in Figure 5, net metered DG customers across all utilities will observe a significant reduction in monthly bills. Over the study period, residential customers who adopt net metered DG will have 87% to 92% in average monthly bill reductions. Similarly, small general service customers will have approximately 93% in average monthly bill reductions. Large variation is shown in average monthly bill reductions for large general service customers across the three utilities, ranging from 4% to 40%. This is due to the significant variation in the utility-specific average PV system sizes when compared to the overall customer load.

Figure 5. Average Monthly Bill Impact[20] for net metered DG Utility Customer Under NEM Scenario (2021-2035) (Relative to no-DG Scenario)[21]



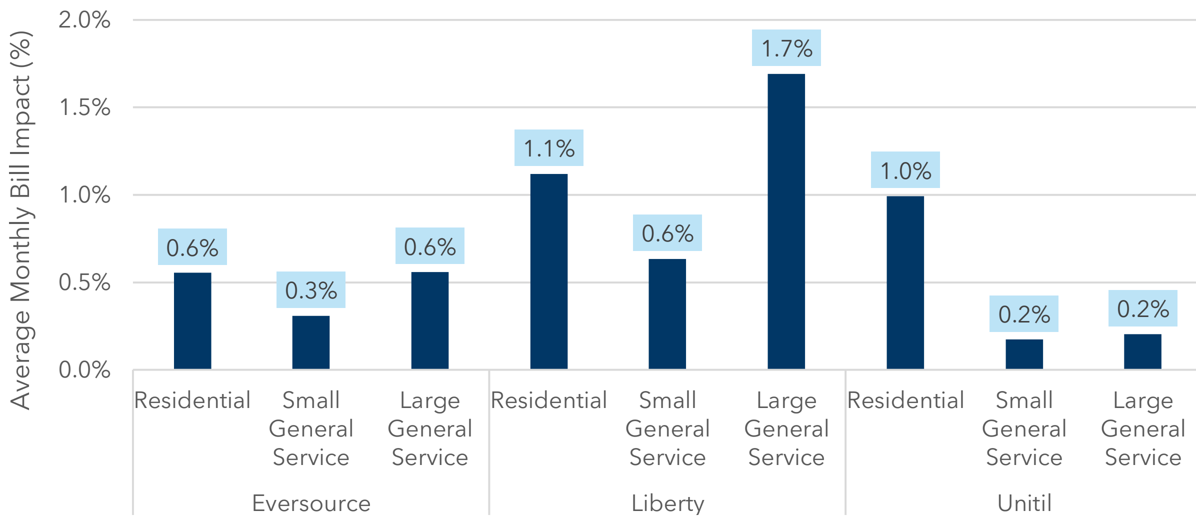
Non-DG Customers

As shown in Figure 6, utility customers that do not adopt DG experience a slight increase in bills across all utilities and rate classes. Residential customers see on average a 1.0% to 1.5% increase in average

[20] The bill impacts do not include the cost of DG installations.
[21] Averaged across the study period

monthly bills, while small and large general service customers see on average a 0.3% to 2.6% increase in average monthly bills. The largest increase in customer bills (1.7%) is observed for large general service customers in Liberty's service territory. This is a result of Liberty's large generation service rate design, which is more demand-based than the other utilities, and also a result of Liberty having the highest expected proportion of large general service net metered DG customers among the three utilities by 2032.

Figure 6. Average Monthly Bill Impact for Non-DG Utility Customer Under NEM Scenario (2021-2035)(Relative to no-DG Scenario)[22]

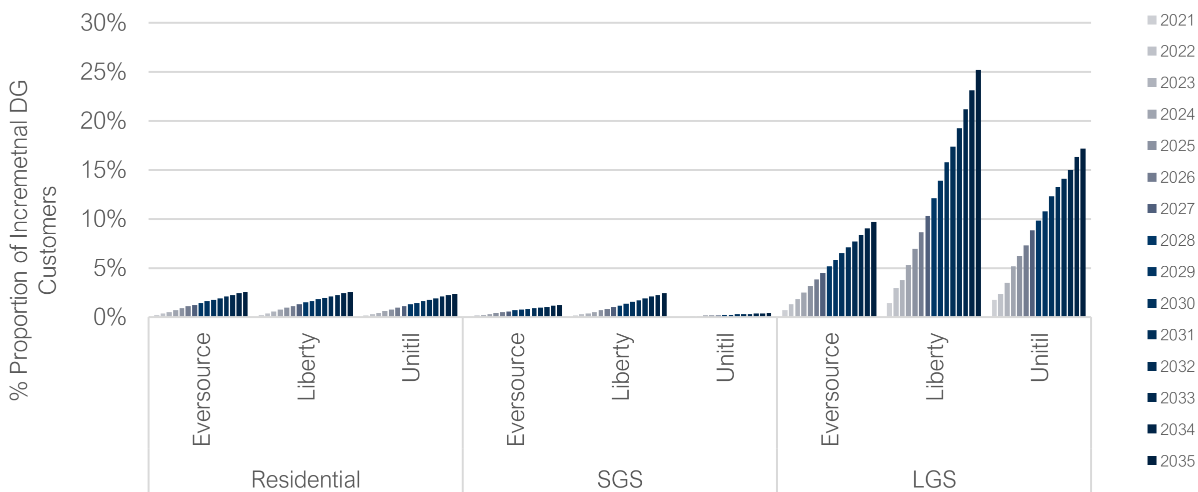


Average Customers

The adoption of distributed solar PV would enable net metered DG customers to experience significant reductions in bills, while resulting in a slight increase in bills for customers who do not adopt DG. Average impacts across all customer types can be assessed by considering net metered DG customer bill impacts, non-DG customer bill impacts, and the proportion of customers that fall into each category. The proportion of net metered DG customers to non-DG customers varies over time for each utility and within each rate class, as illustrated below.

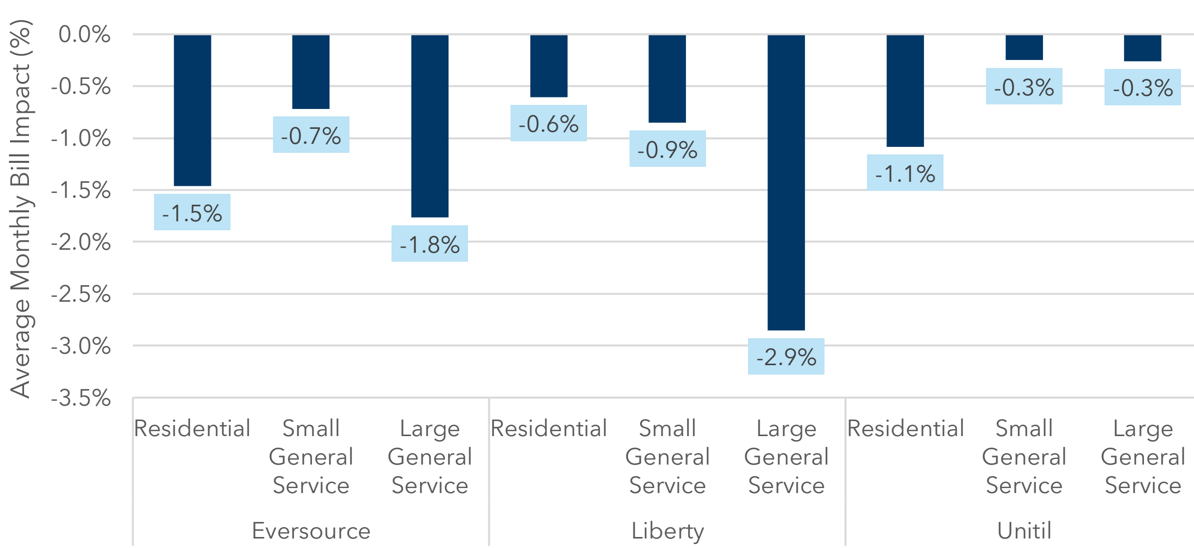
[22] Averaged across the study period

Figure 7. Proportion of Incremental net metered DG Customers Across Rate Classes in Each Utility Service Territory[23] (Relative to no-DG Scenario)[24]



Despite the forecasted electricity rate increases, average monthly bills across all utilities and rate classes are expected to decline over the study period. This is because the average reduction in consumption compensates for the rate increases, resulting in bill decreases overall.

Figure 8. Average Monthly Bill Impact for Average Utility Customer Under NEM Scenario (2021-2035)(Relative to no-DG Scenario)[25]



[23] The proportion of DG customers informed by the utility interconnection data and the CELT forecasts for New Hampshire. Assumes that the solar forecasts consider the impact of the alternative NEM tariff being in place.
[24] SGS: Small General Service; LGS: Large General Service
[25] Averaged across the study period

1.3.2 – Avoided Cost Value (ACV) Tariff Scenario

The Avoided Cost Value (ACV) Tariff scenario represents a hypothetical scenario under which net exports from net metered DG are compensated at the avoided cost value, as quantified by the base avoided cost value stack assessment. The treatment of net export compensation is the key differentiator between the two tariff scenarios. Under the NEM Tariff scenario, exports are compensated at a rate that represents a proportion of the underlying retail rates, whereas under the ACV Tariff scenario, net exports are compensated based on the value of the avoided costs calculated in this study (excluding environmental externalities). Because net export bill credits are determined based on the avoided cost values under the ACV Tariff, which is effectively less than the current export compensation rate, the program costs that are recovered by the utilities are lower. Consequently, the ACV has a slightly lower impact on retail rates.

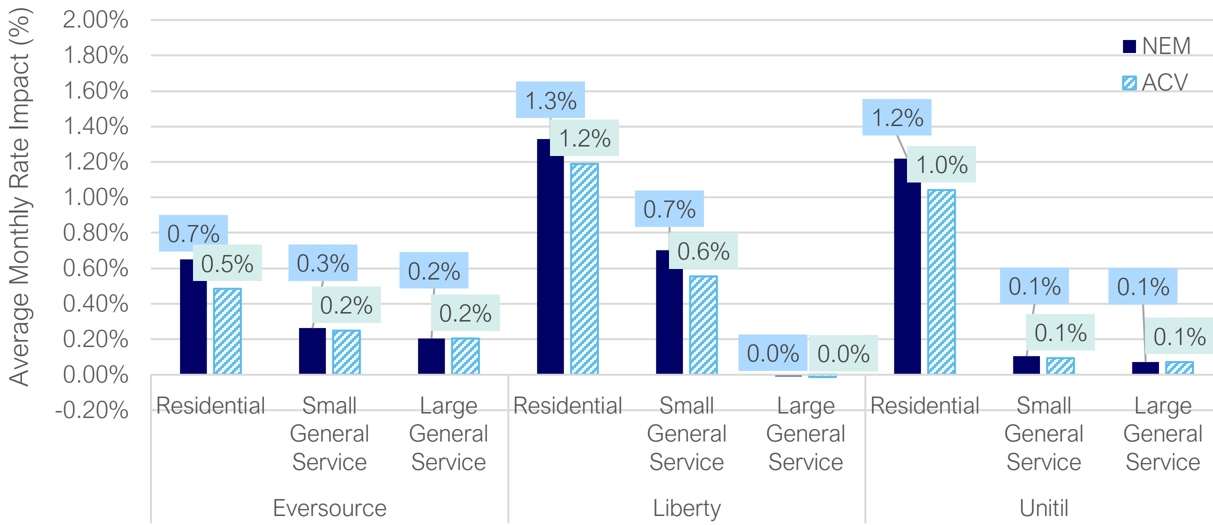
It is important to note that the analysis <u>does not</u> consider any impacts that the transition to an ACV Tariff compensation model may have on net metered DG economics and deployment trends in New Hampshire (i.e., the same level of future net metered DG deployment is assumed under both scenarios).

1.3.2.1 – Rate Impacts

Comparing the rate impacts (relative to a no-DG scenario) for the ACV Tariff scenario with the current NEM Tariff scenario highlights that both scenarios result in slight increases in rates. As shown in Figure 9, both the NEM and ACV scenarios show a comparable increase in rates across most customer classes; however, slightly lower rate impacts for some customer classes are observed under the ACV Tariff scenario.

As discussed above, the effective compensation of net exports is the primary driver for the rate impacts observed. Therefore, differences in rate impacts are primarily observed in rate classes where a significant portion of the electricity produced is exported to the grid. For example, residential customers across all three utilities experience slightly lower rate increase impacts under the ACV Tariff when compared against the current NEM scenario. The rate impacts experienced for small and large general service customers are similar between the NEM and ACV Tariff scenarios, due to the high proportion of energy production that offsets on-site consumption (i.e., assumption of little to no net exports).

Figure 9. Average Rate Impact by Utility and Rate Class (2021-2035) (Relative to no-DG Scenario)[26]



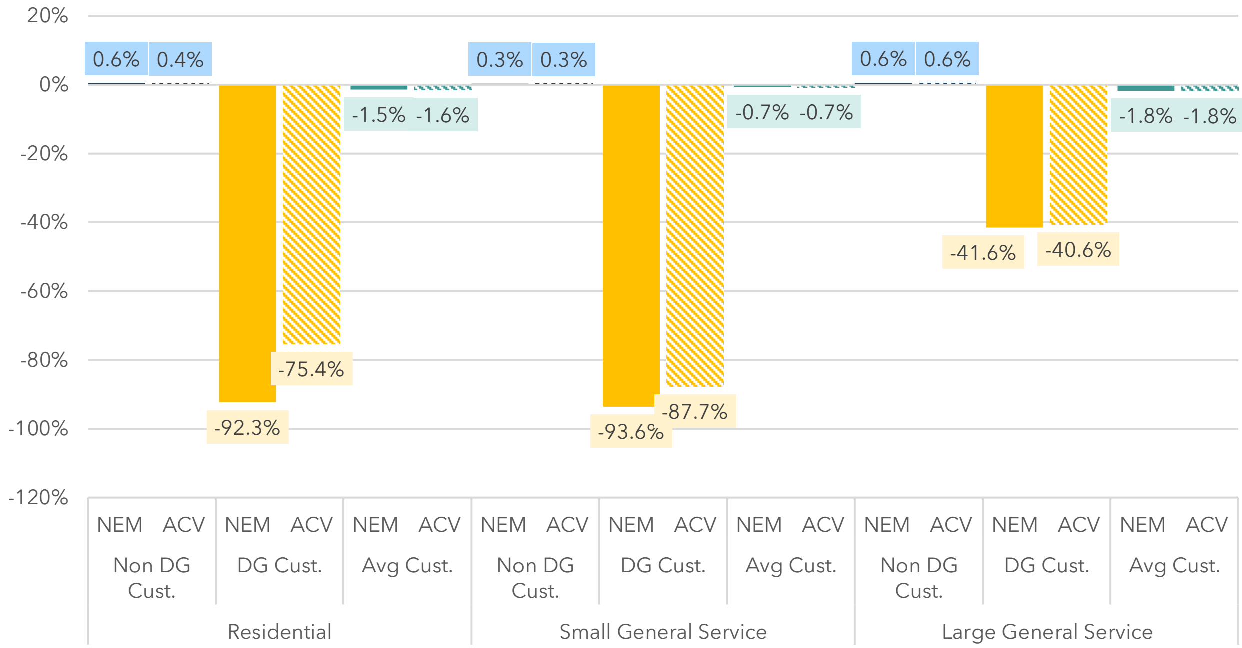
1.3.2.2 – Bill Impacts

A similar trend is observed for bills under the NEM Tariff scenario and the ACV Tariff scenario, where bill impacts do not change significantly for most customers under the two alternative scenarios. Figure 10 below illustrates the findings for customers in Eversource's service territory as an example.[27]

Overall, non-DG customers experience slightly lower bill impacts due to the lower rate impacts under the ACV Tariff scenario, net metered DG customers observe lower bill savings due to the reduced benefits from lower net export credits, while utility customers on average observe slightly higher bill reductions. The following subsections describe the impacts for each of the three representative customer types.

[26] Averaged across the study period
[27] This reflects monthly bills and does not include the costs of installation and ownership solar PV systems.

Figure 10. Bill Impacts[28] Across Rate Classes in Eversource Territory Under ACV and NEM Scenarios (Relative to no-DG Scenario)[29]

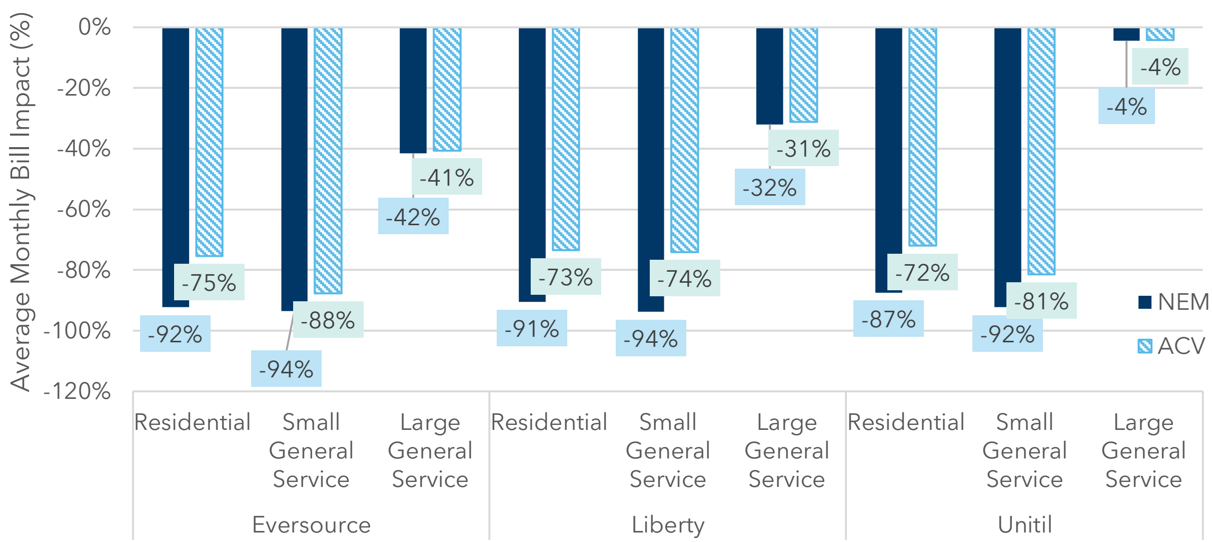


DG Customers

Under the ACV Tariff scenario, most net metered DG customers will experience a reduction in bill savings relative to NEM as a result of the reduced value of net export credits. The impacts will be most prominent in rate classes with high levels of grid exports which makes them more sensitive to changes to net export credits. Specifically, residential customers would experience 72-75% bill savings under ACV as compared to 87-92% bill savings under NEM, an 18% difference in bill savings. Similarly, small general service customers would experience reductions of up to 12% in their average monthly bill savings as compared to their savings under the NEM Tariff scenario. Conversely, large general service customers would experience reductions of up to 4% in their average monthly bills, because of the large share of net metered DG self-consumption assumed for those customers.

[28] The bill impacts do not include the cost of DG installations.
[29] Averaged across the study period

Figure 11. Average Monthly Bill Impact[30] for net metered DG Customer Under NEM and ACV Scenarios (2021-2035)(Relative to no-DG Scenario)[31]

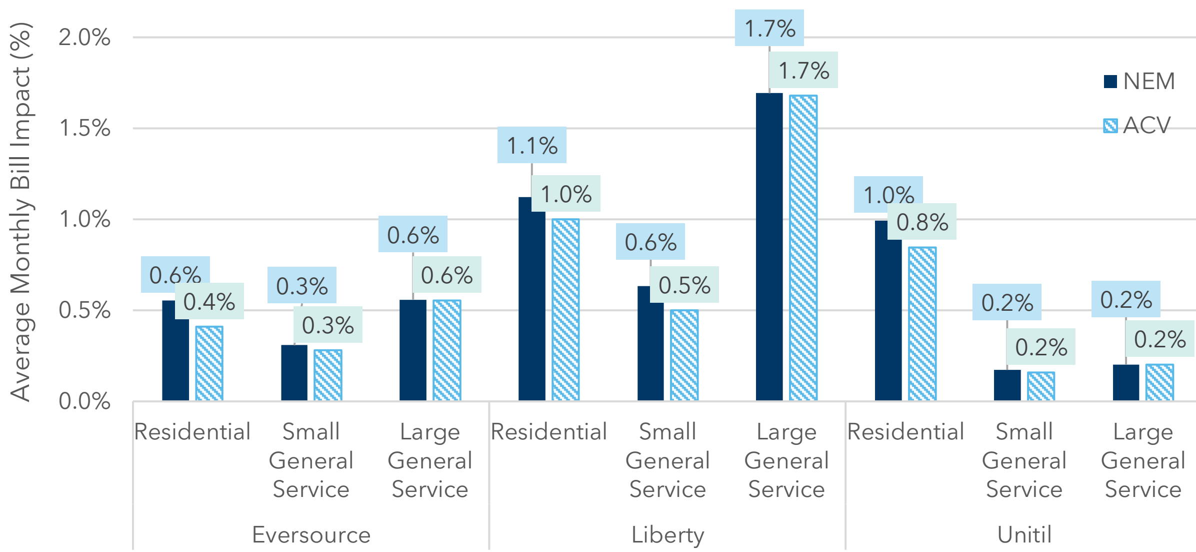


Non-DG Customers

Differences in monthly bills for non-DG customers are insignificant under the ACV Tariff scenario relative to the NEM Tariff scenario. As described above, the differences are primarily observed in residential rate classes that tend to have a higher proportion of net exports, where non-DG customers would benefit from lower rate impacts under the ACV tariff as compared to the NEM scenario, thereby leading to a corresponding reduction in bill impacts.

[30] The bill impacts do not include the cost of DG installations.
[31] Averaged across the study period

Figure 12. Average Monthly Bill Impact for Non-DG Customer (2021-2035)(Relative to no-DG Scenario)[32]

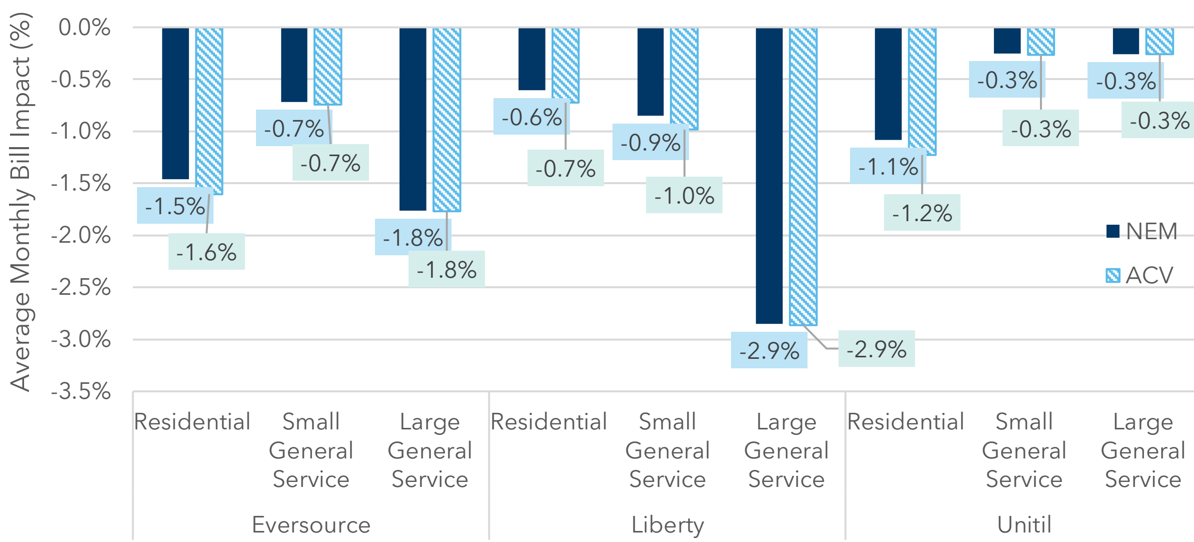


Average Customers

In assessing the bill impacts for an average utility customer under the ACV Tariff scenario relative to the NEM Tariff scenario, we observe insignificant differences in monthly bills for customers across most utilities and rate classes, with slight bill reductions observed for residential and small commercial classes. The impacts and corresponding magnitude of the differences are largely driven by the magnitude of the net exports within a customer class.

[32] ibid

Figure 13. Average Monthly Bill Impact for Average Utility Customer (2021-2035)(Relative to no-DG Scenario)[33]



[33] Averaged across the study period

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