

**FILE**

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

16  
RECEIVED-DOCKETING DIV  
2009 AUG -3 PM 5:19  
**PUCO**

**In the Matter of Protocols for the                    )  
Measurement and Verification of Energy        )  
Efficiency and Peak Demand Reduction        )  
Measures.    )**

**Case No. 09-512-GE-UNC**

**JOINT COMMENTS CONCERNING PROPOSED MEASURES SUBMITTED BY  
COLUMBUS SOUTHERN POWER COMPANY  
AND OHIO POWER COMPANY ("AEP OHIO"); OHIO EDISON COMPANY, THE  
CLEVELAND ELECTRIC ILLUMINATING COMPANY AND THE TOLEDO  
EDISON COMPANY ("FIRSTENERGY"); DUKE ENERGY OHIO AND  
DAYTON POWER AND LIGHT COMPANY**

**INTRODUCTION**

By Entry dated June 24, 2009, the Commission initiated a process to develop protocols for evaluation, measurement and verification of energy efficiency and peak demand reduction measures in the framework of a Technical Resource Manual (TRM). This Entry established a procedural schedule for response. The Entry directed investor-owned electric utilities to collaborate and include other interested parties in order to provide an initial consensus list of deemed measures. AEP Ohio, FirstEnergy, Duke Energy Ohio and Dayton Power & Light Company (collectively the "Electric Utilities") submit Exhibit A – Initial Deemed Measure List in response to the Commission's directive.

**COMMENTS**

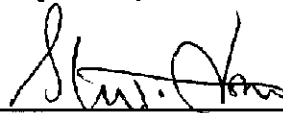
The Electric Utilities provided their initial list of deemed measures to other interested parties, primarily through their Collaborative memberships, which include mercantile customer representation as well as other key stakeholders. The attached Initial Deemed Measure List is a consensus effort from all four investor-owned electric utilities plus additional measures provided

**This is to certify that the images appearing are an  
accurate and complete reproduction of a case file  
document delivered in the regular course of business.  
Technician 8 Date Processed 8/3/09**

by outside stakeholders. The Electric Utilities expect this list to change over time as measures are added or removed. The Electric Utilities have included certain information pertaining to measures provided by outside stakeholders in Appendix B. The Electric Utilities have requested additional information with respect to the measures provided by outside stakeholders, and to the extent such information is made available to the Electric Utilities by the outside stakeholders, the requested information will be provided as part of the upcoming filing of proposed values and protocols.

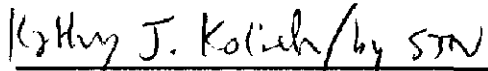
The Electric Utilities urge the Commission to adopt the Initial Deemed Measure List attached to these comments.

Respectfully submitted,



Steven T. Nourse (Counsel of Record)  
Marvin I. Resnik  
American Electric Power Service Corporation  
1 Riverside Plaza, 29<sup>th</sup> Floor  
Columbus, OH 43215  
Tel: (614) 716-1608  
Email: [stnourse@aep.com](mailto:stnourse@aep.com)  
[miresnik@aep.com](mailto:miresnik@aep.com)

Counsel for Columbus Southern Power Company  
and Ohio Power Company



Kathy J. Kolich (Counsel of Record)  
Ebony L. Miller  
76 South Main Street  
Akron, Ohio 44308  
Tel: (330) 384-5861  
Email: [kjkolich@firstenergycorp.com](mailto:kjkolich@firstenergycorp.com)  
[elmiller@firstenergycorp.com](mailto:elmiller@firstenergycorp.com)

Counsel for Ohio Edison Company, The Cleveland  
Electric Illuminating Company and The Toledo  
Edison Company

Amy S. Spiller / by STN

Amy S. Spiller (Counsel of Record)  
Associate General Counsel  
Elizabeth H. Watts  
Assistant General Counsel  
Rocco O. D'Ascenzo  
Senior Counsel  
139 East Fourth Street  
Atrium II, Suite 2500  
Cincinnati, OH 45201-0960  
Tel: (513) 419-1810  
Email: elizabeth.watts@duke-energy.com

155 East Broad St.  
Suite 2100  
Columbus, OH 43215  
Tel: (614) 222-1330

Counsel for Duke Energy Ohio

Respectfully submitted,

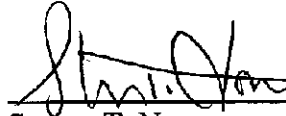
Randall V. Griffin / by STN

Randall V. Griffin (Counsel of Record)  
Dayton Power & Light Company  
1065 Woodman Drive  
Dayton OH 45432  
Tel: (937) 259-7221  
Email: [randall.griffin@dplinc.com](mailto:randall.griffin@dplinc.com)

Counsel for Dayton Power and Light Company

## CERTIFICATE OF SERVICE

I hereby certify that a copy of Joint Comments Concerning Proposed Measures Submitted By Columbus Southern Power Company and Ohio Power Company ("AEP Ohio"); Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company ("First Energy"); Duke Energy Ohio and Dayton Power and Light Company was served via regular US mail upon the individuals listed below this 3<sup>rd</sup> day of August 2009.



Steven T. Nourse

Candace Jones  
Ohio Department of Development  
77 S. High Street  
P. O. BOX 1001  
Columbus OH 43216-1001

Nolan M. Moser  
The Ohio Environmental Council  
1207 Grandview Ave.  
Columbus OH 43212-3449

Teresa Orahood  
Thomas O'Brien  
Bricker & Eckler LLP  
100 South Third Street  
Columbus OH 43215-4291

Jeffrey Small  
Ohio Consumers Counsel  
10 West Broad Street, Suite 1800  
Columbus OH 43215-3485

Harvey I. Wagner  
Ohio Edison Company  
Cleveland Electric Illuminating Company  
76 S. Main Street  
Akron OH 44308

Eric B. Gallon  
Porter Wright Morris & Arthur LLP  
41 South High Street Suite 3000  
Columbus OH 43215

Randall Griffin  
Dona Seger-Lawson  
Dayton Power & Light Company  
1065 Woodman Drive  
Dayton OH 45432

Elizabeth H. Watts  
Amy Spiller  
Rocco O. D'Ascenzo  
Duke Energy Ohio  
155 East Broad Street  
Columbus OH 43215

Paul A. Colbert  
Jones Day  
325 John H. McConnell Blvd, Suite 600  
Columbus, OH 43216-5017

Lisa McAlister  
McNees, Wallace & Nurik  
21 East State Street 17th Floor  
Columbus OH 43215-4228

Janet K. Stoneking  
Ohio Department of Development  
77 South High Street - 29th Floor  
P.O. Box 1001  
Columbus OH 43216-1001

Harvey Wagner  
76 S. Main Street  
Akron OH 44308

Kathy J. Kolich  
FirstEnergy Corp.  
76 South Main Street  
Akron OH 44308

Kenneth D. Schisler  
EnerNOC, Inc.  
75 Federal St. Suite 300  
Boston MA 02110

Carolyn S. Flahive  
Thompson Hine LLP  
10 West Broad Street, Suite 700  
Columbus, OH 43215-3435

David C. Rinebolt  
Ohio Partners for Affordable Energy  
231 West Lima Street  
P.O. Box 1793  
Findlay, OH 45839-1793

Toledo Edison Company  
76 S Main Street  
Akron OH 44308

Richard M. Bulgrin  
Public Utilities Commission of Ohio  
180 E. Broad Street  
Columbus OH 43215

Rick Sites  
Ohio Hospital Association  
155 E. Broad Street, 15<sup>th</sup> Floor  
Columbus, OH 43215-3620

Mary W. Christensen  
Christensen, Christensen, Donchatz,  
Kettlewell & Owen  
100 East Campus View Boulevard  
Suite 360  
Columbus, OH 43235

Mark A. Whitt  
Carpenter, Lipps & Leland LLP  
280 Plaza, Suite 1300 280 North High Street  
Columbus OH 43215

## Commercial

Proposed Technologies	Measure Name
Commercial	
T8 4ft 1 lamp	Standard T8 fluorescent
T8 4ft 2 lamp	Standard T8 fluorescent
T8 4ft 3 lamp	Standard T8 fluorescent
T8 4ft 4 lamp	Standard T8 fluorescent
T8 8ft 1 lamp	Standard T8 fluorescent
T8 8ft 2 lamp	Standard T8 fluorescent
T8 2ft 1 lamp	Standard T8 fluorescent
T8 2ft 2 lamp	Standard T8 fluorescent
T8 2ft 3 lamp	Standard T8 fluorescent
T8 2ft 4 lamp	Standard T8 fluorescent
T8 3ft 1 lamp	Standard T8 fluorescent
T8 3ft 2 lamp	Standard T8 fluorescent
T8 3ft 3 lamp	Standard T8 fluorescent
T8 3ft 4 lamp	Standard T8 fluorescent
T8 HO 8 ft 1 Lamp	Standard T8 fluorescent
T8 HO 8 ft 2 Lamp	Standard T8 fluorescent
HPT8 4ft 1 lamp, T8 to HPT8	High performance T8 fluorescent
HPT8 4ft 2 lamp, T8 to HPT8	High performance T8 fluorescent
HPT8 4ft 3 lamp, T8 to HPT8	High performance T8 fluorescent
HPT8 4ft 4 lamp, T8 to HPT8	High performance T8 fluorescent
HPT8 4ft 1 lamp, T12 to HPT8	High performance T8 fluorescent
HPT8 4ft 2 lamp, T12 to HPT8	High performance T8 fluorescent
HPT8 4ft 3 lamp, T12 to HPT8	High performance T8 fluorescent
HPT8 4ft 4 lamp, T12 to HPT8	High performance T8 fluorescent
T12 8ft 1 lamp retrofit to HPT8 T8 4ft 2 lamp	High performance T8 fluorescent
T12 8ft 2 lamp retrofit to HPT8 T8 4ft 4 lamp	High performance T8 fluorescent
T12HO 8ft 1 lamp retrofit to HPT8 T8 4ft 2 lamp	High performance T8 fluorescent
T12HO 8ft 2 lamp retrofit to HPT8 T8 4ft 4 lamp	High performance T8 fluorescent
LW HPT8 4ft 1 lamp, T8LWT8	High performance low watt lamp T8 fluorescent
LW HPT8 4ft 2 lamp, T8LWT8	High performance low watt lamp T8 fluorescent
LW HPT8 4ft 3 lamp, T8LWT8	High performance low watt lamp T8 fluorescent
LW HPT8 4ft 4 lamp	High performance low watt lamp T8 fluorescent
Low Watt T8 lamps	Low Watt T8 lamps, 25W-30W
Low-watt T8 4-foot 1 lamp fixture replacing T12	
Low-watt T8 4-foot 2 lamp fixture replacing T12	
Low-watt T8 4-foot 3 lamp fixture replacing T12	
Low-watt T8 4-foot 4 lamp fixture replacing T12	
Low-watt T8 4-foot 1 lamp fixture replacing T8	
Low-watt T8 4-foot 2 lamp fixture replacing T8	
Low-watt T8 4-foot 3 lamp fixture replacing T8	
Low-watt T8 4-foot 4 lamp fixture replacing T8	
1 Lamp T5 with Elec Ballast replacing T12	T5 fluorescent
2 Lamp T5 replacing T12	T5 fluorescent
3 Lamp T5 replacing T12	T5 fluorescent
4 Lamp T5 replacing T12	T5 fluorescent
1 Lamp T5 HO with Elec Ballast replacing T12	T5HO fluorescent
2 Lamp T5HO replacing T12	T5HO fluorescent
3 Lamp T5HO replacing T12	T5HO fluorescent
4 Lamp T5HO replacing T12	T5HO fluorescent
Occupancy Sensors under 500 W	Motion sensor control, generally wall mounted
Occupancy Sensors over 500 W	Motion sensor control, generally ceiling mounted
Central Lighting Control	Automatic lighting control system
Switching Controls for Multilevel Lighting	Multi-Level control for each lighting fixture
Daylight Sensor controls	Daylight sensor lighting control
T5 high-output high-bay 2 lamp fixture replacing HID	
High Bay 3L T5HO Replacing 250W HID	T5 fluorescent high bay lighting
High Bay 4LT5HO Replacing 400W HID	T5 fluorescent high bay lighting
High Bay 6L T5HO replacing 400W HID	T5 fluorescent high bay lighting
High Bay 6L T5HO Double fixture replace 1000W HID	T5 fluorescent high bay lighting, two for one replacement
T5 high-output high-bay 8 lamp fixture replacing HID	
T8 high-bay 4-foot 3 lamp fixture replacing HID	
High Bay Fluorescent 4LF32T8 Replacing 250W HID	T8 fluorescent high bay lighting
High Bay Fluorescent 6LF32T8 Replacing 400W HID	T8 fluorescent high bay lighting
High Bay Fluorescent 8LF32T8 Replacing 400W HID	T8 fluorescent high bay lighting
High Bay Fluorescent 8LF32T8 Double fixture replace 1000W HID	T8 fluorescent high bay lighting, two for one replacement
T8 high-output 8-foot 1 lamp fixture replacing HID	
T8 high-output 8-foot 2 lamp fixture replacing HID	
42W 8 Lamp Hi Bay CFL	CFL highbay fixture
Pulse Start Metal Halide 150-200W retrofit only	Pulse start metal halide highbay lighting 150-200W replacing higher wattage

Clothes washer MEF= 1.72  
Clothes washer MEF= 1.72  
Clothes washer MEF= 1.72  
Clothes washer MEF= 1.8  
Clothes washer MEF= 1.8  
Clothes washer MEF= 1.8  
Clothes washer MEF= 1.8  
Clothes washer MEF= 2.0  
Clothes washer MEF= 2.0  
Clothes washer MEF= 2.0  
Clothes washer MEF= 2.0  
Clothes washer MEF= 2.2  
Clothes washer MEF= 2.2  
Clothes washer MEF= 2.2  
Clothes washer MEF= 2.2  
Smart Strip plug outlet  
Refrigerated vending machine with motion control

ENERGY STAR Commercial Solid Door Refrigerators less than 20ft <sup>3</sup>	Energy Star commercial refrigerator
ENERGY STAR Commercial Solid Door Refrigerators 20 to 48 ft <sup>3</sup>	Energy Star commercial refrigerator
ENERGY STAR Commercial Solid Door Refrigerators more than 48ft <sup>3</sup>	Energy Star commercial refrigerator
ENERGY STAR Commercial Solid Door Freezers less than 20ft <sup>3</sup>	Energy Star commercial freezer
ENERGY STAR Commercial Solid Door Freezers 20 to 48 ft <sup>3</sup>	Energy Star commercial freezer
ENERGY STAR Commercial Solid Door Freezers more than 48ft <sup>3</sup>	Energy Star commercial freezer
ENERGY STAR Ice Machines less than 500 lbs	Energy Star ice machine
ENERGY STAR Ice Machines 500 to 1000 lbs	Energy Star ice machine
ENERGY STAR Ice Machines more than 1000 lbs	Energy Star ice machine
ENERGY STAR Steam Cookers 3 Pan	Energy Star Cooking Energy Efficiency = 0.50
ENERGY STAR Steam Cookers 4 Pan	Energy Star Cooking Energy Efficiency = 0.50
ENERGY STAR Steam Cookers 5 Pan	Energy Star Cooking Energy Efficiency = 0.50
ENERGY STAR Steam Cookers 6 Pan	Energy Star Cooking Energy Efficiency = 0.50
ENERGY STAR Hot Holding Cabinets Half Size	Energy Star holding cabinet <40W/cuft
ENERGY STAR Hot Holding Cabinets Three Quarter Size	Energy Star holding cabinet <40W/cuft
ENERGY STAR Hot Holding Cabinets Full Size	Energy Star holding cabinet <40W/cuft
ENERGY STAR Fryers	Energy Star Cooking Energy Efficiency = 0.80
Griddles	Cooking Energy Efficiency = 0.70
Convection Ovens	Cooking Energy Efficiency = 0.70
Combination Ovens	Cooking Energy Efficiency = 0.60
Pre Rinse Sprayers - North	Efficient Sprayer <= 1.6 gpm
Pre Rinse Sprayers - South	Efficient Sprayer <= 1.6 gpm
Anti Sweat Heater Controls - North	Automatic heater control
Anti Sweat Heater Controls - South	Automatic heater control
ECM Case Motors	Electronically Commutated Motor, ECM
Night covers for displays	Cases with night covers
Efficient Refrigeration Condenser	Oversized condensers with low approach temperatures
Head Pressure Control	Automatic head pressure control varying on outside temperature
Engineered Nozzles Compressed Air	Installation of engineered nozzle for blow-off
Barrel Wraps Inj Mold and Extruders	Heater barrel with insulation
Pellet Dryer Tanks and Ducts 3 dia	Pellet dryer with insulated duct and tank
Pellet Dryer Tanks and Ducts 4 dia	Pellet dryer with insulated duct and tank
Pellet Dryer Tanks and Ducts 5 dia	Pellet dryer with insulated duct and tank
Pellet Dryer Tanks and Ducts 6 dia	Pellet dryer with insulated duct and tank
Pellet Dryer Tanks and Ducts 8 dia	Pellet dryer with insulated duct and tank
Photovoltaics	1 kW PV system - North
Photovoltaics	1 kW PV system - South
AC <65,000 1 Ph	
AC <65,000 3 Ph	
AC >760,000	
AC 135,000 - 240,000	
AC 240,000 - 760,000	
AC 65,000 - 135,000	
Unitary and split system A/C < 65,000 BTUH (<5.4 tons)	
Unitary and split system A/C > 760,000 BTUH (>63.33 tons)	
Unitary and split system A/C 136,000 - 240,000 BTUH (11.33-20 tons)	
Unitary and split system A/C 241,000 - 760,000 BTUH (20-63.33 tons)	
Unitary and split system A/C 65,000 - 135,000 BTUH (5.4-11.25 tons)	
Air-Cooled Recip Chiller COP = 2.8, IPLV = 3.41	
Air-Cooled Recip Chiller COP = 2.8, IPLV = 3.89	
Air-Cooled Recip Chiller COP = 2.8, IPLV = 4.24	
Air-Cooled Recip Chiller COP = 3.08, IPLV = 3.36	
Air-Cooled Recip Chiller COP = 3.08, IPLV = 3.76	
Air-Cooled Recip Chiller COP = 3.08, IPLV = 4.28	
Air-Cooled Recip Chiller COP = 3.08, IPLV = 4.67	
Air-Cooled Recip Chiller COP = 3.36, IPLV = 3.66	
Air-Cooled Recip Chiller COP = 3.36, IPLV = 4.10	
Air-Cooled Recip Chiller COP = 3.36, IPLV = 4.67	
Air-Cooled Recip Chiller COP = 3.36, IPLV = 5.09	
Air-Cooled Screw Chiller COP = 2.8, IPLV = 3.46	
Air-Cooled Screw Chiller COP = 2.8, IPLV = 3.84	
Air-Cooled Screw Chiller COP = 2.8, IPLV = 4.75	
Air-Cooled Screw Chiller COP = 3.08, IPLV = 3.36	
Air-Cooled Screw Chiller COP = 3.08, IPLV = 3.80	
Air-Cooled Screw Chiller COP = 3.08, IPLV = 4.00	
Air-Cooled Screw Chiller COP = 3.08, IPLV = 5.22	
Air-Cooled Screw Chiller COP = 3.36, IPLV = 3.66	
Air-Cooled Screw Chiller COP = 3.36, IPLV = 4.15	
Air-Cooled Screw Chiller COP = 3.36, IPLV = 4.42	



Air-Cooled Screw Chiller COP = 3.36, IPLV = 5.69

Anti Sweat Heater Control

Boiler

CHW reset 10 deg

CHW reset 5 deg

Cool roof

DCV

Economizer

Outside air economizer with two enthalpy sensors

Efficient Condenser

EMS

Engineered CKV hood

Floating Head Pressure Control

Gas Engine Chiller

Gas Furnace

GSHP <135,000 17EER

GSHP <135,000 19EER

GSHP <135,000 EER 17 ASHP base

GSHP <135,000 EER 19 ASHP base

High Performance Glazing

HP <65,000 1 Ph

HP <65,000 3 Ph

HP >240,000

HP 135,000 - 240,000

HP 65,000 - 135,000

Infrared Heater

Night Covers

PTAC

PTAC-HP

Refrigerant charging correction

Roof Insulation

Setback/Setup

VFD Fan

VFD Pump

Water-Cooled cent Chiller > 300 ton 0.46 kW/ton with 0.28 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.46 kW/ton with 0.33 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.46 kW/ton with 0.35 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.46 kW/ton with 0.37 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.46 kW/ton with 0.44 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.52 kW/ton with 0.31 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.52 kW/ton with 0.37 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.52 kW/ton with 0.39 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.52 kW/ton with 0.42 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.52 kW/ton with 0.48 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.58 kW/ton with 0.35 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.58 kW/ton with 0.41 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.58 kW/ton with 0.44 kW/ton IPLV

Water-Cooled cent Chiller > 300 ton 0.58 kW/ton with 0.47 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.51 kW/ton with 0.3 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.51 kW/ton with 0.36 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.51 kW/ton with 0.38 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.51 kW/ton with 0.41 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.51 kW/ton with 0.48 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.57 kW/ton with 0.34 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.57 kW/ton with 0.4 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.57 kW/ton with 0.43 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.57 kW/ton with 0.46 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.57 kW/ton with 0.54 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.63 kW/ton with 0.38 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.63 kW/ton with 0.45 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.63 kW/ton with 0.48 kW/ton IPLV

Water-Cooled cent Chiller 150 - 300 ton 0.63 kW/ton with 0.51 kW/ton IPLV

Water-Cooled Centrifugal Chiller < 150 ton 0.56 kW/ton with 0.34 kW/ton IPLV

Water-Cooled Centrifugal Chiller < 150 ton 0.56 kW/ton with 0.4 kW/ton IPLV

Water-Cooled Centrifugal Chiller < 150 ton 0.56 kW/ton with 0.43 kW/ton IPLV

Water-Cooled Centrifugal Chiller < 150 ton 0.56 kW/ton with 0.46 kW/ton IPLV

Water-Cooled Centrifugal Chiller < 150 ton 0.56 kW/ton with 0.53 kW/ton IPLV

Water-Cooled Centrifugal Chiller < 150 ton 0.63 kW/ton with 0.38 kW/ton IPLV

Water-Cooled Centrifugal Chiller < 150 ton 0.63 kW/ton with 0.45 kW/ton IPLV  
 Water-Cooled Centrifugal Chiller < 150 ton 0.63 kW/ton with 0.48 kW/ton IPLV  
 Water-Cooled Centrifugal Chiller < 150 ton 0.63 kW/ton with 0.51 kW/ton IPLV  
 Water-Cooled Centrifugal Chiller < 150 ton 0.63 kW/ton with 0.6 kW/ton IPLV  
 Water-Cooled Centrifugal Chiller < 150 ton 0.7 kW/ton with 0.42 kW/ton IPLV  
 Water-Cooled Centrifugal Chiller < 150 ton 0.7 kW/ton with 0.5 kW/ton IPLV  
 Water-Cooled Centrifugal Chiller < 150 ton 0.7 kW/ton with 0.53 kW/ton IPLV  
 Water-Cooled Centrifugal Chiller < 150 ton 0.7 kW/ton with 0.57 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.63 kW/ton with 0.38 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.63 kW/ton with 0.41 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.63 kW/ton with 0.44 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.63 kW/ton with 0.47 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.63 kW/ton with 0.5 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.63 kW/ton with 0.56 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.71 kW/ton with 0.43 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.71 kW/ton with 0.46 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.71 kW/ton with 0.5 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.71 kW/ton with 0.53 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.71 kW/ton with 0.56 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.71 kW/ton with 0.63 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.79 kW/ton with 0.47 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.79 kW/ton with 0.51 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.79 kW/ton with 0.55 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.79 kW/ton with 0.59 kW/ton IPLV  
 Water-cooled screw chiller < 150 ton 0.79 kW/ton with 0.62 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.51 kW/ton with 0.31 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.51 kW/ton with 0.33 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.51 kW/ton with 0.36 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.51 kW/ton with 0.38 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.51 kW/ton with 0.4 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.51 kW/ton with 0.46 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.58 kW/ton with 0.35 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.58 kW/ton with 0.37 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.58 kW/ton with 0.4 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.58 kW/ton with 0.43 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.58 kW/ton with 0.45 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.58 kW/ton with 0.51 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.64 kW/ton with 0.38 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.64 kW/ton with 0.42 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.64 kW/ton with 0.45 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.64 kW/ton with 0.48 kW/ton IPLV  
 Water-cooled screw chiller > 300 ton 0.64 kW/ton with 0.51 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.57 kW/ton with 0.34 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.57 kW/ton with 0.37 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.57 kW/ton with 0.4 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.57 kW/ton with 0.43 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.57 kW/ton with 0.45 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.57 kW/ton with 0.51 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.65 kW/ton with 0.39 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.65 kW/ton with 0.42 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.65 kW/ton with 0.45 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.65 kW/ton with 0.48 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.65 kW/ton with 0.51 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.65 kW/ton with 0.57 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.72 kW/ton with 0.43 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.72 kW/ton with 0.47 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.72 kW/ton with 0.5 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.72 kW/ton with 0.54 kW/ton IPLV  
 Water-cooled screw chiller 150 - 300 ton 0.72 kW/ton with 0.57 kW/ton IPLV

Window Film

WLHP <17,000

WLHP 17,000-65,000

WLHP 65,000-135,000

Water source heat pump < 240,000 BTUH @ 85 degrees F

CFL - Screw-in

CFL - Hard-wired

CFL pin-based fixture

Electronic Ballast - Dimming

Remote-mounted daylight dimming sensor

Fixture-mounted daylight dimming sensor

Switching controls for multilevel lighting

LED Exit

T5 w/Electronic Ballast

CFL - Screw-in weighted Watts

CFL - Hard-wired weighted Watts

T8 Electronic Ballast - Dimming

LED Exit

T5 w/Electronic Ballast

Super T8 -- T12 baseline  
 Super T8 -- T8 baseline  
 Delamping w/Reflectors (2 lamp)  
 Delamping T12 2-foot lamp fixture (1-lamp fixture)  
 Delamping T12 3-foot lamp fixture (1-lamp fixture)  
 Delamping T12 4-foot lamp fixture (1-lamp fixture)  
 Delamping T12 8-foot lamp fixture (1 lamp fixture)  
 Occupancy Sensor Motion Detector  
 Ceiling-mounted occupancy sensor  
 Wall- or fixture-mounted occupancy sensor  
 50W MH HID  
 75W MH HID  
 100W MH HID  
 175W PS MH HID  
 250W PS MH HID  
 50W MH HID  
 75W MH HID  
 100W MH HID  
 175W PS MH HID  
 250W PS MH HID  
 Outdoor Lighting Controls  
 Central lighting control  
 T5 Interior High Bay Fluorescent Fixture  
 T8 Interior High Bay Fluorescent Fixture  
 LED Streetlights  
 LED Traffic Lights  
 Prem Motor < =10 HP  
 Prem Motor > 10HP  
 Adjustable Speed Drives for Fans & Pumps  
 Compressed Air Controls  
 Air compressor 15-24HP load/no Load  
 Air compressor 15-24HP variable speed  
 Air compressor 25-49HP load/no Load  
 Air compressor 25-49HP variable speed  
 Air compressor 50-75HP load/no Load  
 Air compressor 50-75HP variable speed  
 Air compressor 50-75HP variable displacement  
 Convection Oven  
 Spray Nozzles for Food Service  
 Hot Water Circulation Pump Time Clock  
 Retrocommissioning  
 Additional primary storage required  
 Packaged Rooftop A/C 12 EER  
 EMS System  
 Programable Thermostat  
 Programmable setback/setup thermostat control - Heat Pump  
 Programmable setup thermostat control A/C only  
 Economizer  
 Reflective Window Film  
 Cool Roof  
 Efficient Centrifugal Chiller  
 Efficient Screw Chiller  
 Efficient Air-Cooled Chiller  
 Tune-up/Advanced Diagnostics  
 Occupancy sensor for HVAC system - Heat pump  
 Occupancy sensor for HVAC system - A/C only  
 Energy recovery ventilation > 450 CFM  
 Motor Upgrade for Fans & Compressors  
 Single Line to Multiplex Compressor  
 Multiplex system with oversized condenser  
 High efficiency, low temperature compressor  
 Evap Fan Controller for Med. Temp Walk-in  
 Strip Curtains  
 Night Covers  
 Anti-sweat Heater Controls  
 Floating Head Pressure Controls  
 Glass Doors on Low and Med. Temperature Displays  
 Chilled Water Reset Water Cooled 0-1000 tons  
 Chilled Water Reset Water Cooled 1000-2000 tons  
 Chilled Water Reset Water Cooled 2000-3000 tons  
 Custom Rebate  
 Energy Star Sleeve AC over 14,000 Btu/hr  
 Energy Star Sleeve AC under 14,000 Btu/hr

Super T8 -- T12 baseline  
 Super T8 -- T8 baseline  
 Delamping w/Reflectors (2 lamp)

Occupancy Sensor Motion Detector

50W MH HID  
 75W MH HID  
 100W MH HID  
 175W PS MH HID  
 250W PS MH HID  
 50W MH HID  
 75W MH HID  
 100W MH HID  
 175W PS MH HID  
 250W PS MH HID  
 Outdoor Lighting Controls

T5 Interior High Bay Fluorescent Fixture - four lamp  
 T8 Interior High Bay Fluorescent Fixture - six(?) lamp  
 LED Streetlights 120W  
 LED Traffic Lights - 10-25W  
 Prem Motor < =10 HP  
 Prem Motor > 10HP  
 Adjustable Speed Drives for Fans & Pumps  
 Compressed Air Controls

Convection Oven  
 Spray Nozzles for Food Service  
 Hot Water Circulation Pump Time Clock  
 Retrocommissioning

Packaged Rooftop A/C 12 EER  
 EMS System - Lighting & HVAC  
 Programable Thermostat

Economizer  
 Reflective Window Film  
 Cool Roof  
 Efficient Centrifugal Chiller - 0.51 kW/ton  
 Efficient Screw Chiller - 0.55 kW/ton  
 Efficient Air-Cooled Chiller - 1.01 kW/ton  
 Tune-up/Advanced Diagnostics

Motor Upgrade for Fans & Compressors - ECM & PSC motors  
 Single Line to Multiplex Compressor  
 Multiplex system with oversized condenser  
 High efficiency, low temperature compressor with EER of 5.2  
 Evap Fan Controller for Med. Temp Walk-in  
 Strip Curtains  
 Night Covers  
 Anti-sweat Heater Controls  
 Floating Head Pressure Controls  
 Glass Doors on Low and Med. Temperature Displays  
 air conditioning  
 air conditioning  
 general  
 air conditioning  
 air conditioning

Energy Star Window AC over 14,000 Btu hr	air conditioning
Energy Star Window AC under 14,000 Btu hr	air conditioning
High Bay 2L T-5 High Output	lighting
High Bay 8L T-5 High Output	lighting
High Bay Fluorescent 3 Lamp (F32 Watt T8)	lighting
Low Watt T8 lamps replacing standard 32 Watt T-8's	lighting
Packaged Terminal AC	air conditioning
Plug Load Occupancy Sensors Document Stations	occupancy sensors
Thermal Storage	thermal storage
Variable Frequency Drive 1.5 Horse Power Pumps	motors
Variable Frequency Drive 10 Horse Power Pumps	motors
Variable Frequency Drive 15 Horse Power Pumps	motors
Variable Frequency Drive 2 Horse Power Pumps	motors
Variable Frequency Drive 20 Horse Power Pumps	motors
Variable Frequency Drive 25 Horse Power Pumps	motors
Variable Frequency Drive 3 Horse Power Pumps	motors
Variable Frequency Drive 30 Horse Power Pumps	motors
Variable Frequency Drive 40 Horse Power Pumps	motors
Variable Frequency Drive 5 Horse Power Pumps	motors
Variable Frequency Drive 50 Horse Power Pumps	motors
Variable Frequency Drive 7.5 Horse Power Pumps	motors
PS OH CallOption10 (Demand Response)	demand response
PS OH CallOption15 (Demand Response)	demand response
PS OH CallOption20 (Demand Response)	demand response
PS OH Emergency (Demand Response)	demand response
PS OH Hospital Generator (Demand Response)	demand response
PS OH Generator (Demand Response)	demand response
Commercial, Industrial Audit - Sm&Md	
Commercial, Industrial Audit - Large	
Commercial CFL Program	
Commercial, Industrial Audit - Gov	
Street Lighting - 175 Mercury to 100 HPS	
EE Water Heater (Base usage 22831)	
HP Water Heater (Base usage 22831)	
Refrigeration Commissioning	
Automatic door closer	walk in freezer
Adjustable drives for fans and pumps	
Intelligent building controls	
Motors 1 HP (1200 RPM, either ODP or TEFC)	NEMA Premim efficiency 82.5%
Motors 1.5 HP (1200 RPM, either ODP or TEFC)	NEMA Premim efficiency 86.5%
Motors 2 HP (1200 RPM, either ODP or TEFC)	NEMA Premim efficiency 87.5%
Motors 3 HP (1200 RPM, either ODP or TEFC)	NEMA Premim efficiency 88.5%
Motors 5 HP (1200 RPM, either ODP or TEFC)	NEMA Premim efficiency 89.5%
Motors 7.5 HP (1200 RPM, ODP)	NEMA Premim efficiency 90.2%
Motors 10 HP (1200 RPM, ODP)	NEMA Premim efficiency 91.7%
Motors 15 HP (1200 RPM, ODP)	NEMA Premim efficiency 91.7%
Motors 20 HP (1200 RPM, ODP)	NEMA Premim efficiency 92.4%
Motors 25 HP (1200 RPM, ODP)	NEMA Premim efficiency 93%
Motors 30 HP (1200 RPM, ODP)	NEMA Premim efficiency 93.6%
Motors 40 HP (1200 RPM, ODP)	NEMA Premim efficiency 94.1%
Motors 50 HP (1200 RPM, ODP)	NEMA Premim efficiency 94.1%
Motors 60 HP (1200 RPM, ODP)	NEMA Premim efficiency 94.5%
Motors 75 HP (1200 RPM, ODP)	NEMA Premim efficiency 94.5%
Motors 100 HP (1200 RPM, ODP)	NEMA Premim efficiency 95%
Motors 125 HP (1200 RPM, ODP)	NEMA Premim efficiency 95%
Motors 150 HP (1200 RPM, ODP)	NEMA Premim efficiency 95.4%
Motors 200 HP (1200 RPM, ODP)	NEMA Premim efficiency 95.4%
Duct sealing	
Evaporative assist cooling	
ECM motors in variable air volume HVAC systems	
Demand control ventilation for parking garage	
Demand control ventilation for restaurant hood	
Flow restrictors, faucet aerators and low flow shower heads	

## Residential

Proposed Technologies	Measure Name
9-16W Screw-in CFL	13 Watt Screw-in CFL <=800 lumens
9-16W Screw-in CFL	13 Watt Screw-in CFL > 800 lumens
17-24W Screw-in CFL	20 Watt Screw-in CFL
25-34W Screw-in CFL	30 Watt Screw-in CFL
Over 34W Screw-in CFL	40 Watt Screw-in CFL
9-16W Pin Based CFL	13 Watt Pin Based CFL <=800 lumens
9-16W Pin Based CFL	13 Watt Pin Based CFL >800 lumens
17-24W Pin Based CFL	20 Watt Pin Based CFL
25-34W Pin Based CFL	30 Watt Pin Based CFL
35-44W Pin Based CFL	40 Watt Pin Based CFL
45-54W Pin Based CFL	55 Watt Pin Based CFL
Over 54W Pin Based CFL	65 Watt Pin Based CFL
9-16W Screw-in CFL - Outdoor	13 Watt Screw-in CFL - Outdoor <=800 lumens
9-16W Screw-in CFL - Outdoor	13 Watt Screw-in CFL - Outdoor > 800 lumens
17-24W Screw-in CFL - Outdoor	20 Watt Screw-in CFL - Outdoor
25-34W Screw-in CFL - Outdoor	30 Watt Screw-in CFL - Outdoor
Over 34W Screw-in CFL - Outdoor	40 Watt Screw-in CFL - Outdoor
9-16W Pin Based CFL - Outdoor	13 Watt Pin Based CFL - Outdoor <=800 lumens
9-16W Pin Based CFL - Outdoor	13 Watt Pin Based CFL - Outdoor >800 lumens
17-24W Pin Based CFL - Outdoor	20 Watt Pin Based CFL - Outdoor
25-34W Pin Based CFL - Outdoor	30 Watt Pin Based CFL - Outdoor
35-44W Pin Based CFL - Outdoor	40 Watt Pin Based CFL - Outdoor
45-54W Pin Based CFL - Outdoor	55 Watt Pin Based CFL - Outdoor
Over 54W Pin Based CFL - Outdoor	65 Watt Pin Based CFL - Outdoor
Indoor Torchieres	55 W CFL
Indoor Torchieres	55 W CFL
Pin based CFL table Lamp	20 W CFL
Pin based CFL table Lamp	25 W CFL
Pin based CFL table Lamp	30 W CFL
Pin based CFL table Lamp	55 W CFL
Occupancy Sensor for Common Area	No sensor
Lighting Photocell controls for Common Area	No sensor
LED Exit Signs for Multi-family	Incandescent Exit Sign
LED night light	1 W LED light
LED holiday lights	300 x 0.08 W LED Lights
CFLs - Less than 17 watts	CFL bulbs regular
CFLs - 17 to 24 watts	CFL bulbs specialty
CFLs - 25 watts or higher	CFL bulbs high wattage
Covered Product	CFL Reflector
LED Downlight	LED downlight
Reflectors/Controllable Bulbs	
CFL fixtures	Compact fluorescent fixtures
LED Night Light	LED night light
LED Task Light	LED night light
Torchiere Floor Lamps	CFL Torchiere
Holiday Lights	LED holiday lights
Electric Water Heater EF 0.93+ North	Efficient electric water heater EF>=0.93
Electric Water Heater EF 0.93+ South	Efficient electric water heater EF>=0.93
Heat Pump Water Heaters - North	Heat pump water heater EF>=2.0
Heat Pump Water Heaters - South	Heat pump water heater EF>=2.0
Pipe Wrap	R4 5 Ln feet
Low Flow Showerheads - North	Low Flow 1.75 gal/minute
Low Flow Showerheads - South	Low Flow 1.75 gal/minute
Low Flow Faucet Aerators - North	1.5 gal/minute
Low Flow Faucet Aerators - South	1.5 gal/minute
Shower Start - North	Shower start technology with low flow showerhead 1.75 gpm
Shower Start - South	Shower start technology with low flow showerhead 1.75 gpm
Gravity Film Heat Exchanger GFX	40-60 ft GFX unit installed
Gravity Film Heat Exchanger GFX	40-60 ft GFX unit installed
Energy Star Room A/C Northern Regions	Energy Star A/C unit, 10.8 EER
Energy Star Room A/C Southern Regions	Energy Star A/C unit, 10.8 EER
Pump and Motor Single Speed	High efficiency pump and motor, speed control

Pump and motor w/auto controls - multi speed	High efficiency pump and motor
Clothes Washer Energy Star, Gas water heater, Electric dryer	Clothes washer MEF= 1.72
Clothes Washer Energy Star, Electric Water heater, Gas Dryer	Clothes washer MEF= 1.72
Clothes Washer Energy Star, Electric Water heater, Electric Dryer	Clothes washer MEF= 1.72
Clothes Washer CEE Tier1, Gas water heater, Gas dryer	Clothes washer MEF= 1.8
Clothes Washer CEE Tier1, Gas water heater, Electric dryer	Clothes washer MEF= 1.8
Clothes Washer CEE Tier1, Electric Water heater, Gas Dryer	Clothes washer MEF= 1.8
Clothes Washer CEE Tier1, Electric Water heater, Electric Dryer	Clothes washer MEF= 1.8
Clothes Washer CEE Tier2, Gas water heater, Gas dryer	Clothes washer MEF= 2.0
Clothes Washer CEE Tier2, Gas water heater, Electric dryer	Clothes washer MEF= 2.0
Clothes Washer CEE Tier2, Electric Water heater, Gas Dryer	Clothes washer MEF= 2.0
Clothes Washer CEE Tier2, Electric Water heater, Electric Dryer	Clothes washer MEF= 2.0
Clothes Washer CEE Tier3, Gas water heater, Gas dryer	Clothes washer MEF= 2.2
Clothes Washer CEE Tier3, Gas water heater, Electric dryer	Clothes washer MEF= 2.2
Clothes Washer CEE Tier3, Electric Water heater, Gas Dryer	Clothes washer MEF= 2.2
Clothes Washer CEE Tier3, Electric Water heater, Electric Dryer	Clothes washer MEF= 2.2
Smart Strip plug outlet	Smart Strip plug outlet
Refrigerators Energy Star - Refrig. Only - single door	Energy Star refrigerator
Refrigerators Energy Star - Refrig/Freezer - single door	Energy Star refrigerator
Refrigerators/Freezers Energy Star - Side by Side	Energy Star refrigerator
Refrigerators/Freezers Energy Star - Top Freezer	Energy Star refrigerator
Freezers Energy Star - Bottom Freezer	Energy Star freezer
Freezers Energy Star - Chest Freezer	Energy Star freezer
Freezers Energy Star - Upright Freezer	Energy Star freezer
Refrigerator recycling	Old refrigerator removed
Freezer recycling	Old freezer removed
Room A/C recycling	Old unit removed
Dehumidifier recycling	Old unit removed
Energy Star Dehumidifier	Energy Star Dehumidifier
ES Dishwasher Tier 1 - gas water heater	ES High Efficiency Dishwasher EF>= 0.65
ES Dishwasher Tier 1 - elec water heater	ES High Efficiency Dishwasher EF>= 0.65
ES Dishwasher Tier 2 - gas water heater	ES High Efficiency Dishwasher EF>= 0.68
ES Dishwasher Tier 2 - elec water heater	ES High Efficiency Dishwasher EF>= 0.68
Clothes Dryers	High Efficiency Electric Clothes Dryer with Moisture Sensor.
Residential PV - North	1 kW PV system
Residential PV - South	1 kW PV system
Solar Domestic Hot Water - North	Solar water heater
Solar Domestic Hot Water - South	Solar water heater
ASHP - SEER 14	
ASHP - SEER 15	
ASHP - SEER 16	
ASHP - SEER 17	
ASHP - SEER 18	
Air Source Heat Pump, SEER 14-15 (early retirement)	
Air Source Heat Pump, SEER 16+ (replacement/new construction)	
Air Source Heat Pump, SEER 14-15 (replacement/new construction)	
Air Source Heat Pump, SEER 16+ (early retirement)	
Basement Wall Insulation	
Ceiling Fans	
Crawlspace Wall Insulation	
Desuperheater for DHW	
DFHP - SEER 14	
DFHP - SEER 14 with 95 AFUE furnace	
DFHP - SEER 15	
DFHP - SEER 15 with 95 AFUE furnace	
DFHP - SEER 16	
DFHP - SEER 16 with 95 AFUE furnace	
DFHP - SEER 17	
DFHP - SEER 17 with 95 AFUE furnace	
DFHP - SEER 18	
DFHP - SEER 18 with 95 AFUE furnace	
Duct Insulation	
Duct sealing 15% leakage base	
Duct sealing 20% leakage base	
Duct sealing 25% leakage base	
Duct sealing 30% leakage base	
ECM blower - continuous	

ECM blower - intermittent	
Floor Insulation	
Furnace/AC - SEER 14	
Furnace/AC - SEER 14 with 95 AFUE furnace	
Furnace/AC - SEER 15	
Furnace/AC - SEER 15 with 95 AFUE furnace	
Furnace/AC - SEER 16	
Furnace/AC - SEER 16 with 95 AFUE furnace	
Furnace/AC - SEER 17	
Furnace/AC - SEER 17 with 95 AFUE furnace	
Air Conditioner - Central, SEER 14-15 (early retirement)	
Air Conditioner - Central, SEER 16+ (replacement/new construction)	
Air Conditioner - Central, SEER 14-15 (replacement/new construction)	
Air Conditioner - Central, SEER 16+ (early retirement)	
GSHP - EER 17	
GSHP - EER 17 ASHP Base	
GSHP - EER 19	
GSHP - EER 19 ASHP Base	
High efficiency furnace with ECM	
High efficiency furnace without ECM	
Infiltration reduction - 10%	
Infiltration reduction - 10% and attic insulation	
Infiltration reduction - 15%	
Infiltration reduction - 15% and attic insulation	
RCA 10% improvement	
RCA 15% improvement	
RCA 5% improvement	
Roof Insulation	
Setback thermostat - full setback	
Setback thermostat - moderate setback	
Wall Insulation	
Whole House Fan	
Window Replacement	
Agency Assistance Portal	low income program
Home Energy Comparison Report - Pilot	residential audit
Home Energy House Call - Energy Efficiency Starter KIT	residential audit
Home Performance Pilot - Elec	general residential program
K-12 Education Program- Curriculum	education
Low Income Weatherization- Refrigerator Replacement	refrigerator replacement
Low Income Weatherization- Tier 1	low income program
Low Income Weatherization- Tier 2	low income program
New Construction - Elec Manufactured Home	new construction
New Construction - Elec Single Family Home	new construction
New Construction - Gas Heat Manufactured Home	new construction
New Construction - Gas Heat Single Family Home	new construction
Online Audit	residential audit
Personalized Energy Report	residential audit
Pre-Paid Meter - Pilot	pre-paid meter pilot
Smart Saver - Central Air Conditioner	general air conditioning
Smart Saver - Heat Pump	general heat pump
Smart Saver - Residential Compact Fluorescent Light Promo	general for CFL
PowerManager Ohio	demand response
DLC-CAC	
DLC-Pool pumps	FE additions in blue
CAC Maintenance	
EE Ground Source Heat Pump	
Torchiere Floor Lamps	
RES DLC Central AC	demand response
RES DLC Water Heat	demand response

Covered Candle (low wattage, CFL or LED)	
Post or Porch Fixture Lighting (CFL or LED)	
Tankless water heaters (gas and electric)	
Water heating - natural gas condensing	
Insulated cement forms	
Water bed insulating pad	
Bathroom ventilation fan	
<b>Energy code training</b>	
<b>Energy code enforcement</b>	
<b>Duct balancing</b>	
Pool pump timer	
Variable speed pool pump	
In home energy use monitor	
Home energy management control systems	
Behavioral energy use campaign	
Social marketing campaign	
Building energy management controls	
Attic fans	
Window Replacement	U value of 0.40 or less and solar heat gain coefficient of 0.40 or less
Window Replacement	U value of 0.30 or less and solar heat gain coefficient of 0.40 or less
Programmable thermostats	
HVAC maintenance; clean coils, measure charge and air flow	
HVAC Quality Installation program	
Heat recovery ventilation	
Energy recovery ventilation	
Home Performance with Energy Star	res. existing homes whole house energy improvement prgm
Ductless mini split systems	14 SEER and 12 EER or higher rating
Evaporative cooling	
Attic insulation (air sealing required)	R-40
Attic insulation (air sealing required)	R-50
Attic insulation (air sealing required)	R-60
Tankless (on demand) water heaters	