Synapse
Energy Economics, Inc.

October 21, 2021

Karynne Munroe
EfficiencyOne
230 Brownlow Avenue, Suite 300
Dartmouth, NS
B3B 0G5

RE: Comments on 2023-2025 Demand Side Management Resource Plan: Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results

Dear Ms. Munroe:

Synapse Energy Economics, Inc. (Synapse) appreciates the opportunity to submit comments regarding EfficiencyOne's *2023–2025 Demand Side Management Resource Plan: Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results* (Initial Plan), circulated to stakeholders on September 29, 2021 by email and as discussed at the October 5, 2021 DSMAG session. In these comments, we address carbon reduction goals, energy efficiency (EE) investment scenarios, and sector allocations. Within each section, we provide (1) an analysis and findings based on one or more tables and figures, (2) questions and/or requests for more information, and (3) conclusions specific to the section.

Synapse provides these comments as preliminary input on the information provided by EfficiencyOne to date. These comments should not be interpreted as endorsing any aspect of the plan that EfficiencyOne proposes in February, 2022.

CARBON REDUCTION GOALS

The Province of Nova Scotia and the Government of Canada signed an agreement on May 26, 2014, declaring that the provisions of Nova Scotia's Environment Act and Greenhouse Gas Emissions Regulations ("Provincial regulations") are effectively equivalent to those of the 1999 Canadian Environmental Protection Act (CEPA). Under this equivalency agreement, Nova Scotia established limits for electricity sector greenhouse gas (GHG) emissions through 2029. The initial equivalency agreement, which expired on December 31, 2019, was superseded by a renewed agreement between Canada and Nova Scotia for the period January 1, 2020 to December 31, 2024.[1]

In September 2020, the Government of Canada announced its intent to strengthen the criteria that all GHG emissions pricing systems must meet and to increase carbon prices after 2022. For price-based

[1] Government of Canada. "Quantitative analysis of equivalency determination: coal-fired generation of electricity." Modified 2019-12-06. Available at: https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-nova-scotia-greenhouse-gas-electricity-producers-2020/quantitative-analysis-equivalency-determination-final.html.

systems, the Government of Canada is establishing a minimum national price of $65 per tonne of carbon dioxide equivalent (CO2e) emissions in 2023. This minimum price will increase by $15 per year, up to $170 per tonne CO2e in 2030.[2]

Nova Scotia Power's 2020 Integrated Resource Plan (IRP) Reference Plan incorporates and meets the requirements of the renewed equivalency agreement but not the impending more stringent GHG regulations.

Analysis and Findings

Table 1 shows projected new federal emissions limits and existing provincial emissions limits under the equivalency agreement, compared with projected emissions under the IRP Reference Plan (2.0C) in roughly five-year increments from 2022 through 2040. We observe the following:

- The Provincial emissions limits are more constraining in the early years. From 2030 on, the projected Federal emissions limits become more constraining.
- The IRP projects significantly lower emissions than the Provincial or projected Federal limits in all years.

[2] Government of Canada. "Update to the Pan-Canadian Approach to Carbon Pollution Pricing 2023-2030." Modified 2021-08-05. https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/carbon-pollution-pricing-federal-benchmark-information/federal-benchmark-2023-2030.html.

Table 1. Projected Federal and Provincial Emissions Limits Relative to IRP Projected Emissions in MT CO2

	MT CO2				
	2022	2025	2030	2035	2040
Federal Carbon Emission Limits: Electric Sector	7.3	7.2	3.2	3.1	3.0
Provincial Carbon Emission Limits: Electric Sector	6.9	6.0	4.5	3.7	3.5
IRP Carbon Emissions: Scenario 2.0C	4.2	4.1	2.4	2.2	0.7
IRP Carbon Emissions vs. Federal Carbon Emission Limits	-3.1	-3.1	-0.8	-0.9	-2.3
IRP Carbon Emissions vs. Provincial Carbon Emission Limits	-2.7	-1.9	-2.1	-1.5	-2.8

Sources: NSPI. 2021. "AVC CO2 Comparison 2021-03-19.xlsx." a workbook obtained from NSPI on March 22, 2021; Government of Canada. "Quantitative analysis of equivalency determination: coal-fired generation of electricity." Modified 2019-12-06. Available at: https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-nova-scotia-greenhouse-gas-electricity-producers-2020/quantitative-analysis-equivalency-determination-final.html.

QUESTIONS/REQUESTS

Scenarios

1. How does the cost and cost-effectiveness of energy efficiency for the various scenarios compare with other resources that will be used to meet the emission limits?
2. How does the magnitude of energy efficiency savings for the various scenarios compare with other resources that will be used to meet the emission limits?
3. What proportion of emissions reductions is energy efficiency anticipated to represent under the various scenarios?

CONCLUSIONS

Nova Scotia Power will have emissions to trade and will be able to receive revenue from emissions trading, if trading is allowed. In this case, savings from DSM can potentially provide a source of revenue.

EE INVESTMENT SCENARIOS

EfficiencyOne proposes modeling four investment scenarios, sequenced from Scenario 1A (with the highest EE investment and associated energy savings at 1.6 percent of sales) to Scenario 4A (with the lowest EE investment and associated energy savings at 0.7 percent of sales). Three of the four scenarios align with the low (Scenario 4A), base (Scenario 2A), and mid cases (Scenario 1A) in the EE potential study. EfficiencyOne did not include the high case in the EE potential study as a scenario. Scenario 3A aligns with current investments and associated energy savings of roughly 1.0 percent of sales.

Analysis and Findings

Table 2 shows key metrics from the EE investment scenarios presented in the initial plan. We observe the following:

- There is very little difference between the savings as a percent of sales, costs, energy savings, cost of saved energy, and Total Resource Cost test ratios (TRC) with and without carbon for scenarios 2A and 3A.
- The scenarios generally progress from less to more cost effective, with the highest annual cost of saved energy and the lowest TRCs for Scenario 1A and the lowest annual cost of saved energy and the highest TRCs for Scenario 4A.
- Scenario 3A is an anomaly, with a higher cost of saved energy and cost per KT of carbon, as compared to Scenario 2A.
- The avoided cost of carbon represents a significant portion of the benefits (approximately 35 to 40 percent) in all scenarios.

Table 2. Summary of Key Metrics for EE Investment Scenarios

EE Investment Scenarios		Savings % of Sales	Cost ($M)	Annual Energy Savings (GWh)	Lifetime Energy Savings	Average Meas. Life	Demand Savings (MW)	Annual Cost of Saved Energy ($/kWh)	Cost of Demand Savings ($M/MW)	Lifetime Carbon Emiss. Avoided (KT)	Lifetime Avoided Cost of Carbon Emiss. ($M)	Cost per KT of Lifetime Carbon Emiss. Avoided ($/KT)	Benefits with Carbon ($M)	Benefits without Carbon ($M)	TRC with Carbon	TRC without Carbon
2023-2025: Initial Plan	1 A	1.6	342	516	n/a	n/a	100	0.47	3.42	3,692	274	92,645	718	445	2.1	1.3
	2 A	1.2	148	381	n/a	n/a	74	0.34	2.00	2,461	148	60,145	400	252	2.7	1.7
	3 A	1.0	128	349	n/a	n/a	68	0.35	1.88	1,914	128	66,865	358	230	2.8	1.8
	4 A	0.7	65	245	n/a	n/a	44	0.26	1.48	1,663	78	39,077	202	124	3.1	1.9
2020-2022: Forecast		n/a	110	335	n/a	n/a	82	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

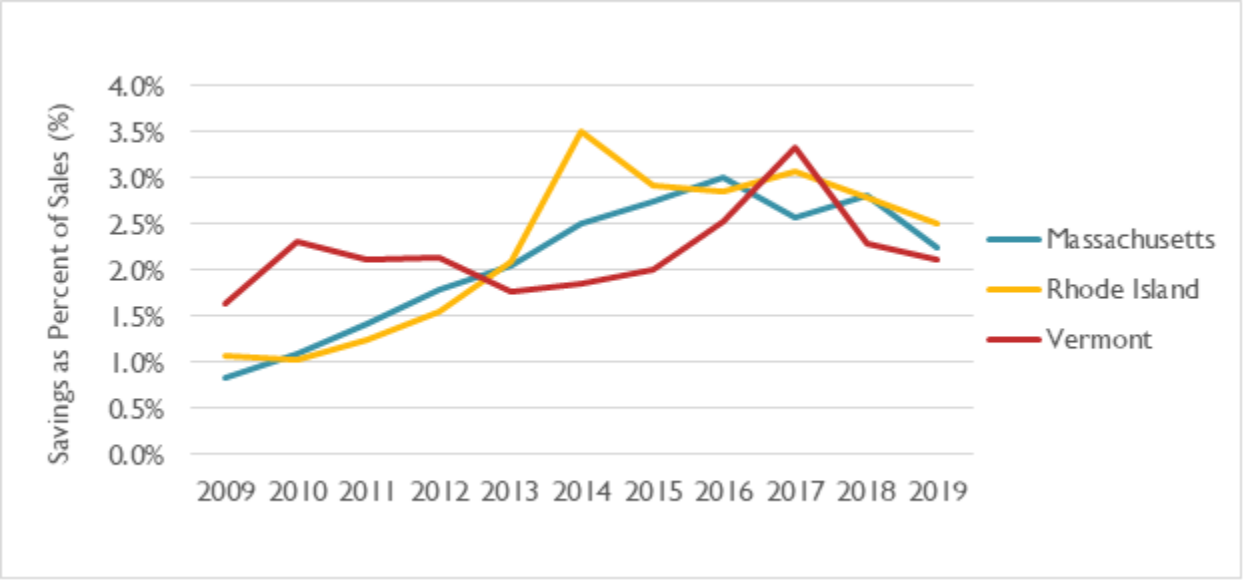
Sources:

1. *Savings % of sales, cost, annual energy savings, demand savings, annual cost of saved energy, lifetime carbon emissions avoided, and TRCs with and without carbon are from EfficiencyOne's 2023-2025 Demand Side Management Resource Plan Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results. Circulated: 29 SEPTEMBER 2021.*
2. *Lifetime avoided cost of carbon emissions, cost per KT of lifetime carbon emissions avoided, and benefits with and without carbon were calculated by Synapse.*

On an annual basis, EfficiencyOne's projected cost of saved energy for all of the scenarios is lower than seen or planned in 2021 in North American jurisdictions leading in energy efficiency achievements. For example, Massachusetts reports an annual cost of $0.61 (USD) per kWh saved for 2021.[3] Likewise, National Grid Rhode Island's 2021-2023 Energy Efficiency and Conservation Procurement Plan forecast an annual cost of saved energy of $0.84 (USD) per kWh saved for 2021.[4] (While a lifetime cost of saved energy is more appropriate for comparisons between jurisdictions, these data were not provided by EfficiencyOne.)

We also note that, savings as a percent of sales in all of EfficiencyOne's scenarios are substantially lower than jurisdictions leading in energy efficiency achievements, including Massachusetts, Rhode Island, and Vermont, as recently as 2019.

Figure 1. Savings as a Percent of Sales for Select States



Source: American Council for an Energy Efficient Economy. State Energy Efficiency Scorecard reports.

[3] MassSave. Electric Costs: As of Q1 2021. Available at: https://www.masssavedata.com/Public/CostToDeliver.

[4] Narragansett Electric Company d/b/a National Grid. Compliance Filing Pursuant to December 22, 2020 Open Meeting. Available at: http://www.ripuc.ri.gov/eventsactions/docket/5076-NGrid-ComplianceFiling%20(PUC%201-29-2021).pdf.

EfficiencyOne included some enhancements to existing programs as well as new initiatives and offerings in the initial modelling exercise. These include Affordable Single-Family Home, Direct Installation, Solar Photovoltaics (Solar PV), Pay-for-Performance, Residential Behavioral, Electrician-Installed Measures in Product Installation, Full-service Applicant Replacements, and Commercial Kitchen Online Rebates. All these potential offerings involve energy conservation or efficiency, except the new initiative for Solar PV.

Table 3 summarizes the enhancements by sector for the EE investment scenarios.

We observe the following:

- There are no residential or low-income enhancements in Scenario 4A.
- Solar PV in both sectors and Appliance Replacements in the residential sector are the first enhancements to be dropped as we proceed from Scenario 1A to 2A.

Table 3. Enhancements by Sector for EE Investment Scenarios

EE Investment Scenarios		RES				LI	BNI			
		Solar PV	Appliance Replacements	Behavioral	Electrician Installed Measures (EPI)	Affordable Single-Family Homes	Solar PV	Small Business Direct Install	Pay for Performance	Kitchen Online Rebates
2023-2025: Initial Plan	1A	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2A			✓	✓	✓		✓	✓	✓
	3A				✓	✓			✓	✓
	4A									✓
2020-2022										

Source: EfficiencyOne. 2023-2025 Demand Side Management Resource Plan Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results. Circulated: 29 SEPTEMBER 2021.

Table 4 shows the summary of key metrics for demand response. We observe the following:

- Demand response investments represent 4 percent of total Scenario 1A investments and 19 percent of total Scenario 4A investments.
- The demand response effort is barely cost-effective with a TRC without carbon of 1.0.

Table 4. Summary of Key Metrics for DR

EE Investment Scenarios		Cost ($M)	Demand Savings (MW)	Cost of Demand Savings ($M/MW)	TRC with Carbon	TRC without Carbon
2023-2025: Initial Plan	1A	15.7	32.1	0.49	n/a	1.0
	2A					
	3A					
	4A					
2020-2022: Forecast		n/a	n/a	n/a	n/a	n/a

Sources:

1. *Cost, demand savings, and TRCs with and without carbon are from EfficiencyOne. 2023-2025 Demand Side Management Resource Plan Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results. Circulated: 29 SEPTEMBER 2021.*
2. *Cost of demand savings calculated by Synapse based on the data in the table.*

We note that the cost of demand savings appears high relative to estimated costs elsewhere. In Table 5, we provide some data on projected and actual demand response program performance in the northeast U.S.

Table 5. Demand Response Program Performance in New York, Massachusetts, and Rhode Island

Utility	State	Year	Program name	MW reduction	Expenditures ($M)	$M/ MW
Residential DR programs						
National Grid	NY	2020	Residential Direct Load Control	10.2	$0.57	$0.06
ConEdison	NY	2020	Residential Direct Load Control	24.0	$1.25	$0.05
Eversource	MA	2020	Residential Active Demand Response	12.1	$1.75	$0.14
National Grid	MA	2020	Residential Active Demand Response	14.4	$1.72	$0.12
National Grid	RI	2021	Residential Active Demand Response	5.7	$1.96	$0.34
Commercial DR programs						
National Grid	NY	2020	Commercial System Relief	241.0	$3.92	$0.02
ConEdison	NY	2020	Commercial System Relief	346.0	$23.37	$0.07
Eversource	MA	2020	Commercial Active Demand Response	46.6	$3.87	$0.08
National Grid	MA	2020	Commercial Active Demand Response	47.4	$4.97	$0.10
National Grid	RI	2021	Commercial Active Demand Response	33.6	$2.99	$0.09

Sources:

1. *National Grid. 2020. Program Performance and Cost Effectiveness of Dynamic Load Management Programs. Available at: https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=14-E-0423*
2. *Central Hudson. 2020. Central Hudson Gas & Electric Corporation's Dynamic Load Management Programs Annual Report. Available at: https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=14-E-0423*
3. *ConEdison. 2020. Report on Program Performance and Cost Effectiveness of Demand Response Programs - 2020. Available at: https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=14-E-0423*
4. *Eversource. 2021. 2020 Energy Efficiency Plan-Year. Available at: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/13620787*
5. *National Grid. 2021. 2020 Energy Efficiency Plan-Year Report. Available at: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/13618214*
6. *National Grid. 2021. Annual Energy Efficiency Plan for 2022. http://www.ripuc.ri.gov/eventsactions/docket/5189-NGrid-Energy%20Efficiency%20Plan%202022%20(PUC%2010-1-21).pdf.*

QUESTIONS/REQUESTS

Scenarios

1. In general, we request more information on how the modeling for each scenario considers cost effectiveness and the levels of historical annual savings and investments for each program, as it is not apparent from the description of the initial plan scenarios.
2. Please describe why Scenario 3A has a higher cost of saved energy than 2A but is more cost-effective.
3. With the next model run, please provide lifetime savings for each scenario by program.

Enhancements

4. Please identify the program or programs affected by each enhancement.
5. Please provide the cost, annual energy savings, annual cost of saved energy in $/kWh, lifetime cost of saved energy in $/kWh, and cost-effectiveness through a TRC with and without carbon for each enhancement.
6. Please describe how EfficiencyOne prioritized the enhancements.
7. Please provide more clarity on the rationale for EfficiencyOne proposing solar PV programs within the portfolio of ratepayer-funded programs.
8. Please break out solar PV in BNI as it was done for RES and provide a subtotal for the BNI and RES investments.
9. Please describe the sources and assumptions about solar PV generation and related system costs. Also, please provide the historical annual production from solar PV net metering customers over the past three years.
10. EfficiencyOne stated that DR is largely informed by Guidehouse's experience. We ask that Guidehouse identify the programs considered to be the best models for programs in NS and explain why. A summary of NSPI's proposed DR effort including expected ramp-up time, end-uses and customer segments targeted, and savings levels and cost estimates by year and by type of DR program is needed to understand how EfficiencyOne's DR programs will function and be received.
11. Please provide more information about the end-uses and customer segments that EfficiencyOne would target with DR, and savings impacts and cost estimates by year as well as by type of DR program. Please also indicate the measure life of the DR program.
12. Please share the results of the Direct Load Control water heater pilot, and any other relevant pilots, with the DSMAG.
13. Does EfficiencyOne need to offer additional incentives in years after the first year of DR participation to maintain the same peak load reduction?
14. EfficiencyOne noted that the lighting transformation is underway in the residential sector, but the details of this transformation were not provided in the data for the initial plan scenarios. In the next version of this plan, please break out each of the three years

in the plan. Please also provide detail on the portion of savings represented by lighting and HVAC in each year of the plan.

Conclusions

We generally do not feel that Scenario 3A is helpful. It is very similar to Scenario 2A and inconsistent with the other scenarios. We still feel that a scenario aligned with the high case in the EE potential study would provide a more balanced perspective.

We request that solar be treated consistently and as an optional add on for all scenarios. First, we are concerned that the investments in solar are supplanting other investments in EE potential that are more cost-effective. It appears that the potential study did not include solar PV (only solar hot water), in which case inclusion of solar PV may be displacing EE resources identified in that study. Second, we are not sure that an EE investment plan should include solar at all. There are reasons why EfficiencyOne would be a fitting choice to administer a distributed solar program: EfficiencyOne has experience with administering the current SolarHomes program, and pairing solar with efficiency services could allow efficiencies in coordination of services. However, using ratepayer funding to support distributed solar gives rise to issues that are distinct from those associated with energy efficiency programs. Breaking it out separately would allow stakeholders to discuss whether to include it.

Sector Allocations

EfficiencyOne indicated that costs and benefits are split between residential (RES) and business, non-profit, and industrial programs (BNI). Although not a distinct sector from RES and BNI, EfficiencyOne also proposed an allocation for Low income (LI) investments. EfficiencyOne applied the following design objectives to all EE scenarios for the initial model run:

- Investment in LI: 20 to 25 percent of total energy efficiency portfolio investment
- Investment split: 50 percent RES programs and 50% BNI programs
- Energy Savings split: 40 percent RES and 60 percent BNI programs

Analysis and Findings

Table 6 shows the costs by sector for the EE investment scenarios. We observe that Scenario 4A has a very different investment allocation by sector as compared to the other scenarios, with a lower contribution to RES and LI programs and a higher contribution to BNI. For example:

- The Scenario 4A investment in RES programs is 31 percent of the total investment versus 35 to 37 percent of the total for Scenarios 1A, 2A, and 3A.
- The Scenario 4A LI program investment is 10 percent of the total investment versus 16 to 18 percent of the total for Scenarios 1A, 2A, and 3A.
- The investment in BNI in Scenario 4A is 58 percent of the total investment versus 46 to 47 percent of the total for Scenarios 1A, 2A, and 3A.

Table 6. Costs by Sector for EE Investment Scenarios

EE Investment Scenarios		RES Cost ($M)	LI Cost ($M)	BNI Cost ($M)	Total Cost ($M)	RES % of Total Cost	LI % of Cost	BNI % of Total Cost
2023-2025: Initial Plan	1A	89.9	37.5	113.2	240.6	37	16	47
	2A	46.3	24.0	61.9	132.2	35	18	47
	3A	44.4	20.9	55.3	120.6	37	17	46
	4A	18.5	6.1	34.4	59.0	31	10	58
2020-2022: Forecast		n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sources:

1. *RES, LI, BNI and total costs from EfficiencyOne. 2023-2025 Demand Side Management Resource Plan Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results. Circulated: 29 SEPTEMBER 2021.*
2. *Percent of total costs by sector calculated by Synapse.*

Notes: We assume that the following programs are LI programs: Affordable Multi-Family Housing, MHEEP, and Affordable Single-Family Housing. We then recalculate Residential to represent non-low income by subtracting the LI programs from the Residential sector program totals.

Table 7 shows the savings and the cost of saved energy by sector for the EE investment scenarios. We observe that:

- LI percent of total energy savings is relatively low in all scenarios, at 2 to 5 percent.
- LI investments are three to seven times as costly as RES and BNI investments. However, these investments are necessary for improving equity and provide significant participant energy savings and energy cost savings for customers with the greatest need for these benefits. These investments will also provide significant non-energy benefits (e.g., reductions in missed days from work and school, and improved productivity), which are not accounted for in the TRC in Nova Scotia.

- The lower Scenario 4A RES and LI investments are not as cost-effective as the higher levels of RES and LI investment in Scenario 2A, based on the cost of saved energy.

Table 7. Savings and Cost of Saved Energy by Sector for EE Investment Scenarios

EE Investment Scenarios		RES Annual Savings (GWh)	LI Annual Savings (GWh)	BNI Annual Savings (GWh)	RES % of Total Savings	LI % of Total Savings	BNI % of Total Savings	RES Cost of Saved Energy ($/kWh)	LI Cost of Saved Energy ($/kWh)	BNI Cost of Saved Energy ($/kWh)
2023-2025: Initial Plan	1A	207	25	283	40	5	55	0.43	1.50	0.40
	2A	138	16	231	36	4	60	0.34	1.46	0.27
	3A	108	14	226	31	4	65	0.41	1.45	0.25
	4A	52	4	170	23	2	75	0.36	1.53	0.20
2020-2022: Forecast		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sources:

1. *RES, LI, BNI, and total annual savings from EfficiencyOne. 2023-2025 Demand Side Management Resource Plan Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results. Circulated: 29 SEPTEMBER 2021.*
2. *Percent of total savings and cost of saved energy by sector calculated by Synapse based on the data in this table and in the prior table.*

Notes: We assume that the following programs are LI programs: Affordable Multi-Family Housing, MHEEP, and Affordable Single-Family Housing. We then recalculate Residential to represent non-low income by subtracting the LI programs from the Residential sector program totals.

Table 8 shows the costs, annual energy savings, cost of saved energy, and TRC with and without carbon by LI program. We observe the following:

- The Affordable Single-Family Housing program represents most of the LI sector investment in Scenarios 1A, 2A, and 3A and none of the LI sector investment in Scenario 4A. This program is also the most cost-effective LI program with the highest TRCs.
- The MHEEP program represents a small percentage of the LI sector investment in all scenarios and is not cost effective in any scenario, with TRCs with and without carbon below 1.0.[5] The program also has the highest cost of saved energy of the LI programs.
- Affordable Multi-Family Housing also represents a small percentage of the LI sector investment in Scenarios 1A, 2A, and 3A and an even smaller percentage in Scenario 4A. The program is slightly cost effective in Scenarios 1A and 2A and more cost effective in Scenarios 3A and 4A. This program has the lowest cost of saved energy of the LI programs.

[5] While Non-energy Benefits are not included in the TRC, it is worth noting that these benefits are likely substantial for low income programs.

Table 8. Costs by LI Program

EE Investment Scenarios		Affordable Multi-Family Housing					MHEEP					Affordable Single-Family Housing				
		Costs ($M)	Annual Energy Savings (GWh)	Cost of Saved Energy ($kWh)	TRC with carbon	TRC without carbon	Costs ($M)	Annual Energy Savings (GWh)	Cost of Saved Energy ($kWh)	TRC with carbon	TRC without carbon	Costs ($M)	Annual Energy Savings (GWh)	Cost of Saved Energy ($kWh)	TRC with carbon	TRC without carbon
2023-2025: Initial Plan	1A	3.0	4.5	0.67	1.1	0.7	4.5	1.4	3.21	0.7	0.4	30.0	19.1	1.57	1.6	1.0
	2A	3.0	4.5	0.67	1.1	0.7	4.5	1.4	3.21	0.7	0.4	16.5	10.5	1.57	1.6	1.0
	3A	3.0	4.5	0.67	1.7	1.1	4.5	1.4	3.21	0.7	0.4	13.4	8.5	1.58	1.7	1.0
	4A	1.6	2.6	0.62	1.7	1.1	4.5	1.4	3.21	0.7	0.4	0.0	0.0	n/a	n/a	n/a
2020-2022: Forecast		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sources:

1. *Costs, annual energy savings, and TRCs with and without carbon by program from EfficiencyOne. 2023-2025 Demand Side Management Resource Plan Updated DSM Portfolio Scenarios Plan & Initial Model Input Assumptions and Results. Circulated: 29 SEPTEMBER 2021.*
2. *Cost of saved energy by program calculated by Synapse based on the data in this table.*

QUESTIONS/REQUESTS

1. EfficiencyOne stated that 25 percent of its investments are directed to LI customers. Please describe how the 25 percent is calculated and which program(s) contain the remaining 10 to 15 percent of the investment dollars. (See Table 6, which shows that LI investments in Affordable Multi-Family Housing, MHEEP, and Affordable Single-Family Housing make up 10 to 18 percent of total investments.)

2. Please explain what the sector allocations are based on. For example, are the sector allocations related to the potential in each sector? Please explain how the modeling for each scenario incorporates constraints (including LI investment and investment and savings splits between RES & BNI sectors). Also, please indicate if and how the number of LI customers or LI participants in the existing EE programs to date are used to develop LI investment and savings targets.

3. The sector breakout for Scenario 4A differs significantly from the other scenarios. For example, Scenario 4A features a significantly lower LI investment and annual energy savings but a higher cost of saved energy. Further, the most cost-effective LI enhancement from a TRC perspective is not included in Scenario 4A. And, Scenario 4A has a significantly lower investment in the Affordable Multi-Family Housing programs, as compared to all other scenarios. We request additional information on how this scenario was developed, the rationale for the choices made in the development of the scenario, and why the results differ as they do.

4. Please describe the MHEEP program and explain why this program is not cost effective in any scenario.

5. Please explain why Affordable Multi-Family Housing has higher TRCs in Scenarios 3A and 4A than in Scenarios 1A and 2A.

CONCLUSIONS

1. Increased attention to LI customers, in the form of higher investment and higher savings, appears to be appropriate. We encourage EfficiencyOne to establish minimum LI investment and savings targets that are reflected in all scenarios.

    - In addition to the spending target, we ask EfficiencyOne to consider and develop energy savings goals for the LI customer segment. Adding a savings target will encourage the programs to produce bill savings, which put downward pressure on energy burdens for these customers. The spending target is likely still needed, and may need to be increased even further, to address the greater need for minor repairs and health and safety measures for LI customers.

    - We do not understand why the Affordable Single-Family and Multi-Family Housing programs are being treated as an enhancement. It seems that these programs could be an essential component of the DSM portfolio in all scenarios, to improve equity.

We thank the DSMAG for the opportunity to ask these questions and provide these comments. We reiterate that these comments should not be interpreted as endorsing any aspect of the plan that EfficiencyOne proposes in February, 2022.

Sincerely,

Alice Napoleon, Principal Associate

Jennifer Kallay, Senior Associate

Kenji Takahashi, Senior Associate