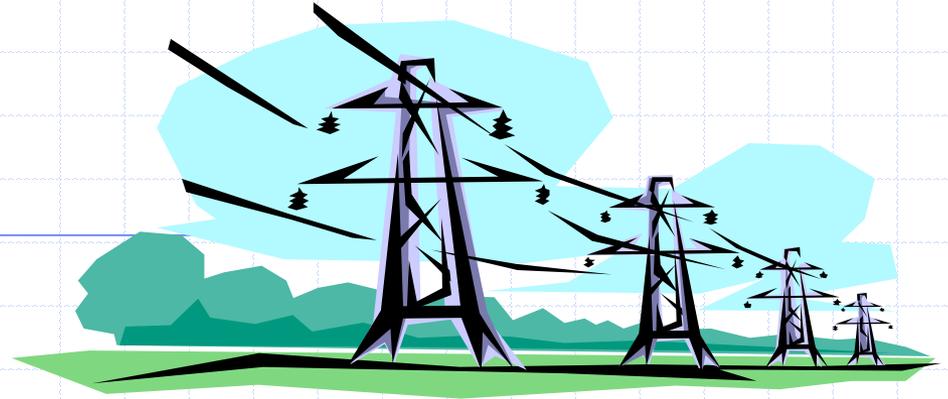


# DEMEC

Delaware Municipal Electric Corporation



## Energy Efficiency Service Offerings

### Energy Efficiency Advisory Council

March 9, 2016

For Discussion Purposes Only



# Energy Efficiency Program Development

DEMEC and its municipal member utilities have elected to develop, implement and fund programs for energy efficiency and peak demand reduction. This election comes after consideration of the following:

- Cost-Effective Energy Savings for both its residential and non-residential customers
- Savings and Costs to achieve EEAC incremental annual savings targets as a percentage of sales (.4% in year one, .7% in year two and 1% in year three)
- Proposed Evaluation, Measurement and Verification (EM&V) Regulations



# Approved Program Offerings

## ◆ Residential Sector

- Consumer Education Program

## ◆ Non-Residential Sector

- LED Streetlight Retrofit Program
  - ◆ Current pilot program consists of over 2,000 change outs
  - ◆ Utilities will continue with LED change outs
- Demand Response Program
  - ◆ Active Participation
  - ◆ Passive Participation

# Customer Education Program

## Energy Depot for Homes



**Energy Depot for Homes** is a one-stop free resource for energy information. Participants receive a quick personalized energy snapshot by answering eight simple introductory questions. This feature acts as a quick reference guide for basic improvements.

It also offers a more in depth look with features such as:

- ◆ A completely do-it-yourself home energy audit tool
- ◆ An energy calculator to estimate the annual energy use and cost of existing home energy systems and appliances
- ◆ Side by side comparisons for evaluating existing heating and cooling systems, or water heaters, with new systems
- ◆ An energy library to answer frequently asked questions

# LED Streetlight Retrofit Program

## LED Streetlight Retrofits



**LED Streetlight Retrofits** has been identified as an improvement effort to save all municipal electric customers money. DEMEC cities and towns are working together on a large scale LED streetlight retrofit program. On behalf of all its member communities, DEMEC developed product specifications and issued a request for proposals (“RFP”) in 2015 from vendors that could furnish LED lighting fixtures.

The program is designed to:

- ◆ Allow any or all communities to participate
- ◆ Permit all cities and towns to benefit from the savings of a scaled purchase
- ◆ Maintain pricing regardless of purchase quantity
- ◆ In other words, enable DEMEC members to receive very attractive pricing with a la carte menu options

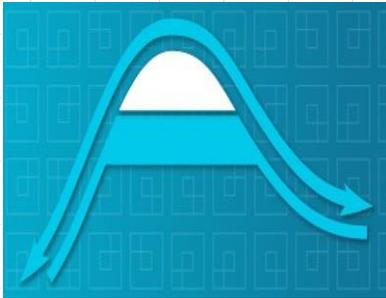


# LED Streetlight Retrofit Program

LED Streetlight Program	2016	2017	2018	2019	Total
Annual MWh Savings	1,175	103	66	TBD	1,345
Measures	2,157	210	134	TBD	2,501
Implementation Costs	\$569,803	\$47,880	\$30,552	TBD	\$648,235
Saving %	0.060%	0.005%	0.003%	0.00%	0.069%

# Demand Response Program

DEMEC partners with large customers to shed load during peak periods.



Demand response account customers are those customers that generally have large electric load usage during peak periods. Having these partners reduce load during peak periods can have a big impact on saving the community money and as such, the regional grid provides them incentives. DEMEC's program offers both an Active and Passive option:

## Active Program Customer Obligation:

- ◆ Customers must actually reduce electric load when called by PJM or DEMEC during the program period
- ◆ Active DR Customers include U of D, DAFB, Dover Downs

## Passive Program Customer Obligation:

- ◆ Customers permanently reduce electric load through energy efficiency improvements that can be quantified and that would normally be part of the customer's electric load during peak periods
- ◆ Passive DR Customers include U of D, Del Tech - Terry Nanticoke Health Services





# Demand Response Program

Demand Response Program	2016	2017	2018	2019	Total
Annual Emergency Response Available MWs*	7.1	7.5	8	8.5	8.5
Participants	11	12	14	16	16
Annual Growth kW	400	500	500	500	1,900

\*Annual Emergency Response Available MWs is a running total.



# Program Offerings Evaluated

## ◆ Residential Sector

- Consumer Retail Lighting Program

## ◆ Non-Residential Sector

- Business Energy Rebates Program



# Residential Lighting Program



**The Residential Lighting Program** offers rebates to facilitate the implementation of cost-effective lighting improvements.

Rebates would be available for common residential lightbulbs from compact fluorescent lightbulbs ("CFL") to light emitting diode ("LED") bulbs.

Participants would have access to an online store to purchase the product needed. The advantage of this approach is:

- ◆ Guaranteed identification of program participants
- ◆ Easy tracking of product sales
- ◆ Online access
- ◆ Immediate incentive application
- ◆ All products sold are EnergyStar compliant



# Residential Lighting Program



Residential Lighting	2017	2018	2019	Total
Annual MWh Savings	550	550	550	1,650
Annual KW Savings	51	51	51	153
Participants	2,300	2,300	2,300	6,900
Measures	14,000	14,000	14,000	42,000
Incentive Costs	<b>\$73,000</b>	<b>\$73,000</b>	<b>\$73,000</b>	<b>\$219,000</b>
Implementation Costs	<b>\$104,000</b>	<b>\$104,000</b>	<b>\$104,000</b>	<b>\$312,000</b>
Total Program Costs	<b>\$177,000</b>	<b>\$177,000</b>	<b>\$177,000</b>	<b>\$531,000</b>
TRC Ratio*	1.66	1.66	1.66	
Saving %	0.028%	0.028%	0.028%	

\*TRC Ratio is indicative of similar programs offered by DEMEC's contractor

# Business Energy Rebates Program



**The Business Energy Rebates Program** offers rebates to facilitate the implementation of cost-effective energy efficiency improvements for non-residential (commercial and industrial) customers.

Rebates would be available for common commercial and industrial efficient measures with documented energy savings.



Improvement zones targeted to include:

- ◆ Lighting
- ◆ HVAC
- ◆ Compressed air
- ◆ Refrigeration
- ◆ Food service and more



# Business Energy Rebates Program



Business Program	2017	2018	2019	Total
Annual MWh Savings	1,100	1,100	1,100	3,300
Annual KW Savings	150	150	150	450
Participants	60	60	60	180
Measures	3,500	3,500	3,500	10,500
Incentive Costs	<b>\$91,000</b>	<b>\$91,000</b>	<b>\$91,000</b>	<b>\$273,000</b>
Implementation Costs	<b>\$193,000</b>	<b>\$193,000</b>	<b>\$193,000</b>	<b>\$579,000</b>
Total Program Costs	<b>\$284,000</b>	<b>\$284,000</b>	<b>\$284,000</b>	<b>\$852,000</b>
TRC Ratio*	2.43	2.43	2.43	
Saving %	0.056%	0.056%	0.055%	

\*TRC Ratio is indicative of similar programs offered by DEMEC's contractor

# Summary Energy Programs



Summary	2017*	2018	2019	Total
Annual MWh Savings	2,929	1,716	1,650	6,295
Annual KW Savings	201	201	201	603
Participants	2,360	2,360	2,360	7,080
Measures	19,867	17,634	17,500	55,001
Incentive Costs	<b>\$164,000</b>	<b>\$164,000</b>	<b>\$164,000</b>	<b>\$492,000</b>
Implementation Costs	<b>\$914,683</b>	<b>\$327,552</b>	<b>\$297,000</b>	<b>\$1,539,235</b>
Total Program Costs	<b>\$1,078,683</b>	<b>\$491,552</b>	<b>\$461,000</b>	<b>\$2,031,235</b>
Bus and Res Lt Saving %	0.084%	0.083%	0.083%	0.250%
LED Saving %	0.065%	0.003%	TBD	0.069%
Total saving %	0.149%	0.087%	0.083%	0.319%

\*Inclusive of 2016 savings



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Questions

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Thank You

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