



The Reliable One®

Orlando Utilities Commission

2018 Annual Conservation Report

Demand-Side Management and Conservation Programs Offered in Calendar Year 2017

Prepared by:

nFront Consulting LLC

March 2018





March 1, 2018

Tripp Coston
Florida Public Service Commission
2540 Shumard Oak Blvd
Tallahassee, Florida 32399-0688

Subject: 2018 Orlando Utilities Commission Annual Conservation Report

Dear Mr. Coston

Attached please find an electronic version (in PDF format) of the 2018 Orlando Utilities Commission (OUC) Annual Conservation Report. The 2018 OUC Annual Conservation Report was prepared by nFront Consulting LLC (nFront) and is being submitted by nFront on behalf of OUC.

If you have any questions about this report, please do not hesitate to contact me.

Respectfully submitted,

A handwritten signature in black ink that reads "Bradley Kushner".

Bradley Kushner
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Letter of Transmittal

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1.0 INTRODUCTION

In accordance with Rule 25-17.0021, Florida Administrative Code, the Florida Public Service Commission (FPSC) must establish numeric conservation goals for the Orlando Utilities Commission (OUC) at least once every five years. In addition, OUC must file an annual report showing the status of its numeric conservation goals.

1.1 OUC's Current Approved Numeric Conservation Goals

OUC's residential and commercial/industrial numeric conservation goals for the 2015 through 2024 period were established by the PSC pursuant to Order No. PSC-13-0645-PAA-EU. The FPSC's Consummating Order (PSC-15-0359-CO-EG), issued September 8, 2015, approved OUC's 2015 Demand-Side Management Plan (DSM Plan). The Consummating Order confirmed Order No. PSC-15-0325-PPA-EG, the FPSC Notice of Proposed Agency Action that recommended approval of OUC's DSM Plan. OUC's DSM Plan sets forth the programs that OUC anticipated offering to achieve the numeric conservation goals established by the FPSC. The approved numeric conservation goals are summarized in Section 2.0 of this report, and OUC's actual DSM reductions are presented in Section 3.0 of this report.

1.2 OUC's DSM and Conservation Programs

OUC has been increasingly emphasizing its DSM and conservation programs to increase customer awareness of such programs. Not only do these programs help customers save money by saving energy, the programs help OUC reduce emissions of greenhouse gases and better position OUC to meet possible future greenhouse gas regulations. It should be noted that government mandates have forced manufacturers to increase their efficiency standards, thereby decreasing the incremental amount of energy savings achievable. In addition, the efficiency of new generation has increased and natural gas prices have remained at or near historic lows for the last several years, and look to continue to do so for the near future. These appliance and generating unit efficiency improvements, coupled with low natural gas prices, have mitigated to some degree the effectiveness of DSM and conservation programs, as overall efficiency increases in the marketplace partially offset the benefit of such programs.

The following two sections of this report provide more specific details concerning the DSM and conservation programs offered by OUC in calendar year 2017 (Section 2.0), and present the participation levels and associated numeric savings for each of OUC's quantifiable conservation programs which were offered in 2017 (Section 3.0) consistent with OUC's submitted DSM Plan. As noted in Order No. PSC-15-0325-PAA-EG, annual energy reductions associated with OUC's residential and commercial/industrial energy surveys will no longer be counted towards achieving DSM goals. As such, Tables 3-1 through 3-3 do not reflect energy reductions associated with OUC's energy survey programs.

The conservation programs included in the DSM Plan and offered to OUC's customers in 2017 consist of the following:

- Residential Home Energy Survey Program – Walk-Through and Online
- Residential Duct Repair/Replacement Rebate Program
- Residential Ceiling Insulation Upgrade Rebate Program
- Residential Window Film/Solar Screen Rebate Program
- Residential High Performance Windows Rebate Program

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- Residential Efficient Electric Heat Pump Rebate Program
- Residential New Home Rebate Program
- Residential Efficiency Delivered Program
- Commercial Energy Survey Program
- Commercial Efficient Electric Heat Pump Rebate Program
- Commercial Duct Repair/Replacement Rebate Program
- Commercial Window Film/Solar Screen Rebate Program
- Commercial Ceiling Insulation Upgrade Rebate Program
- Commercial Cool/Reflective Roof Rebate Program

2.0 CONSERVATION GOALS AND DEMAND-SIDE MANAGEMENT PLAN

2.1 Approved Numeric Conservation Goals

Table 2-1 presents the annual peak demand and energy reduction goals established for OUC by the FPSC.

Table 2-1 FPSC's Approved Numeric Conservation Goals for OUC						
Year	Residential Reduction Goals			Commercial/Industrial Reduction Goals		
	Summer (MW)	Winter (MW)	Annual Energy (GWh)	Summer (MW)	Winter (MW)	Annual Energy (GWh)
2015	0.05	0.04	0.14	0.20	0.49	0.34
2016	0.08	0.08	0.30	0.28	0.57	0.50
2017	0.12	0.12	0.45	0.30	0.70	0.66
2018	0.16	0.16	0.60	0.36	0.70	0.75
2019	0.20	0.21	0.72	0.37	0.66	0.82
2020	0.21	0.21	0.77	0.39	0.70	0.85
2021	0.21	0.22	0.80	0.40	0.78	0.86
2022	0.19	0.20	0.72	0.37	0.78	0.85
2023	0.19	0.18	0.66	0.39	0.74	0.82
2024	0.16	0.16	0.57	0.36	0.70	0.80
Total	1.57	1.58	5.73	3.42	6.82	7.25

2.2 OUC's DSM and Conservation Programs

The FPSC has established residential and commercial/industrial conservation goals for OUC for the 2015 through 2024 period (refer to Table 2-1). The programs that OUC offered during calendar year 2017 are described in the following subsections. Program incentives included in the descriptions are current as of the time this report was prepared.

2.2.1 Energy Survey Programs

2.2.1.1 Residential Home Energy Survey Program

OUC has been offering home energy surveys dating back to the late 1970's. The home energy walk-through surveys were designed to provide residential customers with recommended energy efficiency

measures and practices customers can implement. The Residential Energy Survey Program consists of two measures: the Residential Energy Walk-Through Survey and an interactive Online Energy Survey. These measures are available to both single family and multi-family residential customers.

The Residential Energy Walk-Through Survey includes a complete examination of the attic; heating, ventilation, and air conditioning (HVAC) system; air duct and air returns; window caulking; weather stripping around doors; faucets and toilets; and lawn sprinkler systems. OUC provides participating customers specific tips on conserving electricity and water as well as details on customer rebate programs. OUC Conservation Specialists are using this walk-through type audit as a means of motivating OUC customers to participate in other conservation programs and qualify for appropriate rebates.

In addition to the Energy Walk-Through, OUC offers customers an interactive Online Home Energy Audit. The Online Home Energy Audit walks the customer through a complete visual assessment of energy and water efficiency in his or her home. The online audit has several benefits over the walk-through survey, including the convenience of viewing it at any time without a scheduled appointment and the ability to conduct it numerous times. The interactive Online Home Energy Audit is available on OUC's web site at <http://www.OUC.com/energyaudit>.

One of the primary benefits of the Residential Energy Survey Program is the education it provides to customers on energy conservation measures and ways their lifestyle can directly affect their energy use. Customers participating in the Energy Survey Program are informed about conservation measures that they can implement. Customers will benefit from the increased efficiency in their homes, and decreased electric and water bills.

Participation in the Walk-Through Energy Survey has been consistently strong over the past several years and interest in the interactive Online Home Energy Audit has been high since the measure was first introduced. Feedback from customers who have taken advantage of the surveys has been very positive.

The Home Energy Audit rates how efficient a customer's home energy use is and where one can make improvements to lower utility bills. Participation is tracked through service orders that are produced when appointments are scheduled and completed. Online Surveys are tracked through the service provider (Schneider), who produces monthly activity reports.

2.2.1.2 Commercial Energy Survey Program

The Commercial/Industrial Energy Survey Program has been offered for several years and is focused on increasing the energy efficiency and energy conservation of commercial buildings and includes a free survey comprised of a physical walk-through inspection of the commercial facility performed by highly trained and experienced energy experts. The survey will examine heating and air conditioning systems including duct work, refrigeration equipment, lighting, water heating, motors, process equipment, and the thermal characteristics of the building including insulation. Following the inspection the customer receives a written report detailing cost-effective recommendations to make the facility more energy and water efficient. Participating customers are encouraged to participate in other OUC commercial programs and directly benefit from energy conservation, which decreases their electric and water bills.

OUC customers can participate by calling the OUC Customer Service Call Center and requesting an appointment for a Walk-Through Energy. Participation is tracked through service orders that are produced when appointments are scheduled and completed.

2.2.2 Rebate Programs

The following outlines the various rebate programs OUC offers to its customers. Customers can participate by submitting a rebate application online at <http://www.OUC.com/rebates>. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

2.2.2.1 Residential Duct Repair/Replacement Rebate Program

The Duct Repair Rebate Program originated in 2000 and is designed to encourage customers to repair leaking ducts on existing systems. To qualify, ducts must be sealed with mastic and fabric tape or any other Underwriters Laboratory (UL) approved duct tape on all accessible boots, joints and seams of the air duct system in both the attic and in any accessible air handler closet. Any penetration of the air duct system through the ceiling must be enclosed with a proper draft stop seal. Participating customers receive a rebate for 100 percent of the cost of duct repairs on their homes, up to \$100.

2.2.2.2 Residential Ceiling Insulation Upgrade Rebate Program

The attic is the easiest place to add insulation and lower total energy costs throughout the seasons. The Ceiling Insulation Rebate Program has been offered for several years and is designed to encourage customers to upgrade their attic insulation. Participating customers receive \$0.10 per square foot for upgrading their attic insulation to R-30 or higher.

2.2.2.3 Residential Window Film/Solar Screen Rebate Program

Installing window film on pre-existing homes can help reflect the heat during hot summer days and help the efficiency of home cooling units. The Window Film/Solar Screen Rebate Program has been offered for several years and is designed to encourage customers to install solar shading on their windows. Participating customers will receive a rebate in the amount of \$0.55 per square foot for installation of solar shading film with a shading coefficient of 0.5 or less on east-, west, and south-facing windows. ENERGY STAR® qualified double pane windows do not qualify for this rebate.

2.2.2.4 Residential High Performance Windows Rebate Program

Energy-efficient windows can help minimize heating, cooling, and lighting costs. The High Performance Windows Rebate Program has been offered for several years and is designed to encourage customers to install windows that improve energy efficiency in their homes. Customers will receive a \$1.50 rebate per square foot for the purchase of energy-efficient windows that are National Fenestration Rating Council certified and meet ENERGY STAR® southern regionally-accepted standards of a U-Factor of 0.4 or less and a Solar Heat Gain Coefficient of 0.25 or less.

2.2.2.5 Residential Efficient Electric Heat Pump Rebate Program

The Efficient Electric Heat Pump Rebate Program provides rebates to qualifying customers in existing homes who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from \$90 to \$1,630, depending upon the SEER rating and capacity (tons) of the new heat pump. The following table illustrates the incentives available depending on the size and efficiency of the Heat Pump installed.

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AC Size (Tons)	SEER Upgraded To:								
	15	16	17	18	19	20	21	22	23
1	-	-	\$95	\$135	\$170	\$205	\$230	\$260	\$280
1.5	-	\$105	\$175	\$230	\$285	\$330	\$375	\$415	\$450
2	-	\$160	\$250	\$325	\$400	\$460	\$520	\$570	\$620
2.5	\$90	\$215	\$325	\$425	\$510	\$590	\$660	\$725	\$785
3	\$115	\$270	\$400	\$520	\$625	\$720	\$805	\$885	\$955
3.5	\$145	\$320	\$475	\$615	\$740	\$850	\$950	\$1,040	\$1,125
4	\$175	\$375	\$550	\$710	\$850	\$975	\$1,090	\$1,195	\$1,290
5	\$230	\$485	\$705	\$900	\$1,075	\$1,235	\$1,380	\$1,510	\$1,630

2.2.2.6 Residential New Home Rebate Program

Previously named The Residential Gold Ring Home Program, the program has been transformed into a more flexible “a la carte” program offering a variety of choices for the builder or home buyer. This transformation was based on feedback OUC received from the residential building community in order to increase the level of participation in OUC’s program. The table below reflects an example of the incentives available.

Rebates	Rate of Rebates
1. Ceiling Insulation Upgrade: Final R-Values greater than R-30 is required to receive this rebate.	(\$0.03 per sq. ft.) when processed with heat pump or ENERGY STAR® heat pump water heater
2. Heat Pump: Provide and upload a copy of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Certificate or the AHRI Reference number. Only SEER ratings of 15 or higher qualify.	(From \$90-\$1,635)
3. ENERGY STAR® Heat Pump Water Heater: Proof of Energy Star qualification is required to receive rebate.	(100% of cost up to \$500)

Applications for the rebates must be submitted within six months from the closing date. Any existing construction is not eligible for this program.

2.2.2.7 Residential Efficiency Delivered Program

What was once referred to as the Home Energy Fix-Up Program has been revamped and expanded to allow for any OUC customer (both energy and water) to participate and renamed the Efficiency Delivered program. The program is available to residential customers (single family homes) and provides up to \$2,000 of energy and water efficiency upgrades based on the needs of the customer’s home. A Conservation Specialist from OUC performs a survey at the home and determines which home improvements have the potential of saving the customer the most money. The program is an income based program which is the basis for how much OUC will help contribute toward the cost of improvements and consists of three household income tiers:

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Household Income	OUC Contribution
Less than \$40,000	85% (not to exceed \$1,700)
\$40,001–\$60,000	50% (not to exceed \$1,000)
Greater than \$60,000	Rebates only

- \$40,000 or less OUC will contribute 85 percent of the total cost (not to exceed \$1,700),
- \$40,001 to \$60,000 OUC will contribute 50 percent of the total cost (not to exceed \$1,000),
- greater than \$60,000 OUC will contribute the rebate incentives that apply toward the total cost.

Each customer must request and complete a free Residential Energy Survey. Ordinarily, Energy Survey recommendations require a customer to spend money replacing or adding energy conservation measures; however, customers may not have the discretionary income to implement these measures (especially those in the lower income tier). Under this program, OUC will arrange for a licensed, approved contractor to perform the necessary repairs based on a negotiated and contracted rate. The remaining portion of the cost the customer is responsible for can be paid directly to OUC or over an interest-free 12-month period on the participant's monthly electric bill. To be eligible for this program, the customer's account must be in good credit standing with the exception of low-income customers, who are only required to have a current balance. Some of the improvements covered under this program include ceiling insulation, duct system repair, pipe insulation, window film, window caulk, door caulk, door weather stripping, door sweep, threshold plate, air filter replacement, toilet replacement, irrigation repairs, water flow restrictors and minor plumbing repairs.

The purpose of the program is to reduce energy and water costs, especially for low-income households, and particularly those households with elderly persons, disabled persons and children. Through this program, OUC helps to lower the bills of customers who may have difficulty paying their bills, thereby decreasing the potential for costly service disconnect fees and late charges. OUC believes that this program will help customers afford other essential living expenses. For others, this program offers a one-stop-shop to facilitate the implementation of a whole suite of conservation measures at reasonable costs and pre-screened qualified contractors.

Efficiency Delivered contractor(s) are selected through a Request for Proposal (RFP) process on a routine basis. Eligible customers are referred to the participating contractor after the OUC Conservation Specialist inspection is complete. The Efficiency Delivered contractor then inspects the home and creates a proposal to install eligible measures. Once the customer accepts the proposal and signs the agreement the contractor calls the customer and schedules the work. Typically the work is completed within 45 days. Upon receipt of notice of completion and customer acceptance, payment to the contractor is processed and the customer's share of the conservation improvements is billed. Participation is tracked based on completed installations.

2.2.2.8 Commercial Efficient Electric Heat Pump Rebate Program

The Commercial Heat Pump Rebate Program provides rebates to qualifying customers in existing buildings who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from \$90 to \$1,630, depending upon the SEER

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rating and capacity (tons) of the new heat pump. The following table illustrates the incentives available depending on the size and efficiency of the heat pump installed.

AC Size (Tons)	SEER Upgraded To:								
	15	16	17	18	19	20	21	22	23
1	-	-	\$95	\$135	\$170	\$205	\$230	\$260	\$280
1.5	-	\$105	\$175	\$230	\$285	\$330	\$375	\$415	\$450
2	-	\$160	\$250	\$325	\$400	\$460	\$520	\$570	\$620
2.5	\$90	\$215	\$325	\$425	\$510	\$590	\$660	\$725	\$785
3	\$115	\$270	\$400	\$520	\$625	\$720	\$805	\$885	\$955
3.5	\$145	\$320	\$475	\$615	\$740	\$850	\$950	\$1,040	\$1,125
4	\$175	\$375	\$550	\$710	\$850	\$975	\$1,090	\$1,195	\$1,290
5	\$230	\$485	\$705	\$900	\$1,075	\$1,235	\$1,380	\$1,510	\$1,630

2.2.2.9 Commercial Duct Repair Rebate Program

The Duct Repair Rebate program started in 2009. OUC will rebate 100 percent of cost, up to \$100. To qualify, ducts must be sealed with mastic and fabric tape or Underwriters Laboratory (UL) approved duct tape on all accessible boots, joints and seams of the air duct system in both the attic and in any accessible air handler closet. Any penetration of the air duct system through the ceiling must be enclosed with a proper draft stop seal.

2.2.2.10 Commercial Window Film/Solar Screen Rebate Program

The Commercial Window Film/Solar Screen rebate program started in 2009 and is designed to help reflect the heat during hot summer days and retain heat on cool winter days. OUC will rebate customers \$0.55 per square foot for window tinting and solar screening with a shading coefficient of 0.5 or less on east-, west- and south-facing windows. ENERGY STAR® qualified double pane windows do not qualify for this rebate.

2.2.2.11 Commercial High Performance Windows Rebate Program

Energy-efficient windows can help minimize heating, cooling, and lighting costs. Customers will receive a \$1.50 rebate per square foot for the purchase of energy-efficient windows that are National Fenestration Rating Council certified and meet ENERGY STAR® southern regionally-accepted standards of a U-Factor of 0.4 or less and a Solar Heat Gain Coefficient of 0.25 or less.

Customers can participate by submitting a rebate application form available online at <http://www.OUC.com>. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer’s bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

2.2.2.12 Commercial Ceiling Insulation Upgrade Rebate Program

The Commercial Ceiling Insulation Rebate Program started in 2009 and was designed to increase a building’s resistance to heat loss and gain. Participating customers receive \$0.10 per square foot, for upgrading their attic insulation to R-30 or higher.

2.2.2.13 Commercial Cool/Reflective Roof Rebate Program

The Commercial Cool/Reflective Roof Rebate Program started in 2009 and was designed to reflect the sun's rays and lower roof surface temperature while increasing the lifespan of the roof. OUC will rebate customers at \$0.12 per square foot for ENERGY STAR® cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.

3.0 STATUS OF OUC’S APPROVED NUMERIC GOALS

Tables 3-1 through 3-3 illustrate OUC’s actual demand and energy reductions versus the peak demand and energy reductions approved by the FPSC. As shown in Tables 3-1 through 3-3, OUC exceeded each of the FPSC-approved peak demand and energy reductions in 2017 [i.e. summer and winter peak demand (kW) and annual energy (MWh) for residential and commercial/industrial customer classes].

As noted in Order No. PSC-15-0325-PAA-EG, annual energy reductions associated with OUC’s residential and commercial/industrial energy surveys will no longer be counted towards achieving DSM goals. As such, Tables 3-1 through 3-3 do not reflect energy reductions associated with OUC’s survey programs. Table 3-4 lists the summer and winter peak demand (kW) and annual energy (MWh) reductions for each of the programs included in the demand and energy reductions presented in Tables 3-1 through 3-3.

Tables 3-5 through 3-16 present the annual demand and energy savings for the rebate programs offered by OUC during calendar year 2017 (as discussed in Order No. PSC-15-0325-PAA-EG) and as discussed in Section 2.0 of this report. Each table also includes the actual program costs and participation for 2017 and participation projections for years 2018 through 2024, unless otherwise noted. The utility costs associated with the programs have been updated based on actual costs incurred during calendar year 2017. Unless otherwise noted, actual cumulative penetration rates for each program reflect 2015 as the base year and do not consider customer participation prior to 2015.

Table 3-1 Comparison of Actual Conservation Reductions to FPSC’s Approved Numeric Conservation Goals – Residential Programs						
Year	Winter Peak kW Reduction		Summer Peak kW Reduction		MWh Energy Reduction	
	Achieved Reduction	FPSC- Approved Goal	Achieved Reduction	FPSC- Approved Goal	Achieved Reduction	FPSC- Approved Goal
2015	369	40	447	50	845	140
2016	409	80	482	80	1,161	300
2017	314	120	416	120	826	450
2018		160		160		600
2019		210		200		720
2020		210		210		770
2021		220		210		800
2022		200		190		720
2023		180		190		660
2024		160		160		570

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Table 3-2 Comparison of Actual Conservation Reductions to FPSC’s Approved Numeric Conservation Goals – Commercial/Industrial Programs						
Year	Winter Peak kW Reduction		Summer Peak kW Reduction		MWh Energy Reduction	
	Achieved Reduction	FPSC-Approved Goal	Achieved Reduction	FPSC-Approved Goal	Achieved Reduction	FPSC-Approved Goal
2015	743	490	2,181	200	13,367	340
2016	1,297	570	2,528	280	12,259	500
2017	4,442	700	5,037	300	31,008	660
2018		700		360		750
2019		660		370		820
2020		700		390		850
2021		780		400		560
2022		780		370		850
2023		740		390		820
2024		700		360		800

Note: OUC is working with the City of Orlando to retrofit existing streetlights with more efficient LED lighting. The demand and energy reductions corresponding to the City of Orlando’s streetlight retrofit program are included in the total achieved reductions reflected in this table. Demand and energy reductions from OUC’s Indoor Lighting Rebates, Indoor Lighting Billed Solutions, and Custom Incentives are included in the total achieved reductions reflected in this table. See Table 3-4 for the winter peak kW, summer peak kW, and MWh energy reductions associated with these programs.

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Table 3-3 Comparison of Actual Conservation Reductions to FPSC’s Approved Numeric Conservation Goals – Residential and Commercial/Industrial Programs						
Year	Winter Peak kW Reduction		Summer Peak kW Reduction		MWh Energy Reduction	
	Achieved Reduction	FPSC-Approved Goal	Achieved Reduction	FPSC-Approved Goal	Achieved Reduction	FPSC-Approved Goal
2015	1,112	530	2,628	250	14,212	480
2016	1,707	650	3,010	360	13,420	800
2017	4,756	820	5,454	420	31,833	1,110
2018		860		520		1,350
2019		870		570		1,540
2020		910		600		1,620
2021		1,000		610		1,360
2022		980		560		1,570
2023		920		580		1,480
2024		860		520		1,370

Note: OUC is working with the City of Orlando to retrofit existing streetlights with more efficient LED lighting. The demand and energy reductions corresponding to the City of Orlando’s streetlight retrofit program are included in the total achieved reductions reflected in this table. Demand and energy reductions from OUC’s Indoor Lighting Rebates, Indoor Lighting Billed Solutions, and Custom Incentives are included in the total achieved reductions reflected in this table. See Table 3-4 for the winter peak kW, summer peak kW, and MWh energy reductions associated with these programs.

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Table 3-4 2017 Program Winter Peak (kW), Summer Peak (kW), and Annual Energy (MWh) Reductions (at the Generator)			
Program	Winter Peak kW Reduction	Summer Peak kW Reduction	MWh Energy Reduction
Residential Programs			
Duct Repair/Replacement Rebates	27.30	20.93	29
Ceiling Insulation Upgrade Rebates	26.74	14.54	38
Window Film/Solar Screen Rebates	-0.44	1.31	4
High Performance Windows Rebates	21.84	36.05	76
Efficient Electric Heat Pump Rebates	158.03	265.00	515
New Home Rebates	44.65	51.63	107
Efficiency Delivered	35.56	26.84	56
Residential Programs Total	314	416	826
Commercial/Industrial Programs			
Efficient Electric Heat Pump Rebates	0.42	0.65	1
Duct Repair/Replacement Rebates	0.30	0.23	0
Window Film/Solar Screen Rebates	-0.03	0.09	0
Ceiling Insulation Upgrade Rebates	8.60	4.68	6
Cool/Reflective Roof Rebates	0.00	280.96	660
LED Streetlighting	236.53	0.00	951
Indoor Lighting Billed Solution	793.00	793.00	5,890
Indoor Lighting Rebates	3126.30	3126.30	19,707
Custom Incentives	277.11	831.33	3,791
Commercial/Industrial Programs Total	4,442	5,037	31,008
Residential and Commercial/Industrial Programs Total	4,756	5,454	31,833

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Table 3-5. Residential Duct Repair/Replacement Rebates

Program Name: Residential Duct Repair Rebate									
Program Start Date: 2015									
Measure: Residential Duct Repair Rebate									
Reporting Period: 2017									

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	195,606	97,803	269	269	0.28%	367	367	0.38%	98
2016	201,941	100,971	269	538	0.53%	140	507	0.50%	(31)
2017	206,989	103,495	269	807	0.78%	91	598	0.58%	(209)
2018	215,105	107,552	269	1,076	1.00%				
2019	222,215	111,107	269	1,345	1.21%				
2020	228,520	114,260	269	1,614	1.41%				
2021	234,342	117,171	269	1,883	1.61%				
2022	240,241	120,120	269	2,152	1.79%				
2023	246,187	123,093	269	2,421	1.97%				
2024	252,169	126,084	269	2,690	2.13%				

Eligibility Level	50.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.22	0.23	20.14	20.93
Winter kW Reduction	0.29	0.30	26.28	27.30
kWh Reduction	306	318	27,852	28,938

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$118	\$10,705
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$100	\$9,132
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$412,546)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 $d = 5.5\%$ = discount rate (utility's after tax cost of capital)
 $n = 10$ = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-6. Residential Ceiling Insulation Upgrade Rebates

Program Name: Residential Ceiling Insulation Rebate									
Program Start Date: 2015									
Measure: Residential Ceiling Insulation Rebate									
Reporting Period: 2017									

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	195,606	48,901	253	253	0.52%	125	125	0.26%	(128)
2016	201,941	48,647	253	506	1.04%	90	215	0.44%	(291)
2017	206,989	48,394	253	759	1.57%	97	312	0.64%	(447)
2018	215,105	48,142	253	1,012	2.10%				
2019	222,215	47,892	253	1,265	2.64%				
2020	228,520	47,643	253	1,518	3.19%				
2021	234,342	47,395	253	1,771	3.74%				
2022	240,241	47,149	253	2,024	4.29%				
2023	246,187	46,904	253	2,277	4.85%				
2024	252,169	46,660	253	2,530	5.42%				

Eligibility Level	25.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.14	0.15	14.00	14.54
Winter kW Reduction	0.27	0.28	25.74	26.74
kWh Reduction	381	396	36,930	38,370

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$146	\$14,194
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$158	\$15,332
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$348,639)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 $d = 5.5\%$ = discount rate (utility's after tax cost of capital)
 $n = 10$ = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-7. Residential Window Film/Solar Screen Rebates

Program Name: Residential Window Film / Solar Screen Rebate	
Program Start Date: 2015	
Measure: Residential Window Film / Solar Screen Rebate	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	195,606	97,803	90	90	0.09%	36	36	0.04%	(54)
2016	201,941	100,971	90	180	0.18%	33	69	0.07%	(111)
2017	206,989	103,495	90	270	0.26%	18	87	0.08%	(183)
2018	215,105	107,552	90	360	0.33%				
2019	222,215	111,107	90	450	0.41%				
2020	228,520	114,260	90	540	0.47%				
2021	234,342	117,171	90	630	0.54%				
2022	240,241	120,120	90	720	0.60%				
2023	246,187	123,093	90	810	0.66%				
2024	252,169	126,084	90	900	0.71%				

Eligibility Level	50.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.07	0.07	1.26	1.31
Winter kW Reduction	-0.02	-0.02	-0.42	-0.44
kWh Reduction	217	225	3,900	4,052

Costs	Per Participant	Program Total
	Utility Nonrecurring Cost	\$83
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$62	\$1,117
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$97,502)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 d = 5.5% = discount rate (utility's after tax cost of capital)
 n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-8. Residential High Performance Windows Rebates

Program Name: Residential High Performance Window Rebate	
Program Start Date: 2015	
Measure: Residential High Performance Window Rebate	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	195,606	97,803	197	197	0.20%	188	188	0.19%	(9)
2016	201,941	100,971	197	394	0.39%	203	391	0.39%	(3)
2017	206,989	103,495	197	591	0.57%	179	570	0.55%	(21)
2018	215,105	107,552	197	788	0.73%				
2019	222,215	111,107	197	985	0.89%				
2020	228,520	114,260	197	1,182	1.03%				
2021	234,342	117,171	197	1,379	1.18%				
2022	240,241	120,120	197	1,576	1.31%				
2023	246,187	123,093	197	1,773	1.44%				
2024	252,169	126,084	197	1,970	1.56%				

Eligibility Level	50.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.19	0.20	34.70	36.05
Winter kW Reduction	0.12	0.12	21.02	21.84
kWh Reduction	409	425	73,146	75,999

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$157	\$28,113
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$251	\$44,925
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$1,570,056)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 d = 5.5% = discount rate (utility's after tax cost of capital)
 n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-9. Residential Efficient Electric Heat Pump Rebates

Program Name: Residential Heat Pump Rebate									
Program Start Date: 2015									
Measure: Residential Heat Pump Rebate									
Reporting Period: 2017									

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	195,606	5,868	1,013	1,013	17.26%	1,057	1,057	18.01%	44
2016	201,941	6,058	1,013	2,026	33.44%	1,126	2,183	36.03%	157
2017	206,989	6,210	1,013	3,039	48.94%	903	3,086	49.70%	47
2018	215,105	6,453	1,013	4,052	62.79%				
2019	222,215	6,666	1,013	5,065	75.98%				
2020	228,520	6,856	1,013	6,078	88.66%				
2021	234,342	7,030	1,013	7,091	100.86%				
2022	240,241	7,207	1,013	8,104	112.44%				
2023	246,187	7,386	1,013	9,117	123.44%				
2024	252,169	7,565	1,013	10,130	133.91%				

Eligibility Level	3.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.28	0.29	255.05	265.00
Winter kW Reduction	0.17	0.18	152.09	158.03
kWh Reduction	549	571	495,900	515,240

Costs	Per Participant	Program Total
	Utility Nonrecurring Cost	\$211
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$339	\$306,150
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$668,710) \quad (\$616,102) \quad (\$275,177) \quad (\$475,674)$
 where: (SEER 15) (SEER 16) (SEER 17) (SEER 18)

B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 d = 5.5% = discount rate (utility's after tax cost of capital)
 n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-10. Residential New Home Rebates

Program Name: New Home Rebate (Formerly Gold Ring)	
Program Start Date: 2015	
Measure: New Home Rebate (Formerly Gold Ring)	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	195,606	2,851	23	23	0.81%	0	0	0.00%	(23)
2016	201,941	2,271	23	46	2.03%	99	99	4.36%	53
2017	206,989	3,652	23	69	1.89%	177	276	7.56%	207
2018	215,105	3,200	23	92	2.88%				
2019	222,215	2,837	23	115	4.05%				
2020	228,520	2,620	23	138	5.27%				
2021	234,342	2,654	23	161	6.07%				
2022	240,241	2,676	23	184	6.88%				
2023	246,187	2,692	23	207	7.69%				
2024	252,169	2,692	23	230	8.54%				

Eligibility Level	45.0%	of new construction
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.28	0.29	49.69	51.63
Winter kW Reduction	0.24	0.25	42.98	44.65
kWh Reduction	584	606	103,307	107,336

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$224.32	\$39,705
Utility Recurring Cost	\$0.00	\$0
Utility Nonrecurring Rebate	\$180.53	\$31,954
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$2,486)$
 where:

- B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
- d = 5.5% = discount rate (utility's after tax cost of capital)
- n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-11. Residential Efficiency Delivered

Program Name: Residential Efficiency Delivered	
Program Start Date: 2015	
Measure: Residential Efficiency Delivered	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	195,606	54,770	197	197	0.36%	588	588	1.07%	391
2016	201,941	56,544	197	394	0.70%	82	670	1.18%	276
2017	206,989	57,957	197	591	1.02%	95	765	1.32%	174
2018	215,105	60,229	197	788	1.31%				
2019	222,215	62,220	197	985	1.58%				
2020	228,520	63,985	197	1,182	1.85%				
2021	234,342	65,616	197	1,379	2.10%				
2022	240,241	67,267	197	1,576	2.34%				
2023	246,187	68,932	197	1,773	2.57%				
2024	252,169	70,607	197	1,970	2.79%				

Eligibility Level	28.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.27	0.28	25.83	26.84
Winter kW Reduction	0.36	0.37	34.22	35.56
kWh Reduction	565	587	53,659	55,751

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$217	\$20,623
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$205	\$19,487
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$504,488)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 $d = 5.5\%$ = discount rate (utility's after tax cost of capital)
 $n = 10$ = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-12. Commercial Efficient Electric Heat Pump Rebates

Program Name: Commercial Heat Pump Rebate									
Program Start Date: 2015									
Measure: Commercial Heat Pump Rebate									
Reporting Period: 2017									

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	29,498	1,377	40	40	2.91%	10	10	0.73%	(30)
2016	29,801	1,391	40	80	5.75%	113	123	8.84%	43
2017	30,165	1,408	40	120	8.52%	1	124	8.81%	4
2018	31,630	1,476	40	160	10.84%				
2019	32,693	1,526	40	200	13.11%				
2020	33,636	1,570	40	240	15.29%				
2021	34,508	1,610	40	280	17.39%				
2022	35,390	1,652	40	320	19.38%				
2023	36,279	1,693	40	360	21.26%				
2024	37,173	1,735	40	400	23.06%				

Eligibility Level	4.7%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.62	0.65	0.62	0.65
Winter kW Reduction	0.41	0.42	0.41	0.42
kWh Reduction	1,285	1,335	1,285	1,335

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$8	\$8
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$330	\$330
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}]$ = (\$3,583)	(\$25,773)	(\$38,124)	(\$32,423)
where:	(SEER 15)	(SEER 16)	(SEER 18)

B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 d = 5.5% = discount rate (utility's after tax cost of capital)
 n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-13. Commercial Duct Repair/Replacement Rebates

Program Name: Commercial Duct Repair Rebate	
Program Start Date: 2015	
Measure: Commercial Duct Repair Rebate	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	29,498	14,749	44	44	0.30%	4	4	0.03%	(40)
2016	29,801	14,901	44	88	0.59%	96	100	0.67%	12
2017	30,165	15,083	44	132	0.88%	1	101	0.67%	(31)
2018	31,630	15,815	44	176	1.11%				
2019	32,693	16,347	44	220	1.35%				
2020	33,636	16,818	44	264	1.57%				
2021	34,508	17,254	44	308	1.79%				
2022	35,390	17,695	44	352	1.99%				
2023	36,279	18,139	44	396	2.18%				
2024	37,173	18,587	44	440	2.37%				

Eligibility Level	50.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.22	0.23	0.22	0.23
Winter kW Reduction	0.29	0.30	0.29	0.30
kWh Reduction	375	390	375	390

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$2	\$2
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$100	\$100
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$261,143)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 $d = 5.5\%$ = discount rate (utility's after tax cost of capital)
 $n = 10$ = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-14. Commercial Window Film/Solar Screen Rebates

Program Name: Commercial Window Film / Solar Screen Rebate	
Program Start Date: 2015	
Measure: Commercial Window Film / Solar Screen Rebate	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	29,498	28,023	9	9	0.03%	6	6	0.02%	(3)
2016	29,801	28,311	9	18	0.06%	1	7	0.02%	(11)
2017	30,165	28,657	9	27	0.09%	1	8	0.03%	(19)
2018	31,630	30,048	9	36	0.12%				
2019	32,693	31,059	9	45	0.14%				
2020	33,636	31,954	9	54	0.17%				
2021	34,508	32,782	9	63	0.19%				
2022	35,390	33,620	9	72	0.21%				
2023	36,279	34,465	9	81	0.24%				
2024	37,173	35,315	9	90	0.25%				

Eligibility Level	95.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.09	0.09	0.09	0.09
Winter kW Reduction	-0.02	-0.03	-0.02	-0.03
kWh Reduction	405	420	405	420

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$2	\$2
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$531	\$531
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$3,853)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 $d = 5.5\%$ = discount rate (utility's after tax cost of capital)
 $n = 10$ = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-15. Commercial Ceiling Insulation Upgrade Rebates

Program Name: Commercial Ceiling Insulation Rebate	
Program Start Date: 2015	
Measure: Commercial Ceiling Insulation Rebate	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	29,498	14,749	7	7	0.05%	13	13	0.09%	6
2016	29,801	14,742	7	14	0.09%	3	16	0.11%	2
2017	30,165	14,735	7	21	0.14%	1	17	0.12%	(4)
2018	31,630	14,728	7	28	0.19%				
2019	32,693	14,721	7	35	0.24%				
2020	33,636	14,714	7	42	0.29%				
2021	34,508	14,707	7	49	0.33%				
2022	35,390	14,700	7	56	0.38%				
2023	36,279	14,693	7	63	0.43%				
2024	37,173	14,686	7	70	0.48%				

Eligibility Level	50.0%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	4.50	4.68	4.50	4.68
Winter kW Reduction	8.28	8.60	8.28	8.60
kWh Reduction	5,742	5,966	5,742	5,966

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$35	\$35
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$7,502	\$7,502
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$3,877)$
 where:

- B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
- d = 5.5% = discount rate (utility's after tax cost of capital)
- n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.

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Table 3-16. Commercial Cool/Reflective Roof Rebates

Program Name: Commercial Cool / Reflective Roof Rebate	
Program Start Date: 2015	
Measure: Commercial Cool / Reflective Roof Rebate	
Reporting Period: 2017	

A	B	C	D	E	F	G	H	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2015	29,498	1,967	12	12	0.61%	12	12	0.61%	0
2016	29,801	1,987	12	24	1.21%	10	22	1.11%	(2)
2017	30,165	2,011	12	36	1.79%	5	27	1.34%	(9)
2018	31,630	2,109	12	48	2.28%				
2019	32,693	2,180	12	60	2.75%				
2020	33,636	2,242	12	72	3.21%				
2021	34,508	2,301	12	84	3.65%				
2022	35,390	2,359	12	96	4.07%				
2023	36,279	2,419	12	108	4.47%				
2024	37,173	2,478	12	120	4.84%				

Eligibility Level	6.7%
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Annual Demand and Energy Savings	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	54.08	56.19	270.41	280.96
Winter kW Reduction	0.00	0.00	0.00	0.00
kWh Reduction	127,068	132,024	635,342	660,120

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$765	\$3,823
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$3,712	\$18,562
Utility Recurring Rebate	\$0	\$0

Annual Benefits = $B_{npv} \times d / [1 - (1+d)^{-n}] = (\$881,401)$
 where:
 B_{npv} = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period
 $d = 5.5\%$ = discount rate (utility's after tax cost of capital)
 $n = 10$ = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2015 DSM Plan [approved by Consummating Order issued September 8, 2015 (Order No. PSC-15-0359-CO-EG)] and utilizes the 5.5% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2015 DSM Plan.