

ERRATA

*to EfficiencyOne 2023-2025 DSM Resource Plan Application filed with the
Nova Scotia Utility and Review Board on March 11, 2022*

1. Appendix A, Page 40 of 149, Table 9: redline and corrected page is attached.
2. Appendix A, Page 82 of 149, Table 31: redline and corrected page is attached.
3. Appendix A, Page 84 of 149, Table 33: redline and corrected page is attached.
4. Appendix A, Attachment 5, Page 9 of 58, Figure 3: updated to match the cost data in Table 2. Redline and corrected page is attached.
5. Appendix A, Attachment 5, Page 28 of 58, Figure 14: updated to match the cost data in Table 12. Redline and corrected page is attached.

EfficiencyOne 2023-2025 DSM Resource Plan

Appendix A

1 Table 9: 2023-2025 Settlement Plan Investment and Savings, by Program Component

2023-2025	Investment ^a (\$ million)	Lifetime Benefits ^b (\$ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak EE Demand Savings (MW)	Available DR Capacity (MW)	Total Resource Cost Test (TRC) ^c		Program Administrator Cost Test (PAC) ^d	
							incl. carbon	excl. carbon	incl. carbon	excl. carbon
							Residential (Res) Energy Efficiency (EE) Programs			
Efficient Product Rebates	14.1	30.8	32.3	279.0	3.5	-	1.1	0.7	2.2	1.4
Appliance Retirement	3.1	2.0	3.7	15	0.5		1.1 0.9	0.6	0.6	0.4
Instant Savings	11.0	28.8	28.6	264	2.9		1.1	0.7	2.6	1.7
Existing Residential	67.0	163.0	156.7	1,292	30.7	-	1.4 1.5	1.0 1.1	2.6 2.4	1.9 1.8
Efficient Product Installation	10.6	24.3	36.2	220	4.9		1.9 2.3	1.3 1.5	1.9 2.3	1.3 1.5
Affordable Multi-family Housing	4.0	11.6	5.6	102	1.7		1.2	0.9	2.9	2.1
Home Energy Assessment	11.7	66.9	25.7	515	13.0		2.0	1.6	5.7	4.4
Green Heat	6.7	29.7	10.7	193	8.2		1.5	1.2	4.4	3.5
Mi'kmaw Home Energy Efficiency Project	3.7	3.3	1.6	30	0.5		0.7 0.9	0.5 0.6	0.9	0.6
Affordable Single-Family Homes	24.7	18.0	8.6	164	2.5		0.5 0.7	0.4 0.5	0.7	0.5
Residential Behaviour	5.5	9.3	68.2	68	0.0		1.5 1.7	0.8 0.9	1.5 1.7	0.8 0.9
New Residential	0.8	3.9	0.4	13	1.3	-	2.6	2.4	4.8	4.4
Low-Income Participation ^e	35.2	42.8	36.5	384	6.5		1.0	0.7	1.2	0.8
Res EE Programs Total	81.9	197.8	189.4	1,584	35.4	-	1.4 1.5	1.0	2.5 2.4	1.8 1.7
Business, Non-Profit & Institutional (BNI) Energy Efficiency (EE) Programs										
Efficient Product Rebates	23.2	174.3	109.1	1,623	20.6	-	3.7	2.5	7.5	5.1
Custom Incentives	25.2	109.1	77.5	940	15.2	-	2.5	1.7	4.3	2.9
Custom	22.4	107.0	69.5	925	14.3		2.6	1.8	4.8	3.2
Strategic Energy Management & Energy Management Information Systems	2.8	2.1	8.0	15	0.9		0.9	0.5	0.8	0.4
Direct Installation	19.8	58.8	36.7	533	7.6	-	2.2	1.5	3.0	2.0
Low-Income Participation ^e	0.6	4.7	2.9	43	0.8		2.8	1.9	7.6	5.2
BNI EE Programs Subtotal	68.2	342.2	223.3	3,097	43.4	-	2.9	2.0	5.0	3.4
Total EE Programs	150.2	539.9	412.7	4,681	78.8	-				
Enabling Strategies (ES)										
Education & Outreach	4.4									
Development & Research	4.5									
Other Enabling Strategies	4.1									
Total ES	12.9									
EE Portfolio Total (EE + ES)	163.0	539.9	412.7	4,681	78.8	-	2.0	1.4	3.3	2.3
Demand Response (DR) Program										
Residential Demand Response	5.5					7.1		0.8		0.6
BNI Demand Response	4.6					10.7		2.7		0.8
DR Program Total	10.0	2.9	-	-	-	17.9		1.1		0.7
DSM Portfolio Total (EE + ES + DR)	173.0	542.8	412.7	4,681	78.8	17.9	2.0	1.4	2.9	2.0

2 Currency is expressed in nominal dollars. Currency in the total row is a straight sum of 3 years of nominal values. Columns may
3 not add correctly, due to rounding.

4 Annual avoided costs of energy and capacity and annual avoided CO₂e emissions were provided by NS Power, from the 2020 IRP
5 using the Base level of DSM for Scenario 2.0C. Avoided costs of transmission and distribution were provided by NS Power in 2021.
6 Cost-effectiveness ratios in the total row are calculated using 2023 present values of each year's costs and lifetime benefits.

7 ^a Investment for DR includes only E1's required investment for the Settlement Plan. It is recognized that in order for DR benefits
8 to be realized, NS Power collaboration and investment will also be required. This may include investment for staff resource, event
9 calling by the system operator, and Distributed Energy Resources Management System (DERMS) integration.

10 ^b Lifetime benefits for EE are expressed as the net present value of the avoided costs, including energy, capacity, transmission,
11 distribution, and carbon over the life of the program measures, using utility WACC. For DR, lifetime benefits are expressed as the
12 avoided costs, including capacity, transmission, and distribution, resulting from operating DR in 2023-2025 (three years of
13 benefits).

14 ^c TRC is a benefit/cost ratio comparing lifetime benefits to the sum of E1's and participants' costs. For DR, 10-year lifetime costs
15 and benefits are taken to include the expected full program life. TRC excluding carbon is provided for informational purposes
16 only.

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4.2.3.2 MARKETING STRATEGY

The Existing Residential program marketing strategy will deliver integrated marketing campaigns by program component and market segment (e.g. home renovation, low-income, seniors), with a focus on providing more access to virtual education and support. E1's strategy will prioritize direct email marketing, as it is a highly cost-effective way to tailor communications to target market segments and is the preferred method of communication by both residents and businesses. E1 will continue to collaborate closely with its creative, digital, and media agency partners, EPP network members, and its program delivery agents to reach target markets and deliver effective program information and support. Specific tactics will include:

- contractor education and training;
- Delivery Agent education and training;
- industry event attendance and promotion;
- integrated media plans that include radio, TV, billboards, social media, streaming, search engine marketing, email marketing, events, and partnerships;
- in-store promotion and events;
- leveraging strategic partnerships; and
- community outreach and events.

4.2.3.3 QUALITY ASSURANCE

The Existing Residential program has an established quality assurance framework inclusive of random and targeted site visits, energy model file reviews and rebuilds, documentation review, and customer surveys.

4.2.4 PERFORMANCE INDICATORS

Performance indicators for the Existing Residential program are provided in Table 31, below.

Table 31: 2023-2025 Existing Residential Performance Indicators

Year	Investment (\$ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC) ^a		Program Administrator Cost Test (PAC) ^b		Participation (products) ^c	Participation (homes) ^d	Participation (projects) ^e	Lifetime Unit Cost (\$/kWh) ^f
					incl. carbon	excl. carbon	incl. carbon	excl. carbon				
2023	20.9	37.3	403	10.3	1.5	1.1	2.4	1.7	239,998	40,633	42	0.05
2024	22.5	58.8	433	10.2	1.6	1.1	2.5	1.8	225,492	133,818	42	0.05
2025	23.6	60.6	456	10.2	1.6	1.2	2.5	1.8	218,261	133,818	42	0.05
Total	67.0	156.7	1,292	30.7	1-41.5	1-01.1	2-62.4	1-91.8	683,752	308,268	125	0.05

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EfficiencyOne 2023-2025 DSM Resource Plan

Appendix A

Table 33: 2023-2025 Existing Residential Performance Indicators – Comparison of Settlement Plan and Alternate Scenario

Scenario	Year	Investment (\$ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC) ^a		Program Administrator Cost Test (PAC) ^b		Participation (products) ^c	Participation (homes) ^d	Participation (projects) ^e	Lifetime Unit Cost (\$/kWh) ^f
						incl. Carbon	excl. Carbon	incl. Carbon	excl. Carbon				
Settlement	2023	20.9	37.3	403	10.3	1.5	1.1	2.4	1.7	239,998	40,633	42	0.05
	2024	22.5	58.8	433	10.2	1.6	1.1	2.5	1.8	225,492	133,818	42	0.05
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	Total	67.0	156.7	1,292	30.7	1.4	1.1	2.6	1.8	683,752	308,268	125	0.05
Alternate	2023	17.9	30.1	359	9.6	1.5	1.1	2.5	1.9	167,667	30,607	42	0.05
	2024	18.8	45.6	374	9.5	1.5	1.1	2.6	1.9	154,118	100,849	42	0.05
	2025	19.0	45.3	374	9.5	1.5	1.1	2.6	2.0	140,567	100,849	42	0.05
	Total	55.6	121.0	1,107	28.6	1.5	1.1	2.6	1.9	462,353	232,305	125	0.05
Variance from Settlement	2023	(15%)	(19%)	(11%)	(7%)	(0%)	1%	6%	7%	(30%)	(25%)	0%	(4%)
	2024	(16%)	(22%)	(14%)	(7%)	(2%)	0%	5%	7%	(32%)	(25%)	0%	(3%)
	2025	(20%)	(25%)	(18%)	(7%)	(3%)	(1%)	5%	8%	(36%)	(25%)	0%	(2%)
	Total	(17%)	(23%)	(14%)	(7%)	3%	0%	6%	10%	(32%)	(25%)	0%	(3%)

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^d The number of households completing upgrades through Home Energy Assessment, Affordable Single-family Homes, Affordable Multi-family Housing & Non-Profit Organizations, and Mi'kmaw Home Energy Efficiency Project.

^e The number of projects completing upgrades through the Affordable Multi-family Housing & Non-Profit Organizations program component.

^f Lifetime unit cost is the quotient of lifetime energy savings and investment.

7.3 NEW RESIDENTIAL PROGRAM

7.3.1 OVERVIEW

The New Residential program provides residential home builders and new home market entrants access to technical assistance and financial incentives for the installation of energy efficiency upgrades during the design and early construction phases. The program consists of one program component, New Home Construction, which is further described in the section that follows. In the Settlement Plan, E1 will wind down activities in its New Residential program and refocus its support of new residential markets through the development of a market transformation approach. This approach is further described in Enabling Strategies under Section 7.

Table 33: 2023-2025 Existing Residential Performance Indicators – Comparison of Settlement Plan and Alternate Scenario

Scenario	Year	Investment (\$ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC) ^a		Program Administrator Cost Test (PAC) ^b		Participation (products) ^c	Participation (homes) ^d	Participation (projects) ^e	Lifetime Unit Cost (\$/kWh) ^f
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^d The number of households completing upgrades through Home Energy Assessment, Affordable Single-family Homes, Affordable Multi-family Housing & Non-Profit Organizations, and Mi'kmaw Home Energy Efficiency Project.

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EfficiencyOne Demand Response Roadmap

Figure 3. Supply Curve of DR Options for Preferred Plan

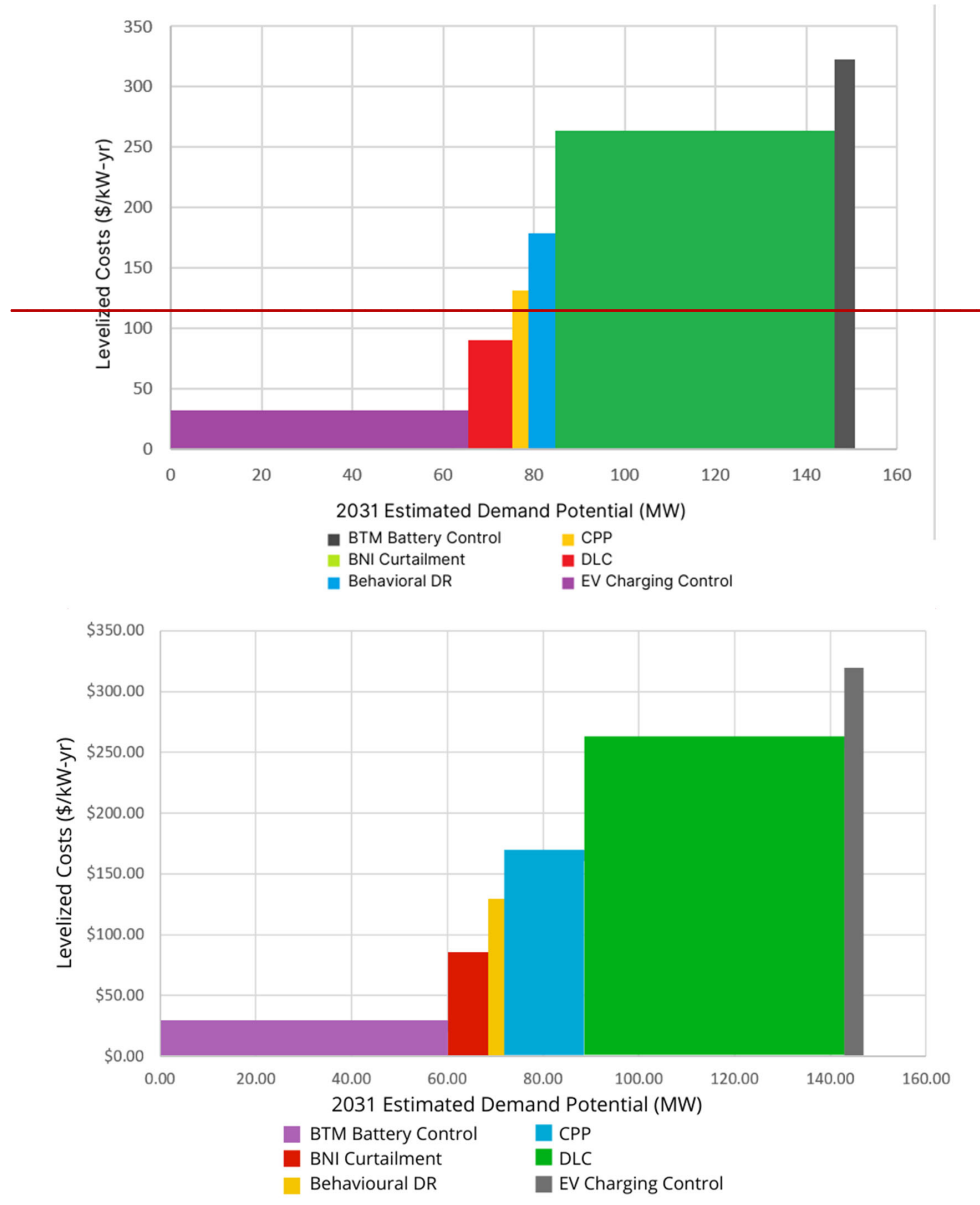


Table 2 and Table 3 show the Net Present Value (NPV) of the benefits and costs, the TRC benefit-cost ratios, and TRC levelized costs, ordered by DR option from highest to lowest benefit-cost ratio for the Preferred Plan and Alternate Scenario, respectively. The TRC benefit-cost ratio is lower and the levelized costs are higher for the Alternate Scenario than the Preferred Plan since the fixed program costs are allocated over fewer participants in the Alternate Scenario when compared with the Preferred Plan (the Alternate Scenario assumes



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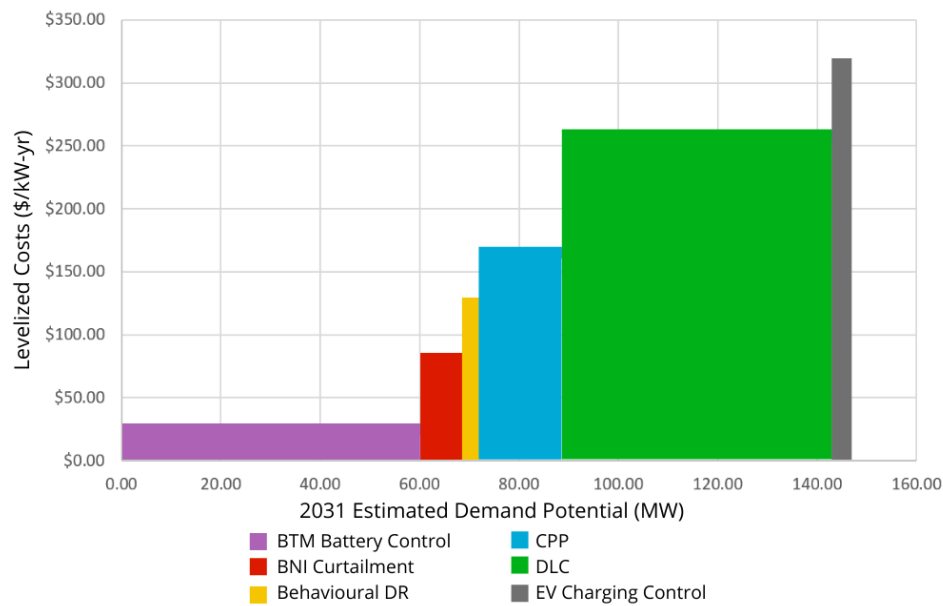


Table 2 and Table 3 show the Net Present Value (NPV) of the benefits and costs, the TRC benefit-cost ratios, and TRC levelized costs, ordered by DR option from highest to lowest benefit-cost ratio for the Preferred Plan and Alternate Scenario, respectively. The TRC benefit-cost ratio is lower and the levelized costs are higher for the Alternate Scenario than the Preferred Plan since the fixed program costs are allocated over fewer participants in the Alternate Scenario when compared with the Preferred Plan (the Alternate Scenario assumes lower participation than the Preferred Plan). The Alternate Scenario does not EV Charging Control, and Behavioural DR; therefore, these options do not appear in Table 3.

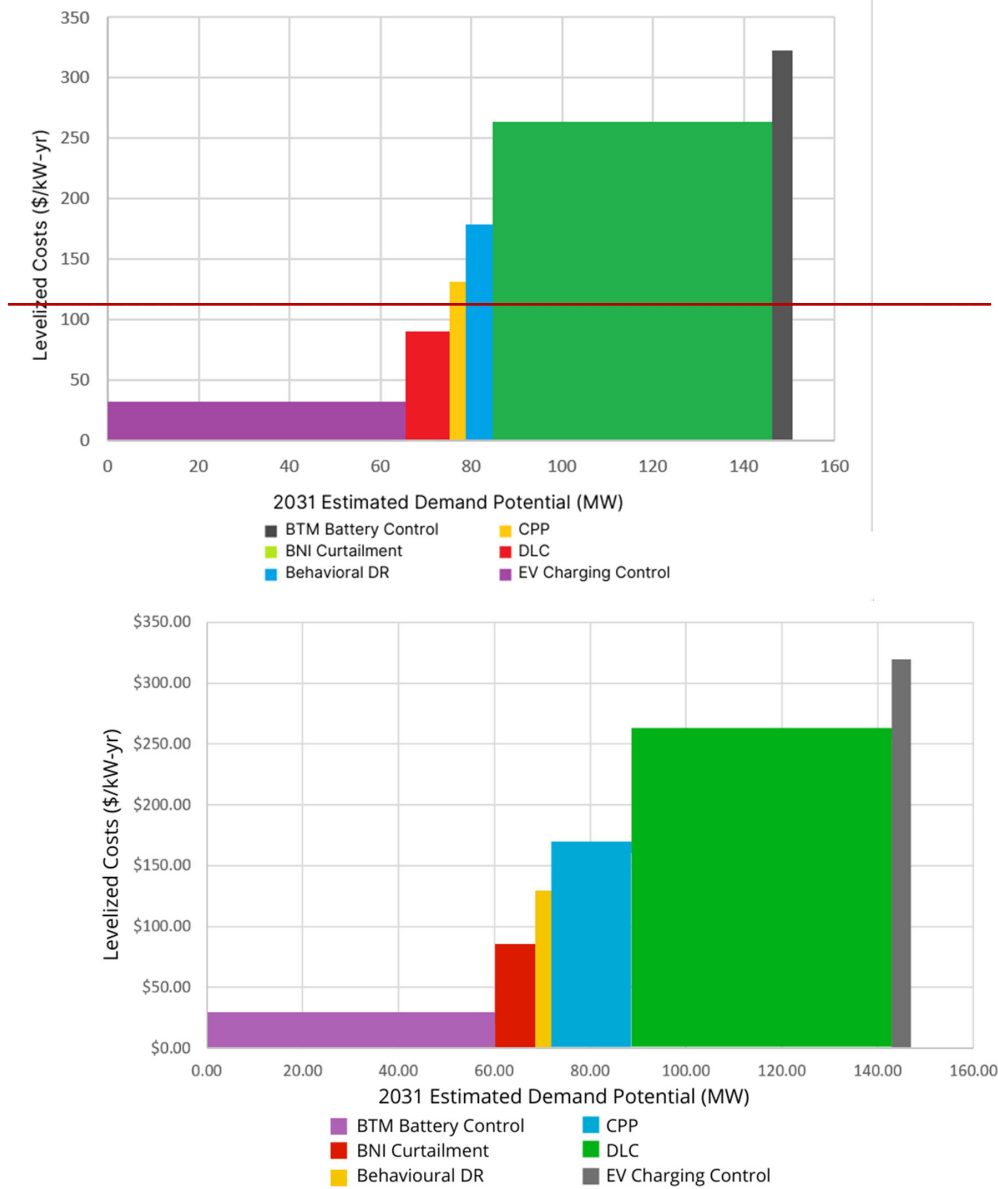
Table 2. NPV Benefits, Costs, and Benefit-Cost Ratios by DR Option for Preferred Plan

DR Option	NPV of Benefits 2021-2030 (\$ million)	NPV of Costs 2021-2030 (\$ million)	TRC Benefit-Cost Ratio	TRC Levelized Costs (\$/kW-yr.)
BTM Battery Control	\$19.37	\$3.05	6.35	\$24.72
BNI Curtailment	\$6.99	\$4.33	1.61	\$81.37
Behavioural DR	\$1.54	\$1.31	1.18	\$124.67
CPP	\$7.86	\$8.40	0.94	\$165.11
DLC	\$20.70	\$33.56	0.62	\$258.05
EV Charging Control	\$0.79	\$1.48	0.53	\$314.75
Total DR Portfolio	\$57.26	\$52.14	1.10	\$139.54



EfficiencyOne Demand Response Roadmap

Figure 14. Supply Curve of DR Options for Preferred Plan

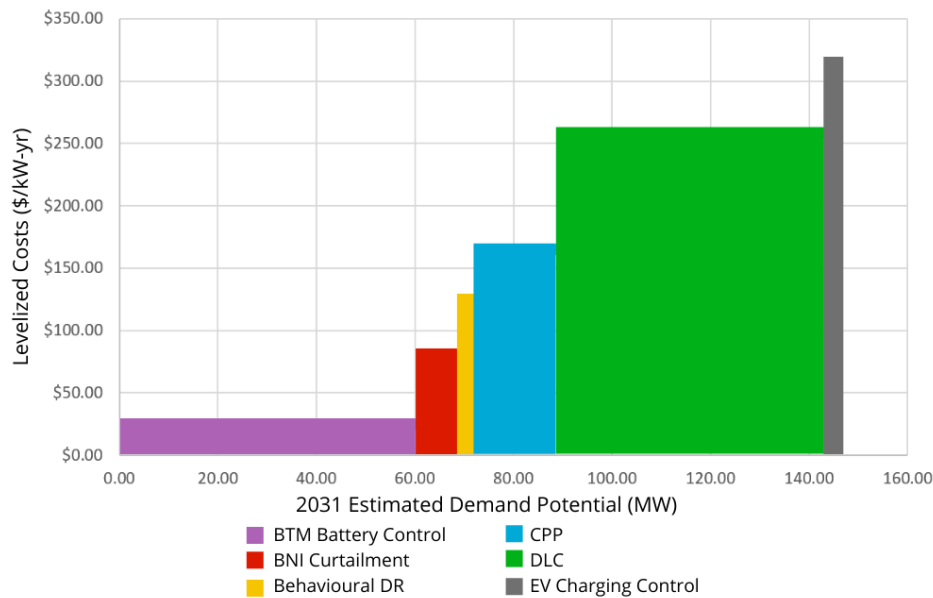


BTM battery control is the least cost option and provides around 65 MW of peak demand savings in 2031. DLC (including both Bring Your Own and Direct Install options) has the next highest contribution in savings at 62 MW in 2031 but is the second most expensive option after EV charging control. Third highest contribution is from BNI Curtailment at around 10 MW peak demand savings in 2030 and it ranks second to BTM battery control in terms of ascending levelized costs. Other DR options have relatively small contribution. The savings from CPP are



EfficiencyOne Demand Response Roadmap

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