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Lansing Board of Water and Light

Energy Optimization Plan

2026-2029

Program Descriptions



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1 INTRODUCTION

The Lansing Board of Water and Light (BWL) is proud to offer the following 2026-2029 Energy Optimization (EO) Plan that includes both Energy Waste Reduction (EWR) programs and Efficient Electrification (EFEL) Programs for all residential and commercial BWL customers. BWL’s proposed EWR programs focus on energy efficiency savings from major electricity using devices such as cooling, heating, lighting, appliances, building and energy management systems, and high use commercial and industrial equipment. In addition, BWL includes an Efficient Electrification Plan to help further advance BWL’s carbon neutrality goals. Table 1 outlines BWL’s Energy Optimization Plan high level savings targets, budgets and key metrics.

Table 1. Summary of BWL’s 2026-2029 Energy Optimization Portfolio Savings Targets, Budgets & Key Metrics

Energy Optimization (EO) Portfolio		2026	2027	2028	2029	Plan Total (2026-2029)
MWh Savings (Gross Annual)	EWR Programs	31,784	35,538	37,501	38,558	143,380
	EFEL Programs	820	1,003	1,239	1,422	4,484
	EO Portfolio Total	32,604	36,541	38,740	39,980	147,864
Budgets (Real 2025\$)	EWR Programs	\$5,850,532	\$6,840,914	\$7,316,674	\$7,677,564	\$27,685,685
	EFEL Programs	\$183,059	\$214,113	\$256,157	\$287,211	\$940,540
	EO Portfolio Total	\$6,033,591	\$7,055,027	\$7,572,831	\$7,964,775	\$28,626,225
Key Portfolio Metrics	EWR Benefit/Cost UCT Ratio*	2.9	2.7	2.6	2.5	2.7
	EFEL Benefit/Cost E-RIM Ratio**	1.7	1.8	1.8	1.8	1.8
	Portfolio Lifetime \$/kWh Saved	\$0.014	\$0.016	\$0.017	\$0.017	\$0.016
	Portfolio WAML (Years)	13.0	12.0	11.7	11.8	12.1
	Income Eligible Share of Total Budget	15.3%	18.0%	21.0%	25.2%	20.2%
	Savings as Percent of Sales	1.52%	1.52%	1.52%	1.55%	1.53%

*UCT is only applicable to EWR programs.

**E-RIM is an Electrification Ratepayer Impact Test. Results over 1.0 indicate the program will not increase rates for non-participants

BWL’s EWR annual savings goals as a percent of BWL’s prior year electric sales is a minimum of 1.5% per year for 2026 through 2029.

EWR programs were evaluated in several ways based on multiple cost-effectiveness tests, including Utility System Resource Cost Test (UCT), Total Resource Cost Test (TRC), Ratepayer Impact Measure (RIM) and Participant Cost Test (PCT). Each test compares program benefits to costs from different perspectives. Test scores above 1.0 are cost effective. Michigan has adopted the UCT as the primary benefit-cost test.

Residential EWR Programs

The residential sector includes the following seven EWR programs with two new offerings, New Construction, and in response to PA 229 and MPSC Order U-21567, Income Eligible Health and Safety. The 2026-2029 Plan addresses the absence of the large savings reservoir of residential lighting that used to provide more than half of the residential sector savings by pivoting to measures that provide long-lived savings, albeit at a higher cost per savings, notably weatherization measures such as insulation.

BWL's 2026-2029 residential programs include:

- Income Eligible Services
- Income Eligible Health and Safety
- High-Efficiency Appliances
- High-Efficiency HVAC
- Appliance Turn-In and Recycling
- Multifamily In-Unit Efficiency
- New Construction

Commercial & Industrial EWR Programs

The commercial and industrial sector includes three programs to achieve electric energy and demand savings from new and existing customers. The 2026-2029 Plan continues the current strategy of offering financial incentives for a broad range of electric efficiency technologies including lighting, HVAC, refrigeration, process, compressed air, and controls. Incentive offers are supported by engagement of market channels and advisory services offered on behalf of BWL. Small businesses are targeted with higher incentives and implementation assistance. Electric savings from the commercial and industrial sector savings are highly cost-effective, and include the following programs:

- Prescriptive
- Custom
- Small Business

Efficient Electrification (EFEL)

BWL's Efficient Electrification (EFEL) program will help customers transition from fossil fuel-powered systems to efficient electric alternatives. These programs are designed to promote the adoption of technologies such as air source heat pumps, heat pump water heaters, electric lawn equipment, electric forklifts, and electric bicycles. Incentives may be provided either directly or through point-of-sale buydown arrangements with local retailers and contractors to reduce upfront costs and streamline customer participation. By supporting electrification alongside conventional efficiency measures, BWL aims to reduce greenhouse gas emissions, improve indoor and outdoor air quality, and ensure alignment with the state's carbon neutrality goals and PA 229 requirements. The Electrification program includes both Residential and Commercial offerings. The EFEL program is designed to ensure non-participant electric rates do not increase, as calculated via assessing impacts with the use of a custom Electric Rate Impact Measure (E-RIM) benefit-cost test. Most electrification measure characterizations are sourced from the Vermont 2023 Tier III TRM.¹

1.1 Features and Benefits of BWL's 2026-2029 Energy Optimization Plan

Enhancements included in BWL's EO Plan will focus on providing customers with comprehensive solutions, innovative technologies, and practical services to meet their energy needs. The Plan provides all customers opportunities to participate in energy efficiency and electrification programs.

Key features include:

1. **Regulatory Compliance.** BWL's plan is designed to comply with all applicable elements of the 2023 Michigan Public Act 229 (PA 229)². Compliance elements and methodologies are detailed in Section 1.2 of this plan.

¹ <https://publicservice.vermont.gov/document/2023-tier-iii-trm-characterizations>

² <https://www.michigan.gov/mpsc/regulatory/energy-optimization>

2. **Budget Structure, Savings and Benefit-Cost.** The Plan forecasts achieving cost-effective EWR and EFEL energy and demand savings targets within the budget through a comprehensive set of measures available to all customer classes. BWL will implement the four-year Plan by closely monitoring market conditions and program performance.
3. **Customer Centric.** BWL's approach is focused on engaging all customers to realize the benefits of increased energy efficiency and building performance as well as demand reductions. A customer centric approach with a deliberate management focus on making participation an easy, convenient and smart choice for customers to take advantage of comprehensive energy solutions.
4. **Measures.** The EO Plan is grounded on a comprehensive set of energy saving measures across all electric end-uses. The measures have been selected to ensure BWL delivers products and services aligned with customers' ongoing needs, incorporating the most innovative technologies. Assessments and custom project measures are included in the portfolio to provide customers with the greatest opportunity to improve the energy performance of their homes and businesses.
5. **Pathways.** Customers will have multiple avenues of engagement to take advantage of the solutions and measures available including:
 - a. A Retail pathway offering discounted efficient products for customer purchase at retail stores or distributors when customers are shopping for new energy consuming products.
 - b. A Direct-Action pathway where customers work directly with BWL for coordinated and delivered programs through BWL implementation contractors. Examples include appliance recycling.
 - c. A Trade Ally/Contractor pathway encompassing services and measures where a customer works through an independent trade ally or contractor to receive the incentives. They will not be purchasing the equipment through a retail channel. BWL depends on the third party, with which BWL has no contract, to promote participation in the pathway. Examples of this occur with Heating, Ventilation and Air Conditioning (HVAC) measures.
 - d. Custom Program: A participant-initiated pathway where commercial and industrial customers pursue energy saving solutions and measures on their own or with their supplier and receive rebate incentives through BWL's custom program applications.
6. **Customer Options.** The EO Plan design will allow customers to choose which program best meets their needs for identifying, purchasing, and installing efficient equipment.
7. **Financial Incentive Structure.** BWL's incentive (rebates) structure will address customer financial barriers to implementing energy efficiency projects. Commercial custom EWR projects will promote both single technology and comprehensive solutions.
8. **Utility Shared Savings.** Utility shared savings are savings from EWR work that generates both electric and gas savings in a territory in which a utility only provides a single fuel service. To be included in shared savings, the project must occur in the originating utility's single-fuel service territory and generate savings of the opposite fuel type, such as gas savings generated in BWL's electric service territory. Measures with opportunities for utility shared savings include smart thermostats, HVAC controls and energy management systems, HVAC energy recovery, insulation and window improvements, air and duct sealing, new construction, and business custom measures. BWL would like to develop a new EWR shared savings mechanism with Consumers Energy when opportunities arise to benefit BWL and Consumers Energy customers.
9. **Workforce Development.** To the extent practicable, BWL will support developing a diverse energy waste reduction workforce and contractors capable of delivering energy waste reduction measures such as building envelopes, heat pumps, health and safety measures, and other advanced efficiency and related measures.

1.2 Policy and Regulatory Impacts of Michigan’s Public Act 229 of 2023

BWL’s EO Plan is designed to comply with Michigan Public Act 229 (PA 229)³, which passed in 2023 and established several new requirements for all utilities in the state, including:

1. Minimum 1.5% annual savings as a percent of prior year BWL electricity sales
2. At least 25% of budget dedicated to Income Eligible EWR programs by 2029
3. Spending caps of 5% on Pilots and 3% on Education
4. A portfolio-wide weighted average measure life (WAML) of at least 8 years in all years

This section outlines how BWL’s Plan satisfies each requirement and provides supporting calculations, consistent with the Michigan Public Service Commission’s (MPSC) directional order U-21567 (November 7, 2024).⁴

1.2.1 Minimum 1.5% Annual Electricity Savings Target

For the 2026-2029 plan, the 1.5% annual savings as a percent of prior year electricity sales targets are based on BWL’s most recent load forecast. The forecasted sales serve as the baseline, with allowable deductions detailed below.

Exempted Electricity Sales Deductions

- **Unmetered and Streetlighting Sales:** All BWL electricity sales must be counted for the 1.5% target except for unmetered sales and streetlighting sales. These are removed from the sales forecast for this Plan.
- **Community Solar Outflow Deduction:** Forecasted outflows from community solar programs coming online in BWL are also deducted from the 1.5% sales target.
- **Solar PV Outflow Deduction:** Outflow from BWL’s Solar PV program is counted as credits to the 1.5% sales target. Historical outflow data from BWL was used to determine the amount of outflow expected in 2026 and forecasted to increase at a rate of 10% per year based on historical trends and expected program participation in the Plan years.

The final EE savings target, including the four load forecast deductions described above, are detailed in Table 2. The exempt load and both solar deductions reduce the total load that the 1.5% target is calculated from.

Table 2. BWL Annual Electricity Savings Target and Deductions

	2026	2027	2028	2029
Total Forecasted Load (MWh)	2,156,842	2,418,752	2,564,416	2,595,768
Unmetered and Streetlighting Load Deduction (MWh)	28	28	27	27
Community Solar Deduction (MWh)	13,085	16,558	16,541	16,524
Solar PV Program Deduction (MWh)	2,010	2,211	2,432	2,675
1.5% Savings Target Net Deductions (MWh)	32,126	35,999	38,181	38,648

³ <https://www.michigan.gov/mpsc/regulatory/energy-optimization>

⁴ MPSC docket on the implementation of PA 229. <https://mi-psc.my.site.com/s/case/5008y000009ugnCAAQ/in-the-matter-on-the-commissions-own-motion-to-implement-the-provisions-of-public-act-229-of-2023-and-related-definitions-of-public-act-235-of-2023>

1.2.2 Pilots and Education Spend and Credits

PA 229 limits utility spending to 5% of the EWR budget for pilots and 3% for education programs.

- Pilot programs test emerging technologies, outreach strategies, and educational approaches to expand participation and capture future energy savings potential.
- Education programs support the broader EWR portfolio by informing customers about efficiency benefits, energy-saving practices, and BWL incentives.

Under the direction of MPSC Order U-21567, utilities may claim savings credits proportional to these budget shares, relative to the minimum 1.5% savings target. For example, if 8% of the budget is spent on pilots and education combined, then 8% of the 1.5% savings target can be met with corresponding credits.

The BWL Plan allocates the maximum 5% of its EWR budget to pilots and 3% to education yearly, resulting in credits equal to 8% of the 1.5% savings target. These credits are distributed between the residential and C&I portfolios in proportion to each sector’s share of the overall budget, shown in Table 3.

Table 3. Pilots and Education Savings and Budgets by Sector

		2026	2027	2028	2029	Plan Total
MWh Savings (Gross Annual)	Res Pilots & Education	658	843	994	1,122	3,618
	C&I Pilots & Education	1,880	2,004	2,028	1,937	7,850
	Total Pilots & Education	2,538	2,848	3,022	3,060	11,468
	<i>% of Total Plan Savings</i>	8%	8%	8%	8%	8%
Budgets (Real 2025\$)	Res Pilots & Education	\$136,266	\$179,563	\$212,311	\$247,615	\$775,754
	C&I Pilots & Education	\$346,421	\$384,839	\$393,516	\$389,567	\$1,514,344
	Total Pilots & Education	\$482,687	\$564,402	\$605,826	\$637,182	\$2,290,098
	<i>% of Total Plan Budget</i>	8%	8%	8%	8%	8%

1.2.3 25% Spend on Income Eligible by 2029

PA 229 requires utilities to dedicate 25% of their EWR budget to Income Eligible programs, including health and safety initiatives. To meet this requirement, BWL’s Plan:

- Expands the portfolio of income eligible measures (detailed in the program descriptions).
- Increases both budget allocation and participation annually.
- Adds incremental funding for income eligible health and safety measures.

These changes ramp steadily over the four-year plan, achieving the 25% budget target by 2029.

Consistent with PA 229 and MPSC Order U-21567, Income Eligible Health and Safety spending is eligible for savings credits, calculated in the same way as pilots and education. For example, if 7% of the budget is spent on income eligible health and safety, then 7% of the minimum 1.5% savings target can be claimed as credit. In BWL’s Plan, Income Eligible Health and Safety spending varies by year and overall is 7% of the total four-year budget.

1.2.4 Minimum 8-Year Energy Efficiency Weighted Average Measure Life Each Year

PA 229 requires a portfolio wide Weighted Average Measure Life (WAML) of 8 years or more to ensure long-lasting energy efficiency savings. BWL calculates WAML as follows:

- Multiply annual unit energy savings by the assumed measure life to estimate lifetime savings per measure.
- Multiply each measure's lifetime savings by its annual participation rate.
- Sum these lifetime savings across all measures in the portfolio.
- Divide the portfolio's total lifetime savings by the portfolio's first-year annual savings.

This calculation ensures that the overall mix of measures in BWL's Plan produces long-lasting energy savings, consistent with PA 229's requirement.

1.3 Summary of Forecasted Energy Optimization Results

BWL's 2026-2029 Energy Optimization Plan annual budgets and savings are detailed in Tables 4 and 5. The energy optimization plan is designed to save 1,794,968 MWh over the life of the measures (see Table 5). The overall budget for the four-year plan is \$28,626,225 (see Table 4). The cost of saved energy over the life of the measures is \$0.016 per kWh. First year savings cost is \$0.19 per kWh. Of the entire Plan budget, 74% is returned to customers in either incentives or measures given to customers.

Energy efficiency pilot and educational programs are designed to investigate future program development, assess emerging technologies and communicate with and educate customers on the benefits of energy efficiency and conservation. The budget for the pilots is a maximum of 5% and the educational program is a maximum of 3% of the total Plan budget, with deemed savings proportional to the budget.

BWL's 2026-2029 Efficient Electrification Plan annual budgets and savings are detailed as line items in Tables 4 and 5. Savings for the electrification program are net MMBtu savings from electrification measures, converted to kWh savings. The Electrification plan is designed to save 4,484 MWh, avoiding 15,299 MMBtu of fossil fuel use over the 4 years, for a net carbon reduction of 500 metric tons. The overall budget for the four-year plan is \$940,540.

Table 4. BWL 2026-2029 Energy Optimization Plan Annual Budgets

Portfolio Category	Program Portfolio		2026	2027	2028	2029	PLAN TOTAL
Residential	Incentives	Appliance Recycling	\$35,700	\$39,270	\$43,197	\$38,160	\$156,327
		HEP - Appliances	\$24,358	\$24,783	\$25,085	\$24,585	\$98,810
		HEP - HVAC	\$136,803	\$160,719	\$178,475	\$130,318	\$606,316
		Multifamily	\$4,099	\$4,624	\$4,884	\$4,710	\$18,316
		New Construction	\$2,475	\$27,225	\$29,948	\$32,942	\$92,590
		Income Eligible	\$541,755	\$689,875	\$797,382	\$849,278	\$2,878,290
		Income Eligible Health and Safety	\$170,499	\$290,053	\$450,780	\$738,406	\$1,649,738
	Administration & Marketing (Non-LI)		\$213,269	\$256,408	\$264,610	\$257,968	\$992,254
	Administration & Marketing (LI)		\$211,284	\$289,053	\$339,812	\$421,216	\$1,261,365
	Pilots and Education		\$136,266	\$179,563	\$212,311	\$247,615	\$775,754
	Electrification (FEEL) - Res		\$170,361	\$200,244	\$230,128	\$260,012	\$860,745
	Subtotal - Residential without Income Eligible		\$723,331	\$892,835	\$988,637	\$996,309	\$3,601,112
	Subtotal - Residential All		\$1,646,869	\$2,161,816	\$2,576,610	\$3,005,209	\$9,390,505
Commercial & Industrial	Incentives	Prescriptive & Custom	\$2,604,194	\$2,885,842	\$2,947,244	\$2,877,832	\$11,315,111
		Small Business Direct Install	\$239,486	\$263,405	\$289,715	\$318,657	\$1,111,263
	Administration & Marketing		\$983,923	\$1,085,257	\$1,119,217	\$1,114,786	\$4,303,182
	Pilots and Education		\$346,421	\$384,839	\$393,516	\$389,567	\$1,514,344
	Electrification (FEEL) - C&I		\$12,698	\$13,869	\$26,029	\$27,199	\$79,795
	Subtotal C&I		\$4,186,722	\$4,633,211	\$4,775,721	\$4,728,041	\$18,323,695
Portfolio	Outside Technical Services		\$200,000	\$260,000	\$220,500	\$231,525	\$912,025
	Total Portfolio Cost without Income Eligible		\$5,110,053	\$5,786,046	\$5,984,857	\$5,955,876	\$22,836,832
	Total Portfolio Cost		\$6,033,591	\$7,055,027	\$7,572,831	\$7,964,775	\$28,626,225
Sector Spending %	Subtotal - Residential Sector Spend		28%	32%	35%	39%	34%
	Subtotal - Commercial & Industrial Spend		72%	68%	65%	61%	66%

Table 5. BWL 2026-2029 First Year and Lifetime Energy Efficiency Savings (Gross MWh)

Portfolio Category	Program Portfolio	2026	2027	2028	2029	PLAN Total	Lifetime Savings (2026-2029)	Avg WAML (2026-2029)
Residential	Appliance Recycling	609	387	426	381	1,804	14,322	7.9
	HEP - Appliances	103	104	105	104	417	4,397	10.6
	HEP - HVAC	265	304	318	265	1,153	16,507	14.3
	Multifamily	23	27	29	29	108	1,187	11.0
	New Construction	5	59	64	71	199	4,981	25.0
	Income Eligible	207	278	339	353	1,177	11,305	9.6
	Income Eligible Health and Safety	1,135	1,850	2,841	4,479	10,305	107,787	10.5
	Pilot and Education	667	853	1,004	1,134	3,658	38,264	10.5
	Electrification (EFEL) - Res	679	829	979	1,129	3,616	56,522	15.6
	Subtotal excluding Income Eligible or H&S	2,352	2,564	2,926	3,113	10,955	136,179	12.4
Subtotal Residential ALL	3,694	4,692	6,106	7,944	22,436	255,271	11.4	
Commercial & Industrial	Prescriptive & Custom	25,612	28,270	28,809	28,118	110,809	1,369,226	12.4
	Small Business	1,254	1,378	1,515	1,666	5,813	66,207	11.4
	Pilot and Education	1,904	2,027	2,050	1,958	7,938	97,708	12.3
	Electrification (EFEL) - C&I	141	174	260	293	868	6,556	7.6
	Subtotal C&I	28,910	31,849	32,634	32,035	125,428	1,539,697	12.3
Portfolio Total & Key Metrics	1.5% Savings Target MWh	32,126	35,999	38,181	38,648	144,955	-	-
	Total MWh Savings EO	32,604	36,541	38,740	39,980	147,864	1,794,968	12.1
	Total Savings Percent of Target	101.5%	101.5%	101.5%	103.4%	102.0%	-	-
	Planned Savings % of Sales	1.52%	1.52%	1.52%	1.55%	1.53%		
	Weighted Average Measure Life	13.0	12.0	11.7	11.8	12.1	-	-
Sector Savings %	Residential Sector Savings	11%	13%	16%	20%	15%	14%	-
	Commercial & Industrial Savings	89%	87%	84%	80%	85%	86%	-

1.4 EWR Benefit-Cost Tests

This section provides an overview of the benefit-cost (B/C) tests applied to the EWR portion of the portfolio. While five B/C tests are commonly used in EWR, the core test for BWL is the Utility Cost Test (UCT). Each test is described below, followed by a summary table showing which benefits and costs are included in each test (see Table 6) and the overall UCT results (see Table 7). In all cases, a ratio above 1.0 indicates a passing cost-effectiveness score.

Utility Cost Test (UCT)

The UCT evaluates cost-effectiveness from the utility perspective. It is calculated as the ratio of program benefits—primarily reduced electric investments and delivery costs from lower energy and demand use—to the utility’s program costs (incentives and administrative costs).

Total Resource Cost Test (TRC)

The TRC assesses cost-effectiveness from the perspective of all parties contributing to efficiency investments, including both the utility and customers. Benefits are compared to the sum of program costs and the incremental cost of high-efficiency equipment, regardless of whether paid by customers or offset by incentives.

Societal Cost Test (SCT)

The SCT expands on the TRC by incorporating societal impacts beyond direct utility and customer costs. In addition to energy and capacity benefits, it includes values such as avoided environmental externalities and other non-energy impacts when quantified. Costs are defined the same way as in the TRC, but benefits are broader.

Participant Cost Test (PCT)

The PCT measures cost-effectiveness from the customer’s perspective. It compares the participant’s benefits—bill savings plus utility incentives—to the incremental costs they incur for high-efficiency equipment.

Rate Impact Measure (RIM)

The Rate Impact Measure (RIM) test evaluates cost-effectiveness from the perspective of non-participating ratepayers. It compares program benefits to program costs plus utility lost revenues. Although RIM includes avoided generation, transmission, and distribution costs as benefits, it also counts lost utility revenues as a cost. Because lost revenues typically outweigh near-term avoided costs, the RIM ratio is usually below 1.0. RIM is therefore best viewed as a diagnostic of short-term rate impacts, not a measure of long-term system benefits, which are more appropriately captured in the Integrated Resource Plan (IRP).

Table 6. Benefits and Costs Included in Each EWR Cost Test

Input	UCT	TRC	SCT	PCT	RIM
Electric Market Costs (\$/kWh)	Benefit	Benefit	Benefit	NA	Benefit
Generation Investments (\$/kW)	Benefit	Benefit	Benefit	NA	Benefit
T&D Investments (\$/kW)	Benefit	Benefit	Benefit	NA	Benefit
Carbon Compliance	NA*	NA*	Benefit	NA	NA
Incremental Equipment Cost	NA	Cost	Cost	Cost	NA
Utility Incentive	Cost	NA**	NA**	Benefit	Cost
Program Admin	Cost	Cost	Cost	NA	Cost
Electric Bills/Revenue	NA	NA	NA	Benefit	Cost
Gas Bills/Revenue	NA	NA	NA	Benefit	Cost
Non-Energy Benefits	NA	Benefit	Benefit	Benefit	NA

*Carbon Compliance is represented by the societal cost of carbon in the SCT only.

**Incentives are considered a pass through in the TRC/SCT since they are only a portion of the incremental cost.

Table 7. Portfolio EWR Utility Cost Test Results

Utility Cost Test (UCT) Benefit-Cost Ratios	2026	2027	2028	2029	Plan Total (2026-2029)
Income Eligible + Health & Safety (H&S) Programs Only	0.1	0.1	0.1	0.1	0.1
Residential Sector without Income Eligible or H&S Programs	1.8	1.4	1.3	1.4	1.4
Commercial & Industrial Sector	3.7	3.6	3.5	3.3	3.5
Portfolio-Wide with Income Eligible and H&S Programs	2.9	2.7	2.6	2.5	2.7
Portfolio-Wide without Income Eligible or H&S Programs	3.3	3.2	3.1	3.0	3.2

1.5 Efficient Electrification Benefit-Cost Tests

Electrification measures fundamentally shift the typical cost-benefit framework used for energy efficiency (EE). Under standard EE tests, avoided electric generation, transmission, and distribution (T&D) costs are counted as benefits, while utility incentives and program administration are counted as costs. For electrification, those benefits flip to costs because electrification measures add electric load rather than reduce it. Because of this situation, the typical UCT is not meaningful for electrification. All the UCT’s traditional electric-side benefits become costs when additional electric load is added, making the results consistently unfavorable regardless of the net value of electrification.

The only legislative guidance for electrification in Michigan is that non-participant electricity rates must not increase due to program offerings. This requirement makes the Rate Impact Measure (RIM) the most relevant test for evaluating electrification cost-effectiveness given added electric load equates to added utility revenue. However, while a traditional “combined” RIM includes both electric and gas revenues, the legislative intent is focused on electric rates only. For this reason, an Electric-Only RIM (E-RIM)—which excludes gas lost revenue—is the most appropriate indicator of utility-level cost-effectiveness for electrification programs. It also helps guide what is an appropriate incentive to offer for electrification measures. Table 8 illustrates how benefits and costs are treated differently for energy efficiency versus electrification under the UCT, combined RIM and E-RIM. For the purposes of this plan and the reasons laid out above, the E-RIM is used to test electrification measures for cost-effectiveness. The overall, four-year E-RIM benefit-cost test result for the electrification program is 1.8, shown in Table 9.

Table 8. UCT, E-RIM and RIM Tests Inputs – Energy Efficiency vs. Electrification

Input	UCT		Combined RIM (Elec + Gas)		Electric Only RIM	
	Energy Efficiency	Electrification	Energy Efficiency	Electrification	Energy Efficiency	Electrification
Utility Incentive	Cost	Cost	Cost	Cost	Cost	Cost
Program Admin	Cost	Cost	Cost	Cost	Cost	Cost
Electric Bills/Revenue	NA	NA	Cost	Benefit	Cost	Benefit
Gas Bills/Revenue	NA	NA	Cost	Cost	NA	NA
Electric Market Costs (\$/kWh)	Benefit	Cost	Benefit	Cost	Benefit	Cost
Generation Investments (\$/kW)	Benefit	Cost	Benefit	Cost	Benefit	Cost
T&D Investments (\$/kW)	Benefit	Cost	Benefit	Cost	Benefit	Cost
Gas Market Costs (\$/Therm)	Benefit	Benefit	Benefit	Benefit	NA	NA

Table 9. Portfolio Electrification E-RIM Test Results

Electric Only RIM (E-RIM) Benefit-Cost Ratios	2026	2027	2028	2029	Plan Total (2026-2029)
Electrification (EFEL) Portfolio E-RIM Results	1.7	1.8	1.8	1.8	1.8

2 PROGRAM DESCRIPTIONS

2.1 Residential – Income Eligible Services

Program Element	Residential Income Eligible Services
Objective	<ul style="list-style-type: none"> • Provide recommendations, education and energy-saving items to customers with limited income to assist them in reducing their electricity use and managing their utility costs. • Coordinate income eligible services with local weatherization providers, affordable housing organizations and other agencies to provide comprehensive assistance at lower administrative costs.
Target Market	<ul style="list-style-type: none"> • Residential customers whose income is estimated to be below 200% of poverty level. Services will be targeted to diverse segments of the population, including those living in single-family and multifamily buildings, homeowners and renters, and to the extent possible – age and geographic diversity. • Residential electric customers that are in arrears or at risk of falling behind on bill payments will be the target market for the home energy assessments. These include income eligible customers who have or may receive shut off notices and those that are on the Winter Protection Plan.
Program Duration	Services for BWL’s income eligible customers will be an ongoing element of the program portfolio.
Program Description	The utility will help income eligible customers get access to existing programs that can assist them and if appropriate, provide a home energy assessment that includes behavioral education and the direct installation of efficiency measures to assist customers in reducing their energy use. BWL will partner with other agencies and utilities to provide customers with coordinated closely related programs when applicable.
Eligible Measures	Cost-effective electric measures that will be permissible for the program include replacement of inefficient lighting/equipment with ENERGY STAR™ labeled products including LEDs and common area fixtures, lamps, and controls in multifamily housing, refrigerators, dehumidifiers, room air conditioners, bathroom exhaust fans, and electric hot water reduction measures. Other eligible measures include the recycling of older operating refrigerators, room air conditioners and dehumidifiers, and the installation of efficient appliances, smart strips, HVAC, smart/Wi-Fi thermostat, and window film insulation kit, envelope insulation, infiltration reduction, and duct sealing measures, as applicable.
Implementation Strategy	The program will be coordinated with local agencies to subsidize the delivery of the program when possible. The utility will work with an implementation contractor to conduct the home energy assessments and install measures in homes and multifamily properties.
Marketing Strategy	Marketing will be closely coordinated with the local weatherization agencies and the BWL’s implementation contractor. Key elements of the marketing strategy include: <ul style="list-style-type: none"> • Targeted outreach through local agencies • Presentations in the community • BWL website and newsletter

	<ul style="list-style-type: none"> • Press releases • Targeting of multifamily rental property owners 												
EM&V Requirements	Evaluation activities for the Residential Income Eligible program will focus on verification and assessment of electric energy impacts for the installed measures.												
Estimated Participation	<table border="1"> <thead> <tr> <th colspan="4">Participation (in Units of Installed Measures)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>3,180</td> <td>3,618</td> <td>3,900</td> <td>4,045</td> </tr> </tbody> </table>	Participation (in Units of Installed Measures)				2026	2027	2028	2029	3,180	3,618	3,900	4,045
Participation (in Units of Installed Measures)													
2026	2027	2028	2029										
3,180	3,618	3,900	4,045										
Estimated Budget	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$710,414</td> <td>\$906,415</td> <td>\$1,024,499</td> <td>\$1,085,892</td> </tr> </tbody> </table>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$710,414	\$906,415	\$1,024,499	\$1,085,892
Annual Budget (Real 2025 Dollars)													
2026	2027	2028	2029										
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Savings Targets	<table border="1"> <thead> <tr> <th colspan="4">Energy Savings (Gross Annual MWh at Meter)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>207</td> <td>278</td> <td>339</td> <td>353</td> </tr> </tbody> </table>	Energy Savings (Gross Annual MWh at Meter)				2026	2027	2028	2029	207	278	339	353
Energy Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
207	278	339	353										

2.2 Residential – Income Eligible Health and Safety

Program Element	Residential Income Eligible Health and Safety												
Objective	The objective of the Health and Safety program is to increase the number of customers that can participate in EWR programs by addressing physical shortcomings in their dwellings, thus enabling energy and cost savings, while improving the health and safety of dwellings.												
Target Market	Income-qualified customers seeking to participate in the Income Eligible program in need of property repairs in order to implement energy measures are eligible.												
Program Duration	The Health and Safety program is a new offering for 2026 to 2029 to complement the ongoing Income Eligible program.												
Program Description	For some customers, home repairs and updates must be addressed before energy efficiency measures can be installed safely. These repairs are not traditionally funded by the EWR program, nor through state and federal funding provided to weatherization agencies. By providing funding for health and safety repairs, BWL’s income eligible customers may be able to receive energy efficiency assistance from other assistance agencies and BWL’s EWR Plan by braiding funding and providing customers with a one-stop experience. The program also allows BWL a pathway to implement EWR measures in substandard housing stock that otherwise likely would remain unable to receive services.												
Eligible Measures	Eligible measures may include asbestos abatement, mold remediation, structural, electrical or plumbing upgrades, and basement/foundation remediation addressing moisture infiltration, accessibility and egress issues. Projects will be considered on a case-by case basis and other repairs as identified also may be considered.												
Implementation Strategy	BWL’s implementation contractor will identify customers in need of health and safety related repairs during the course of the Income Eligible program delivery, and work with contractors and other agencies as applicable to integrate these repairs into the project plan and budget.												
Marketing Strategy	The Health and Safety program will be co-marketed with the Income Eligible program to encourage participation by customers who may be hesitant due concerns about the condition of their property.												
EM&V Requirements	Evaluation will be coordinated with the Income Eligible program and focus on verification of repairs completed and subsequent EWR measures installed through the Income Eligible program.												
Estimated Budget	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$213,124</td> <td>\$362,566</td> <td>\$563,475</td> <td>\$923,008</td> </tr> </tbody> </table>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$213,124	\$362,566	\$563,475	\$923,008
Annual Budget (Real 2025 Dollars)													
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Energy Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
1,135	1,850	2,841	4,479										

2.3 Residential – High Efficiency Appliances

Program Element	Residential High Efficiency Appliances
Objective	Produce long-term annual energy savings in the residential sector by promoting high efficiency appliances.
Target Market	Residential customers seeking to purchase and install new high efficiency dehumidifiers, clothes washers and dryers, room air conditioners, air purifiers, ENERGY STAR refrigerators, freezers, dishwashers and TVs, advanced power strips, and pool pumps. Residential rental property owners and customers living in rental properties are also eligible.
Program Duration	Ongoing element of the program portfolio.
Program Description	The High Efficiency Appliances program will leverage the nationally recognized ENERGY STAR brand, when applicable, to promote products that can reduce electric energy use. Energy efficient choices can save families about a third on their energy bill, without sacrificing features, style or comfort. The ENERGY STAR brand helps consumers make the most energy efficient choice. The program will focus on the retail sales channel and with key trade ally contractors to provide incentives to customers to encourage them to replace their older, inefficient appliances with high-efficiency units.
Eligible Measures	<p>Eligible measures include:</p> <ul style="list-style-type: none"> • ENERGY STAR Room Air Conditioners and Dehumidifiers • ENERGY STAR Clothes Washers and Dryers (with moisture sensor) • ENERGY STAR Air Purifiers • ENERGY STAR Pool Pumps • ENERGY STAR Refrigerators and Freezers • ENERGY STAR Dishwashers • ENERGY STAR TVs • ENERGY STAR Continuous Bathroom Exhaust Fan • Smart Strips
Implementation Strategy	<p>Retailer recruitment, education and outreach. The utility’s implementation contractor will utilize a field representative to facilitate the recruitment of local appliance retailers to participate in the program.</p> <p>Program coordination with local area utilities. The utility’s implementation contractor will coordinate incentive levels and eligibility requirements to match or be similar to local area utility programs.</p> <p>Application processing. The utility’s implementation contractor will coordinate processing of all rebate applications.</p>
Marketing Strategy	High Efficiency Appliances will be marketed through local retailers. All marketing materials will carry a strong consumer education message emphasizing the cost of operating older, inefficient appliances and the benefits of early replacement with ENERGY STAR qualified models (lifetime dollar savings, energy savings, lower noise, etc.). Marketing materials will

	<p>Leverage the ENERGY STAR brand, which enjoys a high level of consumer recognition and favorable associations.</p> <p>Key elements of the marketing strategy include:</p> <ul style="list-style-type: none"> • Direct consumer marketing through the BWL website and newsletter • Point-of-purchase displays • Cooperative advertising with retailers 												
EM&V Requirements	<p>Savings values are based on documented values from the Michigan Energy Measures Database. Evaluation activity will focus on verification of installation and estimates of deemed savings.</p>												
Estimated Participation	<table border="1"> <thead> <tr> <th colspan="4">Participation (in Units of Installed Measures)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>700</td> <td>712</td> <td>722</td> <td>702</td> </tr> </tbody> </table>	Participation (in Units of Installed Measures)				2026	2027	2028	2029	700	712	722	702
Participation (in Units of Installed Measures)													
2026	2027	2028	2029										
700	712	722	702										
Estimated Budget	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$42,625</td> <td>\$43,233</td> <td>\$43,658</td> <td>\$42,966</td> </tr> </tbody> </table>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$42,625	\$43,233	\$43,658	\$42,966
Annual Budget (Real 2025 Dollars)													
2026	2027	2028	2029										
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Savings Targets	<table border="1"> <thead> <tr> <th colspan="4">Energy Savings (Gross Annual MWh at Meter)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>103</td> <td>104</td> <td>105</td> <td>104</td> </tr> </tbody> </table>	Energy Savings (Gross Annual MWh at Meter)				2026	2027	2028	2029	103	104	105	104
Energy Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
103	104	105	104										

2.4 Residential – High Efficiency Heating, Ventilation and Air Conditioning (HVAC)

Program Element	Residential High Efficiency HVAC
Objective	Produce long-term coincident peak demand reduction and annual energy savings in the residential sector by promoting high-efficiency HVAC and water heating equipment, as well as building envelope improvements.
Target Market	Residential customers seeking to purchase and install new central air conditioning units, air-source heat pumps, heat pump water heaters, Wi-Fi thermostats, or have their air conditioner or heat pump tuned-up, coupled with insulation, air sealing, and duct sealing. Residential rental property owners and customers living in rental properties are also eligible.
Program Duration	Ongoing element of the program portfolio.
Program Description	<p>The High Efficiency HVAC program will leverage the nationally recognized ENERGY STAR brand, when applicable, to promote products that can reduce electric energy use. Energy efficient choices can save families about a third on their energy bill, without sacrificing features, style or comfort. The ENERGY STAR brand helps consumers make the most energy efficient choice.</p> <p>The program will focus on contractor installed heating, cooling, and water-heating equipment, as well as home improvement/renovation contractors, with a prescriptive rebate incentive to customers or contractors.</p>
Eligible Measures	<p>Eligible measures include:</p> <ul style="list-style-type: none"> • Central Air Conditioners (SEER2 ≥ 15.2) • Central Air Source Heat Pumps (SEER ≥ 16) • Ductless Mini-Split Heat Pumps • Central Air Conditioner and Air Source Heat Pump Tune-Ups • Heat Pump Water Heaters • Smart/Wi-Fi Thermostats • O&M Tune-up • Envelope insulation • Infiltration reduction • Duct Sealing
Implementation Strategy	<ul style="list-style-type: none"> • Contractor recruitment, education and outreach. The utility’s implementation contractor will utilize a field representative to facilitate the recruitment of local HVAC/plumbing contractors to participate in the program. • Coordination of Program with local area utilities. The utility’s implementation contractor will coordinate incentive levels and eligibility requirements to match or be similar to local area utility programs. • Application processing: The utility’s implementation contractor will coordinate processing of all rebate applications.

Marketing Strategy	<p>The HVAC and water heater components of the program will be primarily marketed through local contractors, the most direct influencers of customer purchase decisions. Contractors will receive educational materials to share with their customers.</p> <p>All marketing materials will carry a strong consumer education message emphasizing the cost of operating older, inefficient appliances and the benefits of early replacement with ENERGY STAR qualified models (lifetime dollar savings, energy savings, lower noise, etc.). Marketing materials will leverage the ENERGY STAR brand, which enjoys a high level of consumer recognition and favorable associations.</p> <p>Key elements of the marketing strategy include:</p> <ul style="list-style-type: none"> • Direct consumer marketing through the BWL website and newsletter • Point-of-purchase displays • Cooperative advertising with contractors 												
EM&V Requirements	<p>Savings values are based on documented values from the Michigan Energy Measures Database. Evaluation activity will focus on verification of installation and estimates of deemed savings.</p>												
Estimated Participation	<table border="1"> <thead> <tr> <th colspan="4">Participation (in Units of Installed Measures)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>904</td> <td>969</td> <td>1,020</td> <td>758</td> </tr> </tbody> </table>	Participation (in Units of Installed Measures)				2026	2027	2028	2029	904	969	1,020	758
Participation (in Units of Installed Measures)													
2026	2027	2028	2029										
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Estimated Budget	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$186,423</td> <td>\$217,585</td> <td>\$238,044</td> <td>\$179,954</td> </tr> </tbody> </table>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$186,423	\$217,585	\$238,044	\$179,954
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2026	2027	2028	2029										
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Savings Targets	<table border="1"> <thead> <tr> <th colspan="4">Energy Savings (Gross Annual MWh at Meter)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>265</td> <td>304</td> <td>318</td> <td>265</td> </tr> </tbody> </table>	Energy Savings (Gross Annual MWh at Meter)				2026	2027	2028	2029	265	304	318	265
Energy Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
265	304	318	265										

2.5 Residential – Appliance Turn-In and Recycling

Program Element	Appliance Turn-In and Recycling
Objective	Produce long-term coincident peak demand reduction and annual energy savings in the residential sector by removing operable, inefficient refrigerators, freezers, dehumidifiers, and room air conditioners from the power grid and recycling them in an environmentally safe manner.
Target Market	Residential customers who are currently operating older, inefficient refrigerators, freezers, dehumidifiers, and/or room air conditioners as secondary units.
Program Duration	Ongoing element of the program portfolio.
Program Description	The average household replaces a refrigerator every ten years. However, many of the refrigerators being replaced are still functioning, so they often become backup appliances – energy guzzlers in basements and garages – or sold in a used-market. The Turn-In Program targets those “second” refrigerators and freezers, as well as encouraging the early retirement of older inefficient dehumidifiers and room air conditioners that are still operable. The program provides the dual benefit of cutting energy consumption and keeping the appliances out of the used market.
Eligible Measures	Eligible measures include refrigerators, freezers, dehumidifiers, and room air conditioners. Units must be operable at the time of disposal.
Implementation Strategy	<ul style="list-style-type: none"> • Turn-key appliance pick-up/recycling: The utility will work with a qualified recycling service subcontractor to provide comprehensive, turn-key implementation services from eligibility verification and scheduling of pick-ups to proper disposal and recycling of turned-in appliances. • Drop-off events for dehumidifiers and room air conditioners to be coordinated in partnership with the local recycling community. • Incentive coordination and processing: The utility will coordinate prompt processing of incentive payments.
Marketing Strategy	<p>All marketing materials will carry a strong consumer education message emphasizing the cost of operating older, inefficient appliances, the benefits of early replacement with ENERGY STAR qualified models, and the importance of proper disposal and recycling of older units. Key elements of the marketing strategy include:</p> <ul style="list-style-type: none"> • Direct consumer marketing through BWL website, newsletter and community events • Press releases • Point-of-purchase displays • Cooperative advertising with retailers • Posters in area businesses
EM&V Requirements	Deemed savings values are based on documented values from the Michigan Energy Measures Database. Evaluation activity will focus on verification of recycled units and estimates of deemed savings.

Estimated Participation	Participation (in Units of Installed Measures)			
	2026	2027	2028	2029
	936	1,030	1,133	985
Estimated Budget	Annual Budget (Real 2025 Dollars)			
	2026	2027	2028	2029
	\$152,212	\$155,782	\$159,709	\$154,672
Savings Targets	Energy Savings (Gross Annual MWh at Meter)			
	2026	2027	2028	2029
	609	387	426	381

2.6 Residential – Multifamily

Program Element	Residential Multifamily
Objective	Produce immediate annual energy savings in multifamily buildings through direct installation of high-efficiency LED lighting products in common areas and low-flow faucet aerators and showerheads in units with electric water heaters. Work with multifamily property owners/developers to encourage in-unit and common area electric efficiency improvements when undertaking remodeling or new construction projects.
Target Market	Property owners and management companies of new and existing multifamily buildings (both apartments and condominiums).
Program Duration	Ongoing element of the program portfolio.
Program Description	<p>The Multifamily Program provides a turn-key service for helping customers reduce their electric energy use in multifamily buildings. The utility’s implementation contractor will send out a crew of installers to retrofit targeted buildings. The crew will install high-efficiency lighting products in common areas. Educational information about the energy savings associated with these devices is left behind in all units.</p> <p>The program also assists multifamily building developers and property managers in determining appropriate and cost-effective energy-efficiency products for new or remodeled buildings. Developers and property owners receive cash-back rebates through coordinating with the utility programs for the installation of efficiency measures that save electricity in new or remodeled multifamily buildings. Property owners and tenants benefit from long-term reduced electricity use and additional water savings.</p> <p>Common areas in Multifamily buildings may receive services and incentives through the Business programs.</p>
Eligible Measures	<p>Eligible measures for the direct install component include high-efficiency LED lighting products and low flow faucet aerators and showerheads.</p> <p>Eligible measures for the new construction/remodeling component include upgrading lighting fixtures and controls in common areas, and direct installation of flow faucet aerators and showerheads; and coordinating with other programs for the installation of efficient heating and cooling equipment, choosing new ENERGY STAR appliances, including clothes washer, clothes dryers, and recycling old appliances.</p>
Implementation Strategy	<ul style="list-style-type: none"> • Targeted outreach to property owners. The utility’s implementation contractor will work with the utility’s account representatives and an assigned Energy Advisor to build a close working relationship with local and national property owners and management companies in BWL’s electric territory. The Energy Advisor will promote the program to interested property owners. • In-unit direct installs. The utility’s implementation contractor will schedule installation appointments with interested property owners and managers. The contractor will oversee the in-unit installation of high-efficiency products. The installation crew will leave behind educational materials in each unit, to describe for the resident the work that has been

	<p>done and to promote the energy-saving benefits. All in-unit direct install measures will be free to the customer.</p> <ul style="list-style-type: none"> • Comprehensive remodeling and new construction. The utility’s implementation contractor will provide direct outreach and consultation to multifamily property owners and developers who are considering new construction or major remodeling projects. Information about potential in-unit electric savings and product/service availability will be discussed. Flexible incentive packages may be negotiated. 												
Marketing Strategy	A targeted marketing strategy will be employed for the Multifamily program. Eligible properties will be identified from the utility’s customer information system. The program will also be marketed through local landlord and property management associations.												
EM&V Requirements	Savings values are based on documented values from the Michigan Energy Measures Database. Evaluation activity will focus on verification of installation and estimates of deemed savings.												
Estimated Participation	<table border="1"> <thead> <tr> <th colspan="4">Participation (in Units of Installed Measures)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>363</td> <td>411</td> <td>449</td> <td>393</td> </tr> </tbody> </table>	Participation (in Units of Installed Measures)				2026	2027	2028	2029	363	411	449	393
Participation (in Units of Installed Measures)													
2026	2027	2028	2029										
363	411	449	393										
Estimated Budget	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$29,875</td> <td>\$35,172</td> <td>\$37,404</td> <td>\$36,971</td> </tr> </tbody> </table>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$29,875	\$35,172	\$37,404	\$36,971
Annual Budget (Real 2025 Dollars)													
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Energy Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
23	27	29	29										

2.7 Residential – New Construction

Program Element	Residential New Construction
Objective	Produce long-term peak demand reduction and annual energy savings in all electric, new residential construction by promoting high-efficiency home design, HVAC equipment, and appliances in the design and construction of new single-family homes.
Target Market	Builders and residential customers who are designing and building new single-family homes in BWL’s territory. The program also may address new manufactured homes and multifamily new construction.
Program Duration	The Residential New Construction program is a new offering in BWL’s EWR portfolio.
Program Description	New residential homes, whether single-family, manufactured, or multifamily, provide an opportunity for long-term energy savings based on the choice of equipment and design. By prioritizing energy efficiency during construction, savings can be realized for the life of the building and property owners can avoid costly retrofits. BWL will implement the New Construction program through special promotion of high efficiency products and HVAC measures through bundled rebates and incentives. Working with both builders and homebuyers, BWL will bundle and promote measures available through the Michigan Energy Measures Database (MEMD). In addition, BWL will offer incentives for designers and builders to incorporate high efficiency into the building design using ENERGY STAR or other home rating systems to define qualifying homes and incentive levels.
Eligible Measures	Eligible measures may include energy efficiency measures in the MEMD for residential and multifamily suitable for new construction, with a focus on ground source heat pumps, cold climate air source heat pumps, and heat pump water heaters.
Implementation Strategy	BWL will promote the program to builders and customers. Incentives may be bundled with bonuses for incorporating a set of comprehensive measures to optimize electricity savings compared to the minimum requirements of the MI Residential Energy Code. BWL will seek to leverage additional funds available for affordable housing projects in collaboration with the Michigan State Housing Development Authority or other agencies.
Marketing Strategy	The program will be marketed through local builders since they are best positioned to influence their customers’ purchasing decisions. Builders will receive training and educational materials to share with their customers. Key elements of the marketing strategy may include but not be limited to: <ul style="list-style-type: none"> • Customer recruitment, education and outreach will occur at home shows, events, and through other BWL marketing communications. • Builder recruitment, education and outreach will utilize a field representative for the recruitment of local builders to participate in the program.
EM&V Requirements	Evaluation activities will address energy savings values based on documented values from the MEMD or conversion to energy savings equivalent values. Evaluation will focus on verification of installed equipment and estimates of deemed savings compared to the MI Residential Energy Code.

Estimated Participation	Participation (in Units of Installed Measures)			
	2026	2027	2028	2029
	1	11	12	13
Estimated Budget	Annual Budget (Real 2025 Dollars)			
	2026	2027	2028	2029
	\$5,569	\$61,256	\$67,382	\$74,120
Savings Targets	Energy Savings (Gross Annual MWh at Meter)			
	2026	2027	2028	2029
	5	59	64	71

2.8 Commercial & Industrial – Prescriptive and Custom

Program Element	Commercial & Industrial – Prescriptive and Custom
Objective	<p>The primary objectives for the Commercial & Industrial Prescriptive and Custom Program:</p> <ol style="list-style-type: none"> 1) Increase the market share of a targeted group of commercial high-efficiency electric technologies sold through market channels. 2) Increase the installation rate of a targeted group of high-efficiency electric technologies in commercial facilities by businesses that would not have done so in the absence of the program. 3) To reduce energy use and improve operating efficiency of existing long-life equipment to ensure peak operating efficiency for business customers. 4) Influence business customers to select and install high-efficiency measures, such as process improvements or projects involving multiple technologies, which are not addressed through the C&I Prescriptive measures.
Target Market	<p>All business customers are eligible to participate in the prescriptive and custom rebate programs when they purchase qualifying equipment or services. The programs are designed to offer cost-cutting technologies that address a variety of market sectors and industries. Targeted, proactive outreach efforts are utilized to influence specific market sector actors:</p> <ul style="list-style-type: none"> • Trade allies (wholesalers, distributors, engineering and architectural firms, developers and builders, contractors, and retailers that market qualifying technologies). • High-impact/high-need customer sectors (such as schools, municipal buildings, and hospitals). • Commercial and industrial customers where the building load or process design would benefit from the introduction of energy efficient technology. • High-impact/high-need customers such as industrial customers and others that use unique processes or equipment that are not covered by the Prescriptive program
Program Duration	Ongoing element of the program portfolio.
Program Description	<p>Prescriptive Program</p> <p>The utility is interested in providing a seamless set of energy efficiency services to its business customers. The Prescriptive program will provide incentives for the purchase and installation of specific high efficiency technologies.</p> <p>The Prescriptive program will affect the purchase and installation of high-efficiency technologies through a combination of market push and pull strategies that stimulate market demand while simultaneously increasing market provider investment in stocking and promoting them.</p> <p>The Prescriptive program will increase demand of efficient technologies by educating business customers about the energy and money saving benefits associated with efficient products and equipping market providers to communicate those benefits directly to their customers. To address the first-cost barrier for customers, the program will utilize financial incentives (i.e., cash-back mail-in rebates) averaging 25% to 100% of the incremental cost of purchasing qualifying technologies.</p>

	<p>The Prescriptive program will stimulate market provider investment in stocking and promoting efficient products through a targeted outreach effort. The implementation contractor will employ field sales representatives to proactively train and equip market providers to convey the energy and money saving benefits to consumers. Further, the existence of cash-back incentives will elevate efficiency to a competitive issue that will naturally motivate market providers to stock and promote targeted products. The program will offer bonus incentives to increase participation with select customer groups and measures with unrealized opportunities.</p> <p>Custom Program</p> <p>The Custom program helps customers and market providers identify more complex energy savings projects, analyze the economics of each project, and complete a customized incentive grant application. Over the long term, the custom solutions approach will allow the utility to develop and enhance the assistance they can provide to businesses with unique opportunities – including industrial process improvements, emerging technologies, and new facility design and/or modernization. To address the first-cost barrier for customers, the program will utilize financial incentives based on energy savings from the cost-effective high efficiency technologies.</p> <p>The Custom program will affect the purchase and installation of unique high-efficiency technologies through a combination of market push and pull strategies that stimulate market demand while simultaneously increasing market provider investment in stocking and promoting these unique technologies.</p> <p>The Custom program will increase market demand by educating business customers about the energy and money saving benefits associated with efficient products and equipping market providers to communicate those benefits directly to their customers. The implementation contractor will employ field sales representatives to proactively train and equip market providers to convey the energy and money saving benefits to customers.</p> <p>The Custom program will also include a new construction/renovation component that will assist customers in specifying and installing unique high efficiency measures.</p>
<p>Eligible Measures</p>	<p>Eligible measures are listed in Section 3. Unique measures, innovative technologies and new processes that cost effectively save energy but are not listed in Section 3 are eligible for the Custom program.</p>
<p>Implementation Strategy</p>	<ul style="list-style-type: none"> • Outreach to market providers. The implementation contractor will inform and recruit participating market providers. Outreach will include orientation meetings and conducting in-person visits aimed at training and equipping market providers to communicate program information to customers. The Contractor will ensure that providers have an updated stock of program materials. Key market providers that will be targeted include: <ul style="list-style-type: none"> • Lighting distributors, wholesalers, • HVAC distributors and retail contractors • Motors/compressed air vendors • Food service equipment distributors and retailers

	<ul style="list-style-type: none"> • Engineering and Architectural firms • Industrial equipment suppliers and process consultants • Diverse EWR contractors • Developers and Builders in the commercial market <ul style="list-style-type: none"> • Outreach to targeted customers. The implementation contractor will personally contact energy managers and decision makers within the targeted customer sectors. The Contractor will assist business customers in determining the energy and cost savings benefits from using the prescriptive incentives for new high efficiency equipment in their operations. The utility’s business account representative(s) will assist with outreach within the course of regular contact with business customers. • Energy Assessments. The implementation contractor may also provide energy assessments to eligible customers. Energy assessments could include a walk-through analysis by the implementation contractor’s Energy Advisor and a report detailing recommended next steps and estimated energy savings. The assessments will drive customers to participate in the incentive programs.
<p>Marketing Strategy</p>	<p>The Commercial & Industrial Prescriptive Program will employ the following marketing strategies:</p> <ul style="list-style-type: none"> • Engage market providers. Outreach and training will be provided to a targeted group of providers that have business motivation for promoting incentives to their customers. • Outreach to targeted customers. The utility’s implementation contractor will work closely with the utility to identify and conduct face-to-face meetings with key end-use customers to recruit their participation. The contractor will target decision makers within the customer’s organization including energy managers, facility managers, financial and operations managers, chief engineer and facility/property managers, maintenance supervisors, and building operators. Energy assessments will be offered to eligible customers to further encourage participation. • Outreach to key influencers. The implementation contractor’s Energy Advisor(s) will work to generate awareness of the program through presentations and seminars with appropriate trade associations (ASHRAE, BOMA, school administrators, etc.). • Provide complete website presence. The program will be comprehensively outlined on the utility website. Customers and market providers will be able to review qualifying measures, download incentive applications, and complete applications via an online portal.
<p>EM&V Requirements</p>	<p>The utility’s implementation contractor will be responsible for implementing the following types of measurement and verification activities to facilitate the utility’s third-party evaluation work:</p> <ul style="list-style-type: none"> • Collect and track all participating customers, measure installations, and incentive data. • During the incentive process, verify that each product on which incentives are paid meets the prescribed efficiency standards for the incentive. • Custom projects will be considered on a case-by-case basis; product performance information will be requested from the contractor or manufacturer, and efficiency will be verified by a qualified engineer. The energy advisor will work with the customer and/or market provider to complete custom engineering calculations that assess the energy savings potential, cost-effectiveness, payback horizon, project eligibility, and incentive amount. If the project is deemed eligible, the advisor will assist the customer or market provider in completing a custom incentive grant application.

	<ul style="list-style-type: none"> • For Prescriptive projects, conduct on-site inspections of 2% to 5% of equipment for which customers receive incentives to verify that products were installed and that the model and serial numbers match those provided on the incentive claim. Any inconsistencies will be researched and the resolution recorded. Market providers associated with inconsistencies will receive follow up inspections on projects in which they are associated. • For Custom projects, conduct a minimum of 10% on-site inspections of all installations to verify that the specified equipment has been installed and is operating as outlined in the application. Any inconsistencies will be resolved. 												
<p>Estimated Participation</p>	<table border="1"> <thead> <tr> <th colspan="4">Participation (in Units of Installed Measures)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>2,034,968</td> <td>2,240,021</td> <td>2,463,119</td> <td>2,708,087</td> </tr> </tbody> </table> <p>Estimated participation combines the Prescriptive Program and the Custom Program.</p>	Participation (in Units of Installed Measures)				2026	2027	2028	2029	2,034,968	2,240,021	2,463,119	2,708,087
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<p>Estimated Budget</p>	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$3,438,407</td> <td>\$3,806,636</td> <td>\$3,885,573</td> <td>\$3,793,663</td> </tr> </tbody> </table> <p>Estimated budget combines the Prescriptive Program and the Custom Program.</p>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$3,438,407	\$3,806,636	\$3,885,573	\$3,793,663
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<p>Savings Targets</p>	<table border="1"> <thead> <tr> <th colspan="4">Energy Savings (Gross Annual MWh at Meter)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>25,612</td> <td>28,270</td> <td>28,809</td> <td>28,118</td> </tr> </tbody> </table> <p>Estimated savings combines the Prescriptive Program and the Custom Program.</p>	Energy Savings (Gross Annual MWh at Meter)				2026	2027	2028	2029	25,612	28,270	28,809	28,118
Energy Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
25,612	28,270	28,809	28,118										

2.9 Commercial & Industrial – Small Business

Program Element	Commercial & Industrial – Small Business
Objective	The objective of the Small Business (SB) program is to install cost-effective energy efficient measures in small business customers’ facilities that would not install these measures without the support of the program.
Target Market	Small business customers, who have an annual energy consumption of 400,000 kWh or less, are eligible to participate in the SB program. The program will target hard-to-reach customers. Eligible participants are owner-occupied or tenant facilities (with owner permission), including businesses such as small retail, convenience and small grocery stores, small offices, service stations, restaurants and lodging, nonprofit organizations, businesses serving income eligible populations, and small manufacturing. Customers with long hours of operation are ideal targets of the program.
Program Duration	Ongoing element of the program portfolio.
Program Description	BWL will provide energy efficiency services to its small hard-to-reach business customers. The SB program will provide the direct installation of energy efficiency measures at the time of the initial facility assessment, as well at a later time, after broader site optimization assessment. The program will offer free or subsidized installation of LED lighting upgrades, setback thermostats, pre-rinse spray valves, LED exit signs, occupancy sensors, vending machine energy management and water-saving measures for businesses that heat water with electricity.
Eligible Measures	Eligible measures are listed in Section 3.
Implementation Strategy	<p>Outreach to targeted customers. Customers will receive an initial free assessment, with free direct installation of immediate and low-cost measures (e.g., LED’s (if replacing incandescent lighting) and low-flow water devices). The team performing the initial assessment and direct install discuss additional energy efficiency opportunities with the business owner. As a follow-up to the assessment, customers receive a report via mail and email indicating what additional measures could be installed at their facility, and an indicative estimate of the eligible BWL rebate and customer cost. On average, it is estimated that BWL will pay for 70-80% of the total installed cost for eligible measures.</p> <p>BWL’s implementation contractor, and/or program trained and authorized trade allies will be responsible for assessing the site, direct installation of initial measures, proposing additional energy efficiency measures, specifying equipment, performing the installations, and providing required warranties. The implementation team is responsible for conducting inspections to verify pre- and post-installation conditions and equipment, disbursing incentives where applicable, and overall program oversight. The implementation team also provides necessary program information and utilizes an internet web-based tool to enter, track, and receive approval and payment for projects.</p>
Marketing Strategy	In coordination with other BWL energy efficiency programs, the SB program will be marketed directly to targeted small business customers. Marketing support for the program includes

	<p>outreach through small business groups and community organizations, door-to-door sales, and other miscellaneous marketing techniques.</p>												
<p>EM&V Requirements</p>	<p>The utility’s implementation contractor(s) will be responsible for implementing the following types of measurement and verification activities to facilitate the utility’s third-party evaluation work:</p> <ul style="list-style-type: none"> • Collect and track all customers, measure installations, and incentive data. • Conduct on-site inspections of installations to verify that the specified equipment has been installed and is operating 												
<p>Estimated Participation</p>	<table border="1"> <thead> <tr> <th colspan="4">Participation (in Units of Installed Measures)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>185,525</td> <td>204,077</td> <td>224,485</td> <td>246,933</td> </tr> </tbody> </table>	Participation (in Units of Installed Measures)				2026	2027	2028	2029	185,525	204,077	224,485	246,933
Participation (in Units of Installed Measures)													
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<p>Estimated Budget</p>	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$389,196</td> <td>\$427,867</td> <td>\$470,603</td> <td>\$517,612</td> </tr> </tbody> </table>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$389,196	\$427,867	\$470,603	\$517,612
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\$389,196	\$427,867	\$470,603	\$517,612										
<p>Savings Targets</p>	<table border="1"> <thead> <tr> <th colspan="4">Energy Savings (Gross Annual MWh at Meter)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>1,254</td> <td>1,378</td> <td>1,515</td> <td>1,666</td> </tr> </tbody> </table>	Energy Savings (Gross Annual MWh at Meter)				2026	2027	2028	2029	1,254	1,378	1,515	1,666
Energy Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
1,254	1,378	1,515	1,666										

2.10 Residential and Commercial – Efficient Electrification

Program Element	Residential and Commercial Efficient Electrification (EFEL)
Objective	<ul style="list-style-type: none"> • Advance carbon neutrality and energy efficiency goals through the adoption of electric technologies that replace fossil-fueled systems. The program supports the installation of high-efficiency electric end-uses across sectors—such as space heating, water heating, material handling, and lawn equipment—while maintaining compliance with the Electric Rate Impact Measure (E-RIM) and Michigan Public Act 229 (PA 229). • Although certain individual measures may not meet E-RIM criteria, the overall program portfolio is designed to pass the E-RIM test. Inclusion of less cost-effective measures is justified based on their strategic importance, emerging-market status, or long-term benefits.
Target Market	<ul style="list-style-type: none"> • Residential customers replacing natural gas-fueled systems for space or water heating, or upgrading to efficient electric appliances and outdoor equipment. Particular focus is placed on households ready to electrify HVAC systems, water heaters, and cooking or laundry equipment. • Homeowners and renters interested in zero-emissions outdoor tools such as lawn mowers, trimmers, chainsaws, and snow blowers. • Residential customers seeking to electrify transportation options through E-bike adoption. • Small commercial customers with material handling needs or outdoor operations (e.g., landscaping, grounds maintenance) suited to electric forklifts or lawn equipment.
Program Duration	<p>The program will operate throughout the 2026–2029 Plan period, with annual updates to eligible measures and incentive strategies based on market conditions, technology trends, and budget constraints.</p>
Program Description	<p>The Electrification program promotes fuel-switching from gas, propane, or gasoline to efficient electric alternatives. Incentives will be offered for qualified equipment, with an emphasis on:</p> <ul style="list-style-type: none"> • Displacing on-site fossil fuel use (natural gas, propane, gasoline) • Reducing total site energy in MMBtu • Managing electric load growth responsibly • Providing customer choice and new participation pathways <p>Incentives will be available both through direct customer applications and point-sale-buydown arrangements. For example:</p> <ul style="list-style-type: none"> • E-bikes may be discounted at local bike shops • Lawn and garden equipment may be discounted through participating retailers • Contractors and distributors may help promote HVAC and appliance electrification <p>Program design allows for inclusion of some measures that do not independently pass E-RIM, as long as the program portfolio maintains compliance overall. These measures may offer other compelling benefits (e.g., carbon reductions, market transformation, customer satisfaction) that support their inclusion.</p>

Eligible Measures

The following electrification measures are eligible for incentives under the Electrification program:

Residential Measures

- Space Heating
 - Air Source Heat Pump – replacing natural gas furnace and central AC
 - Air Source Heat Pump – replacing natural gas furnace without AC
- Water Heating
 - Heat Pump Water Heater – replacing natural gas water heater
- Appliances
 - Induction cooktop or range
 - Heat Pump Clothes Dryer – Single-Family
 - Heat Pump Clothes Dryer – Multifamily
- Outdoor Equipment
 - Riding Lawn Mower
 - Push Lawn Mower
 - String Trimmer, Edger, Hedge Trimmer
 - Chainsaw
 - Leaf Blower
 - Snow Blower
- Transportation
 - E-bike (Extra incentive available for income-qualified customers)
- Other
 - Heat Pump Pool Water Heater

Commercial Measures

- Outdoor Equipment
 - Riding Lawn Mower
 - Push Lawn Mower
 - String Trimmer, Edger, Hedge Trimmer
 - Leaf Blower
 - Chainsaw
- Material Handling
 - Forklift – Lead Acid Battery
 - Forklift – Lithium Ion Battery

The measure characterization including avoided fossil fuel, added kWh load, and measure life are sourced as follows:

Air Source Heat Pump	MEMD: Prototype modeling
Heat Pump Water Heater	MEMD: FES-C9e Electrification of Residential Water Heaters
Heat Pump Clothes Dryer	MEMD: FES-C16e Electrification of Residential Clothes Dryer
Induction Cooktop	MEMD: FES-C29 Residential Induction Cooktop
All other measures	Vermont 2023 Tier III TRM Characterizations ⁵

Implementation Strategy

Delivery Mechanisms

- Direct-to-customer rebates via online portal

⁵ <https://publicservice.vermont.gov/document/2023-tier-iii-trm-characterizations>

	<ul style="list-style-type: none"> Point-of-sale buydowns with local retailers (e.g., bike shops, lawn equipment dealers) Contractor-led installations for HVAC and water heating <p>Cost-Effectiveness Oversight</p> <ul style="list-style-type: none"> Apply E-RIM screening at the portfolio level Document measure-level kWh added, fossil fuel savings, and net MMBtu impact Exclude measures that significantly jeopardize portfolio-level E-RIM unless strategically justified <p>Coordination with Trade Allies and Retailers</p> <ul style="list-style-type: none"> Identify and enroll participating equipment dealers and contractors Train local retailers on incentive eligibility and program branding <p>Market Development</p> <ul style="list-style-type: none"> Promote awareness of electrification through BWL communications and community outreach Educate customers on the benefits of switching from fossil fuel to efficient electric options 												
Marketing Strategy	<p>Outreach will focus on early adopters and likely equipment replacement cycles (e.g., failed water heater, aging gas furnace, lawn equipment turnover).</p> <p>Marketing channels will include:</p> <ul style="list-style-type: none"> BWL website and newsletter In-store signage at partner retailers Incentive sheets for trade allies and customers Social media, customer webinars, and community events Targeted email campaigns based on fuel type or equipment ownership 												
EM&V Requirements	<p>Quantify site-level MMBtu changes by converting avoided therms, gallons gasoline, and kWh added into net MMBtu.</p> <p>Track E-RIM compliance with electric revenue from added kWh, avoided fuel costs, and measure cost (incentives, admin, delivery). Report measure-level performance annually and adjust eligibility if needed.</p>												
Estimated Participation	<table border="1"> <thead> <tr> <th colspan="4">Participation (in Units of Installed Measures)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>243</td> <td>263</td> <td>285</td> <td>305</td> </tr> </tbody> </table>	Participation (in Units of Installed Measures)				2026	2027	2028	2029	243	263	285	305
Participation (in Units of Installed Measures)													
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Estimated Budget	<table border="1"> <thead> <tr> <th colspan="4">Annual Budget (Real 2025 Dollars)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>\$183,059</td> <td>\$214,113</td> <td>\$256,157</td> <td>\$287,211</td> </tr> </tbody> </table>	Annual Budget (Real 2025 Dollars)				2026	2027	2028	2029	\$183,059	\$214,113	\$256,157	\$287,211
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Savings Targets	<table border="1"> <thead> <tr> <th colspan="4">Net Savings (Gross Annual MWh at Meter)</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>820</td> <td>1,003</td> <td>1,239</td> <td>1,422</td> </tr> </tbody> </table>	Net Savings (Gross Annual MWh at Meter)				2026	2027	2028	2029	820	1,003	1,239	1,422
Net Savings (Gross Annual MWh at Meter)													
2026	2027	2028	2029										
820	1,003	1,239	1,422										

	<p>Electrification savings reported by BWL are calculated by converting net MMBtu savings into equivalent kWh savings. Net MMBtu savings represent the total reduction in fossil fuel consumption (converted to MMBtu) minus the additional electric load (also expressed in MMBtu) resulting from electrification.</p>															
<p><i>E-RIM Benefit-Cost Test Results</i></p>	<table border="1"> <thead> <tr> <th colspan="4">E-RIM Benefit-Cost Test Ratio</th> </tr> <tr> <th>2026</th> <th>2027</th> <th>2028</th> <th>2029</th> </tr> </thead> <tbody> <tr> <td>1.7</td> <td>1.8</td> <td>1.8</td> <td>1.8</td> </tr> </tbody> </table>				E-RIM Benefit-Cost Test Ratio				2026	2027	2028	2029	1.7	1.8	1.8	1.8
E-RIM Benefit-Cost Test Ratio																
2026	2027	2028	2029													
1.7	1.8	1.8	1.8													

3 ELIGIBLE EWR MEASURES

Measure eligibility was determined based on many factors. These included Michigan Energy Measures Database (MEMD) incremental cost and energy savings data, incentives, implementation costs and several utility supply factors. During the Plan implementation period, measures may be added or removed based on market response, technology availability, changes to the MEMD data and changes in efficiency standards. Residential measures by program are shown in Table 10. Commercial and Industrial measures are listed in Table 11.

Table 10. BWL Residential EWR Measures by Program

Residential Measures
Income Eligible
Refrigerator Recycling
Pipe Wrap R3 - Electric Water Heater
Low Flow Showerheads (1.5 GPM) - Residential
Low Flow Bathroom Faucet Aerators - Residential
Low Flow Kitchen Faucet Aerators - Residential
Refrigerators/Freezers ENERGY STAR - Top Freezer
ENERGY STAR Portable Dehumidifier
Dehumidifier Recycling
ENERGY STAR Room AC less than 8,000 BTU hr
ENERGY STAR Room AC greater than or equal to 8,000 BTU hr
Room A/C Recycling
Window Film Insulation Kit
Smart/Wi-Fi Thermostat, Moderate Setback, Combo Customer
ENERGY STAR Continuous Bathroom Exhaust Fan
Basement wall insulation uninsulated base to R-20
Ceiling insulation R-11 base to R-49
Infiltration reduction - 30%
Wall insulation uninsulated base to R-7
Duct sealing 25% leakage base bsmt to 3%
DI-Smart Strip- AV Systems
LED Bulbs A-Line 60w
LED Bulbs A-Line 75w
LED Bulbs A-Line 100w
LED Globes <=8w
LED Candelabra <=5w
High Efficiency Appliances
ENERGY STAR Room AC less than 8,000 BTU hr
ENERGY STAR Room AC greater than or equal to 8,000 BTU hr
ENERGY STAR Portable Dehumidifier
ENERGY STAR Air Purifier CADR 51-100
ENERGY STAR Air Purifier CADR 101-150
ENERGY STAR Air Purifier CADR 151-200
ENERGY STAR Air Purifier CADR 201-250

ENERGY STAR Air Purifier CADR Over 250
Clothes Washer ENERGY STAR, Gas water heater, Electric dryer
Clothes Washer ENERGY STAR, Electric Water heater, Gas Dryer
Clothes Washer ENERGY STAR, Electric Water heater, Electric Dryer
ENERGY STAR Electric Clothes Dryer
Energy Star Heat Pump Clothes Dryer
Refrigerators Freezers ENERGY STAR - Side by Side
Refrigerators Freezers ENERGY STAR - Top Freezer
Refrigerators Freezers ENERGY STAR - Bottom Freezer
Freezers ENERGY STAR - Chest Freezer
Freezers ENERGY STAR - Upright Freezer
Freezers ENERGY STAR - Compact Freezer
ENERGY STAR Dishwasher - gas water heater
ENERGY STAR Dishwasher - elec water heater
Energy Star 9 TV (31-40")
Energy Star 9 TV (41-50")
Energy Star 9 TV (51-60")
Energy Star 9 TV (>60")
ENERGY STAR In Ground Swimming Pool Pumps
ENERGY STAR Whole Home Dehumidifier
ENERGY STAR Continuous Bathroom Exhaust Fan
DI-Smart Strip- AV Systems
High Efficiency HVAC
Furnace/AC - SEER2 15.2
Furnace/AC - SEER2 16
Furnace/AC - SEER2 17
Furnace/AC - SEER2 18
Furnace/AC - SEER2 19
Furnace/AC - SEER2 20
Furnace/AC - SEER2 21
Furnace/AC - SEER2 22
Furnace/AC - SEER2 23
ASHP - SEER2 15.2
ASHP - SEER2 16
ASHP - SEER2 16.5
ASHP - SEER2 17
ASHP - SEER2 17.5
ASHP - SEER2 18
ASHP - SEER2 18.5
ASHP - SEER2 19
ASHP - SEER2 19.5
ASHP - SEER2 20
ASHP - SEER2 20.5
ASHP - SEER2 21
ASHP - SEER2 21.5
ASHP - SEER2 22

ASHP - SEER2 22.5
ASHP - SEER2 23
Minisplit <25 SEER2 per SEER2 base ASHP-SEER2
ENERGY STAR Heat Pump Water Heater
O&M Tune-up
Smart/Wi-Fi Thermostat, Moderate Setback, Combo Customer
Basement wall insulation uninsulated base to R-20
Ceiling insulation R-11 base to R-49
Infiltration reduction - 30%
Wall insulation uninsulated base to R-7
Duct sealing 25% leakage base bsmt to 3%
Appliance Turn-in and Recycling
Refrigerator Recycling
Freezer Recycling
Dehumidifier Recycling
Room AC Recycling
Small Refrigerator Recycling
Small Freezer Recycling
Multifamily
Low Flow Showerheads (1.5 GPM) - Multifamily
Low Flow Bathroom Faucet Aerators - Multifamily
Low Flow Kitchen Faucet Aerators - Multifamily
Energy Star Clothes Washer - Elec WH, Elec Dryer
Energy Star Heat Pump Clothes Dryer
Fluorescent Fixture Relamping with TLED - One T12 4' replaced by One TLED 4' - Multifamily Common Area
Fluorescent Fixture Relamping with TLED - One T8 4' replaced by One TLED 4' - Multifamily Common Area
Fluorescent Fixture Relamping with TLED - One T5 4' replaced by One TLED 4' - Multifamily Common Area
Energy Efficient Exterior Lighting (>=11 hrs/day) - Multifamily Common Area
Interior Occupancy or Daylight Sensor - Multifamily Common Area
One T12 4ft Lamp Replaced by One TLED 4ft Lamp - Multifamily In-Unit
One T8 4ft Lamp Replaced by One TLED 4ft Lamp - Multifamily In-Unit
Residential New Construction
All Electric Residential New Construction

Table 11. BWL Commercial & Industrial EWR Measures by Program

Commercial & Industrial Measures
Prescriptive & Custom
Air Compressor Outdoor Air Intake
Compressed Air Audits & Leak Repair -Non VSD - Average
Compressed Air Audits & Leak Repair-VSD - Average
Cycling Compressed Air Dryer replacing non-cycling - thermal mass
Cycling Compressed Air Dryer replacing non-cycling - VSD
Dew-Point Sensor Control for Desiccant CA Dryer
Engineered Nozzles Compressed Air, 2,000 hrs, 1/4" Dia.
No-Loss Condensate Drains
Two Stage Rotary Screw Air Compressors (VSD/VD/LNL types)
VSD Air Compressor Replacement (< 50-HP), 1 shift (2,080 hrs/yr)
VSD Air Compressors
Chiller Tuneup Savings Average
Commercial Smart thermostat - Average
Computer Room Air Conditioner Glycol Economizer Glycol Cooled Class 1
Computer Room Air Conditioner Glycol Economizer Glycol Cooled Class 3
Data Room Hot Cold Aisle Configuration >10 deg, based on Air Cooled Class 1
Dehumidification for indoor horticultural facilities > 155 to ≤ 478 Pint/Day Capacity
ECM motors on furnaces
Guest Room Energy Management, Gas Heating Electric Cooling
High Efficiency CRAC Air Cooled Class 3
High Efficiency CRAC Glycol Cooled Class 1
HVAC Occ Sensor
HVAC Reduction in Interior Horticultural Grow Rooms < 6570 hrs
PTHP > 15kBtu/hr PTAC base
PTHP 7kBtu/hr - 15kBtu/hr PTAC base
VFD Fan
VFD for HVAC Fans - Fixed Speed, Tier 1, 51 to 54 Hz ECM
VFD HW Pump
1L 2' LED Tube replacing T8 1L 2' lamp
1L 3' LED Tube replacing T8 1L 3' Lamp
1L 4' LED Tube replacing T12 1L 4' lamp
1L 4' LED tube replacing T5 1L 4'
1L 4' LED Tube replacing T8 1L 4' lamp
1L 8' LED tube replacing T12 1L 8' lamp (50/50 magnetic/electronic ballast)
2L 4' LED tube replacing T12 1L 8'
Delamping T12 (per lamp) 4ft
Delamping T12 (per lamp) 8ft
Delamping T8 (per lamp) 4ft
Exterior BiLevel (W controlled base)
Exterior HID replacement LED/Induction
Garage HID replacement LED/Induction
Interior Non Highbay/Lowbay LED Fixtures - 1 shift/Commercial

LED A-line 1100-1599 Lumen output replacing CFL - ER
LED A-line 1100-1599 Lumen output replacing Incandescent/Halogen - ER
LED A-line 1600-1999 Lumen output replacing CFL - ER
LED A-line 1600-1999 Lumen output replacing Incandescent/Halogen - ER
LED A-line 450-799 Lumen output replacing CFL - ER
LED A-line 800-1099 Lumen output replacing CFL - ER
LED A-line 800-1099 Lumen output replacing Incandescent/Halogen - ER
LED Candelabra <= 5W - ER
LED Downlight - ER
LED Exit Signs Electronic Fixtures (Retrofit Only)
LED Globe <= 8W - ER
LED Grow Light - Tier 1 - New Construction
LED Grow Light - Tier 1 - Retrofit
LED Grow Light - Tier 2 - New Construction
LED Grow Light - Tier 2 - Retrofit
LED High Bay (per kW saved) - 1 Shift and Commercial
LED Low Bay (per kW reduced) - 24/7 operation
LED Low Bay (per kW saved base) - 2 shifts
LED MR16 <=6W
LED PAR/R/BR <= 15.5W - ER
LED PAR/R/BR <= 6W replacing CFL - ER
Networked Lighting Controls
Occupancy and Daylight Sensor (connected load base)
Occupancy Sensors (connect load base)
VFD for Process Fans -CRAC units
VFD for Process Fans under 50 Hp ECM
VFD Process Pumping
Door Gaskets - Cooler and Freezer
Evaporator Fan Motor Controls on ECM motors
Heatless Door without ASH Control
LED Refrigerator Case Lighting per Linear Foot
Strip Curtains - Cooler
Strip Curtains - Freezer
Custom Lighting
Custom Non-Lighting
LED High Bay (per kW reduced) - 24/7 operation
LED High Bay (per kW saved base) (2 shifts)
Anti Sweat Heater Control - Grocery
ENERGY STAR Commercial Solid Door Refrigerators less than 15ft ³
ENERGY STAR Commercial Solid Door Freezers less than 15ft ³
ENERGY STAR Ice Machines less than 500 lbs
ECM Cooler and Freezer Motors - ECM replacing SP
Illuminated Signs to LED - Interior
Illuminated Signs to LED - Exterior
Daylight Sensor controls, per watt controlled
Stairwell Bi-Level Control

ECM Cooler and Freezer Motors - ECM replacing PSC
Total ERV Indoor Ag
Variable Displacement Air Compressor
Cycling Compressed Air Dryer replacing non-cycling - Digital Scroll
Desiccant to Refrigerated Air Dryers
Heat-of-Compression Air Dryer
Blower Purge Desiccant Air Dryer on LNL Compressor
Blower Purge Desiccant Air Dryer on VD Compressor
Blower Purge Desiccant Air Dryer on VSD Compressor
Low Pressure Drop Filters
Compressed Air Pressure Flow Controller replacing no flow controller
Pneumatic Tools Replacement with Electric Tools - cordless
Pneumatic Tools Replacement with Electric Tools - corded
Compressed Air Replacement with Air Blowers
Compressed Air Storage Tank (≤ 1 gal/cfm baseline)
Compressed Air Storage Tank (≤ 3 gal/cfm baseline)
Compressed Air Storage Tank (≤ 5 gal/cfm baseline)
Occupancy Sensors for LED Refrigerator Lighting
Night Covers
3-phase High Frequency Battery Charger - 1 shift
3-phase High Frequency Battery Charger - 2 shifts
3-phase High Frequency Battery Charger - 3 shifts
ENERGY STAR Heat Pump Storage Water Heater, ≤ 55 gallons
HP Water Heater 10 to 50 MBH
VFD for Process Fans under 50 Hp
Small Business Direct Install
AC $< 65k$ Split System SEER2 15.2- 1 Ph
ASHP $< 65k$ Split System SEER2 15.2 HSPF2 7.8 - 1 Ph
Commercial Smart thermostat
1L 2' LED Tube replacing T12 1L 2' lamp
1L 2' LED Tube replacing T8 1L 2' lamp
1L 4' LED Tube replacing T12 1L 4' lamp
1L 4' LED Tube replacing T8 1L 4' lamp
1L 8' LED tube replacing T12 1L 8' lamp (50/50 magnetic/electronic ballast)
1L 8' LED tube replacing T8 1L 8' lamp
Delamping T12 (per lamp) 4ft
Delamping T8 (per lamp) 4ft
Exterior HID replacement LED/Induction
LED A-line 1100-1599 Lumen output replacing CFL - ER
LED A-line 1600-1999 Lumen output replacing Incandescent/Halogen - ER
LED A-line 800-1099 Lumen output replacing Incandescent/Halogen - ER
LED Candelabra $\leq 5W$ - ER
LED Exit Signs Electronic Fixtures (Retrofit Only)
LED PAR/R/BR $\leq 15.5W$ - ER
Occupancy Sensors (connect load base)
Anti Sweat Heater Control

Automatic Door Closers for Refrigerated Walk-in Coolers/Freezers
Door Gaskets - Cooler and Freezer
ECM Cooler and Freezer Motors - ECM replacing SP
ENERGY STAR Commercial Glass Door Refrigerators 30 to 50ft3
ENERGY STAR Commercial Solid Door Freezers 15 to 30 ft3
LED Refrigerator Case Lighting per Linear Foot
Refrigerator Recycling (2026 per unit savings)
Strip Curtains - Cooler
Strip Curtains - Freezer
LED Downlight - ER
LED MR16 <=6W
Delamping T12 (per lamp) 8ft
Occupancy and Daylight Sensor (connected load base)
Daylight Sensor controls, per watt controlled
Illuminated Signs to LED - Interior
Illuminated Signs to LED - Exterior
PTHP > 15kBtu/hr PTAC base - Motel
PTHP 7kBtu/hr - 15kBtu/hr PTAC base -Motel
Occupancy Sensors for LED Refrigerator Lighting
ECM Cooler and Freezer Motors - ECM replacing PSC
Night Covers
Interior Non Highbay/Lowbay LED Fixtures - 1 shift/Commercial