

Energy Efficiency Advisory Council

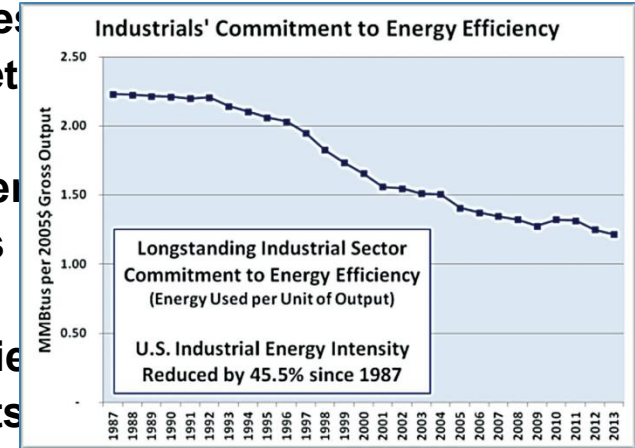
DEUG Voluntary Opt-Out Request From Delmarva Power Energy Efficiency Program

DEUG Members:

E.I. du Pont de Nemours & Co., Kuehne Chemical Co., Delaware City Refining Co., LLC., Burriss Logistics, Linde LLC

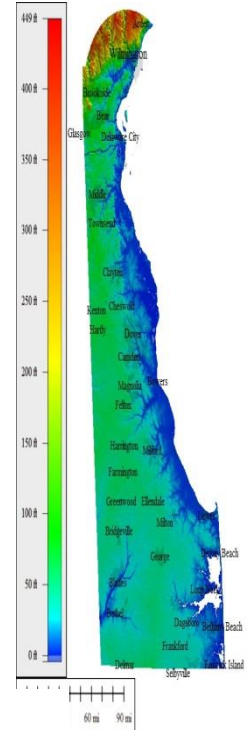
DEUG Member Companies (Large Consumers)

- **Live, Practice and Promote Energy Efficiency Initiatives every day to stay in business and ahead of the competition.**
- **Unprecedented support to Delaware employment, communities, “Green” energy & Economic Development.**
- **Operate with Technical “In-House” Engineering Staffs Utilize Pay-for-Performance Results.**
- **Implement Technical, “Process Related” Energy Efficiency initiatives vs. “Standard” lighting / motor replacements.**
- **Deliver load reductions beyond the Delmarva EE Program.**
- **Invest Tens of Millions in Manufacturing Plant Projects that are not “Recognized” or “Rewarded” in the Delmarva EE Program.**
- **Move Ahead of the EE Program and are pulled “Backward” by Program surcharges to Pay for the Last Movers, Our Internal EE Projects will be Delayed.**
- **Large Consumers Provide Significant EE Benefits to Delaware at “NO COST”.**

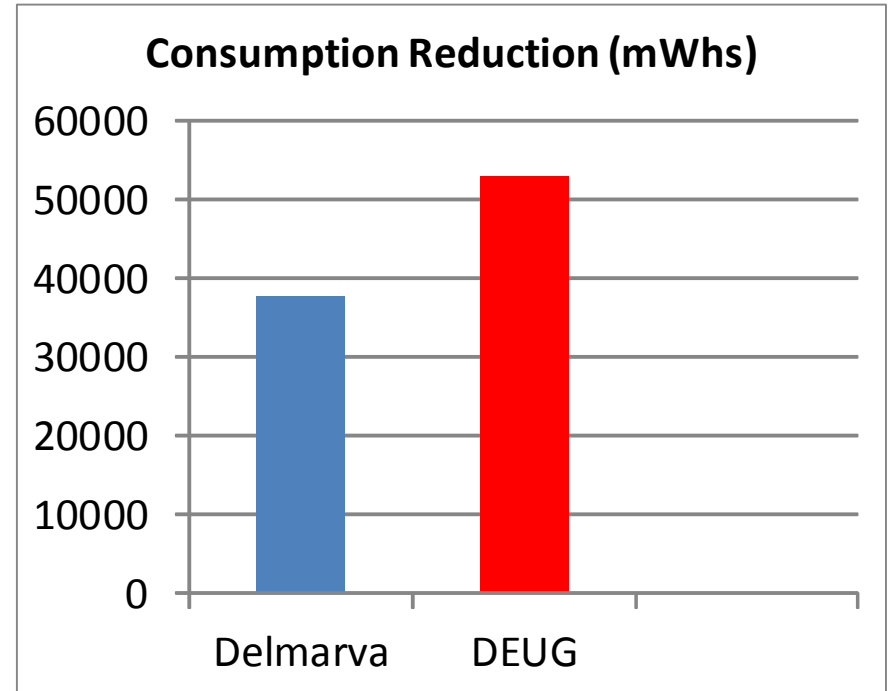
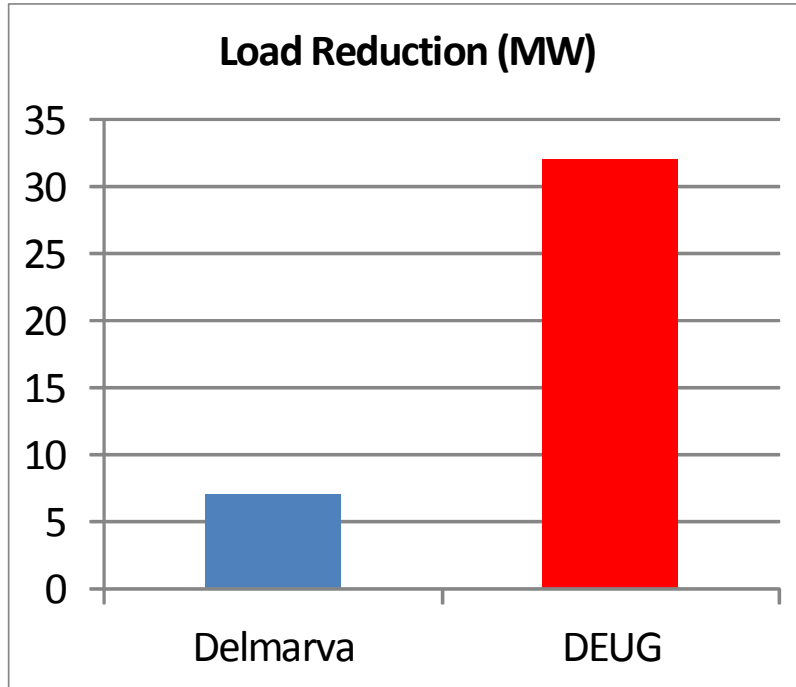


The DEUG Member Commitment to Energy Efficiency

- **36 Energy Professionals on Staff**
 - **36 Technical Engineers on Staff**
 - **Over 6,000 Total Employees in Delaware**
 - **32 MW of peak load reductions completed /planned**
 - **Over 53,000 mWh of electric consumption reduction completed / planned**
 - **\$91,100,000 investment to complete Energy Efficiency initiatives**
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- **Based on 4 of 5 DEUG members. Peak load reduction, consumption reduction and investment for 2013 – 2018 period.**



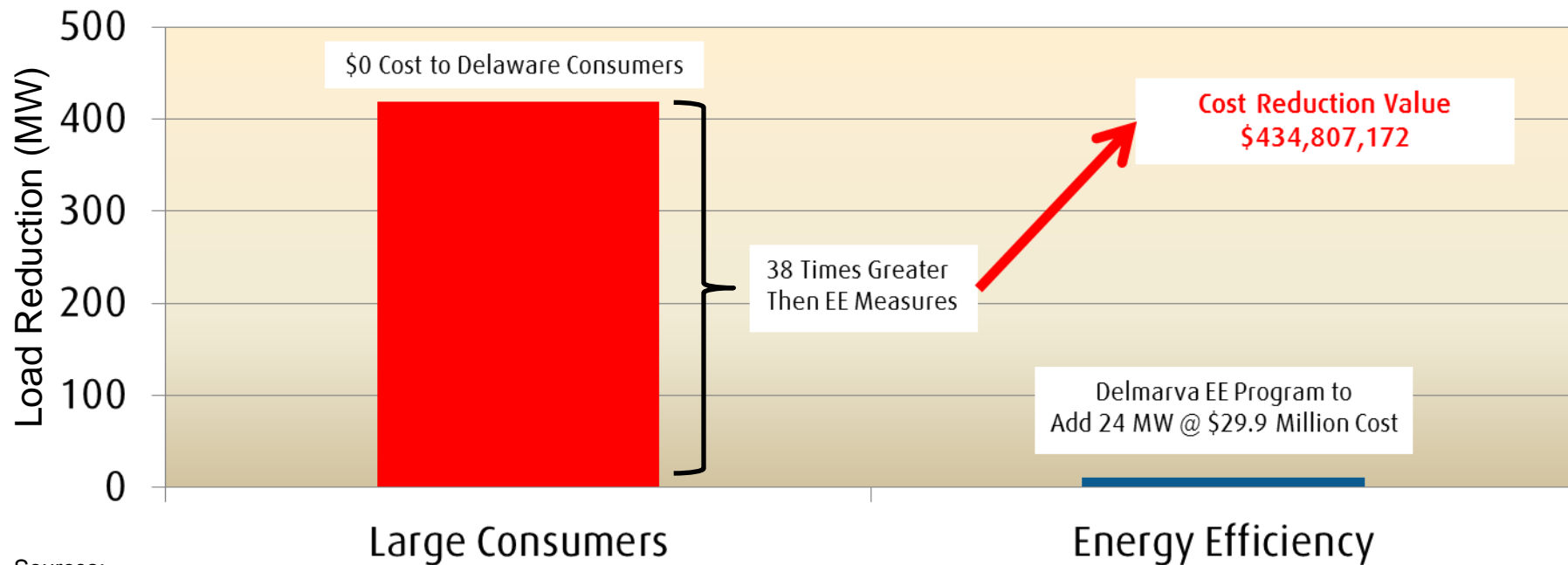
DEUG EE Initiatives Surpass the Proposed Delmarva EE Program



Delmarva initiatives for Prescriptive & Custom Programs that would apply to Large Consumers.
April 13, 2016 Delmarva Power Energy Efficiency Program Portfolio.

Delaware Large Consumers Create Substantial Cost Reductions By Reducing Peak Electric Loads (at No Cost)

PJM 2018/2019 RPM Interruptible Load Program



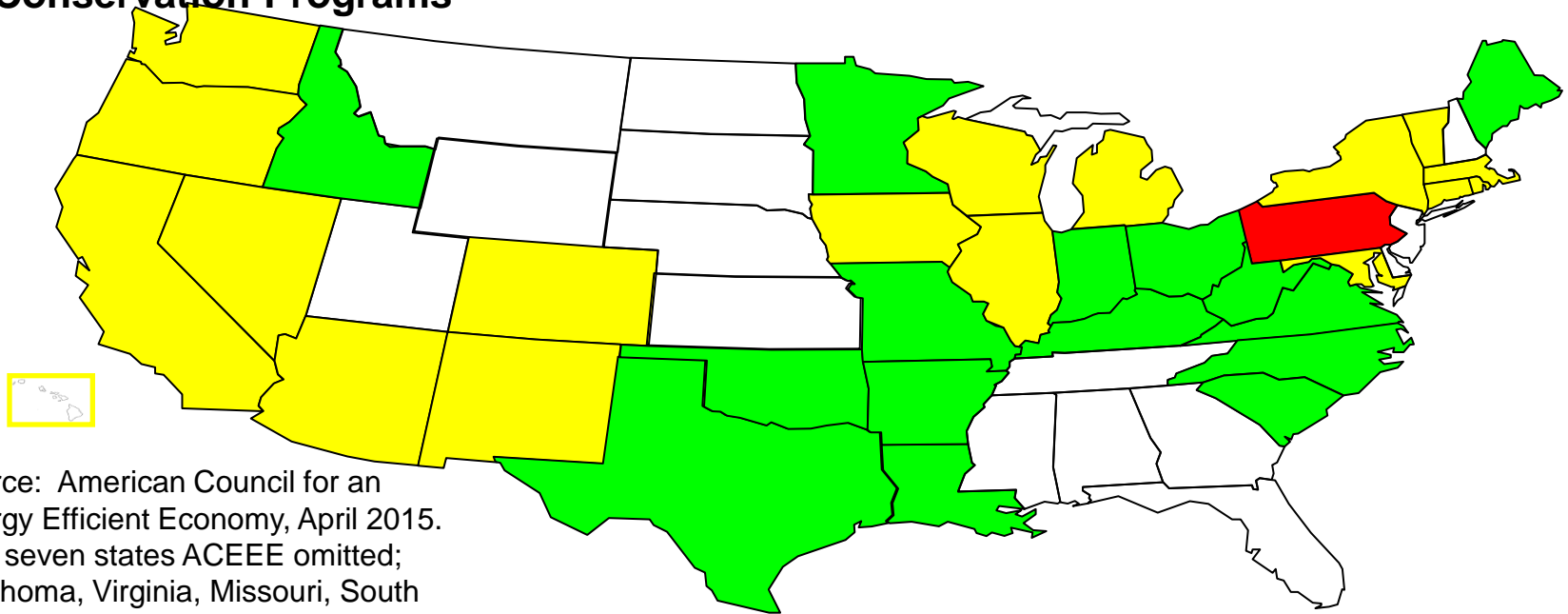
Sources:

PJM 2018/2019 RPM Base Residual Auction Results Report, PJM #5154776, Table 3B for load reduction volumes.

PJM Independent Market Monitor, Analysis of 2018/2019 RPM Base Auction, June 30, 2016, Page 11, \$13,167,010,883 cost reduction for 12,331 MWs.

Position Delaware To Remain Competitive With Other Voluntary Opt-Out States

15 states (Green) have a Voluntary Opt Out Provision and 18 States (Yellow & Red) have a Self-Direct Option/Mandatory Participation for their respective Energy Efficiency & Conservation Programs



Source: American Council for an Energy Efficient Economy, April 2015. Plus seven states ACEEE omitted; Oklahoma, Virginia, Missouri, South Carolina, Kentucky, Louisiana, Idaho.

KEY FINDINGS

- **EE Programs impose Significant Costs (\$200,000/yr and up) on Large Consumers, that Compromise Competitive Advantages, Slow Economic Development and Threaten jobs and job growth.**
- **Legislative initiatives like the EE Program have increased Utility Bills by a factor of 10.**
- **EE Programs do not motivate many Large Consumers and represent an additional tax on operations.**
- **The most Desirable & Beneficial Energy Efficiency Projects are not Rewarded under the Program (Long-term, Multi-Million Investment Commitments).**
- **EE Programs carry Extremely High Overhead Costs – Delmarva Program uses 54 cents of every consumer dollar collected (Pennsylvania uses 59 cents) to fund Overhead Cost NOT EE Projects.**
- **Energy Efficiency Benefits can be easily be overstated using excessive service lives (7 to 15 yrs.) compared to Business evaluations of 1 to 3 years.**
- **Multiple Delaware EE Programs exist, the funding is a substantial cost concern.**
- **Price Suppression Benefits are Marginal in the current/future market and should not be considered.**

Delmarva 20 MW Customer Bill Impact Example

| DELAWARE ELECTRIC SUPPLY COST CALCULATOR | | | | | | |
|--|-------------|------------|----------|--|--------------------|----------------------------|
| COST IMPACT OF LEGISLATIVE INITIATIVES & RATE CASES (GST RATE CLASS) | | | | | | |
| Update: | 6/29/2016 | | | | | |
| INPUT SECTION (Fill in Green Blocks) | | | | COST IMPACT | | |
| Enter Typical Monthly Demand in kW | 20,000 | | | Cost Item | Annual Cost | Cost Impact Per mWh |
| Enter Typical Annual Electric Consumption in kWh | 140,160,000 | | | DELMARVA CUSTOMER CHARGE | \$ 49,104 | \$ 0.35 |
| INDIVIDUAL INITIATIVE RATES | | | | DELMARVA DISTRIBUTION CHARGE | \$ 12,227 | \$ 0.09 |
| Bloom Energy Surcharge (\$/kWh) | \$ | 0.0042610 | per kWh | DELMARVA RARM CHARGE | \$ 15,600 | \$ 0.11 |
| Renewable Portfolio Standard Charge (\$/kWh) | \$ | 0.0040383 | per kWh | DELMARVALOW INCOME CHARGE | \$ 13,315 | \$ 0.10 |
| RGGI Allowance Cost Increase | \$ | 0.0022821 | per kWh | DELMARVA GREEN ENERGY FUND | \$ 49,897 | \$ 0.36 |
| PJM Artificial Island Project Cost Increase | \$ | 1.430 | kW-Month | BLOOM ENERGY CHARGE (QFCP) | \$ 597,222 | \$ 4.26 |
| Delmarva Power Energy Efficiency Program | \$ | 0.00107779 | per kWh | RENEWABLE PORTFOLIO STANDARD CHARGE (RPS) | \$ - | \$ - |
| Green Energy Fund (\$/kWh) | \$ | 0.0003560 | per kWh | RGGI 2013 ALLOWANCE REDUCTION | \$ 319,859 | \$ 2.28 |
| Low Income Charge | \$ | 0.0000950 | per kWh | PJM ARTIFICIAL ISLAND COST INCREASE | \$ 343,200 | \$ 2.45 |
| | | | | DELMARVA POWER ENERGY EFFICIENCY PROGRAM | \$ 151,063 | \$ 1.08 |
| | | | | DELMARVA POWER RATE CASE COST INCREASE | \$ 8,423 | \$ 0.06 |

Traditional Costs
\$140,100/yr.

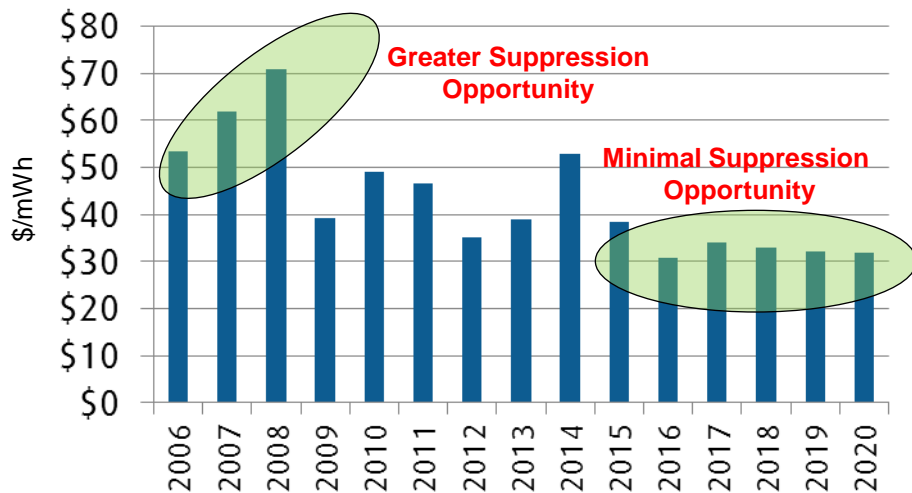
Legislative Costs
\$1,411,300/yr.

Backup Slides

“Price Suppression” Benefits Attributable to Demand Response, not Energy Efficiency

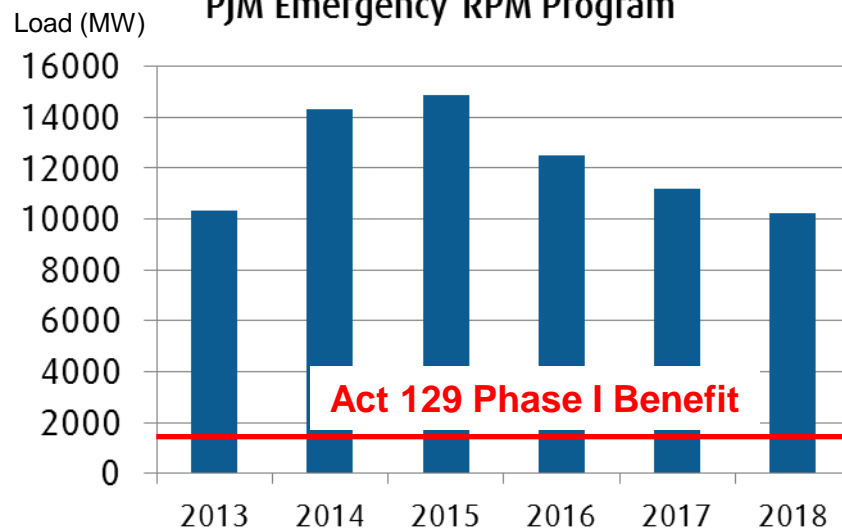
- PAPUC found no financial merit to study Price Suppression
- SWE confirms price decline due to cheap Shale Gas and Growth in Demand Response.
- Existing PJM Program is utilized to create suppression benefits
- Large Consumers are main participants in Demand Response
- Large Consumers played a critical role in protecting Demand Response at the U.S. Supreme Court

PJM Wholesale Electric Price, Past & Future



Source: PJM Monitoring Analytics Real Time Price & NYMEX 3/17/16 Market Close.

PJM Emergency RPM Program



Source: PJM Monitoring Analytics Real Time Price & SWE Phase I Report.

PJM Market Monitor: Demand Response Valued at Over \$9 Billion in “One” Year



The 2017/2018 RPM Base Residual Auction: Sensitivity Analyses

The Independent Market Monitor for PJM
July 10, 2014

Extended Summer DR products resulted in a 22.9 percent reduction in RPM revenues for the 2017/2018 Base Residual Auction compared to what RPM revenues would have been without the Limited and Extended Summer DR products.

Table 4 Scenario 1: Impact of DR product types

| LDA | Product Type | Actual Auction Results | | Annual Resources Only | |
|------------|-----------------|------------------------------------|----------------------|------------------------------------|----------------------|
| | | Clearing Prices (\$ per MW-day) | Cleared UCAP (MW) | Clearing Prices (\$ per MW-day) | Cleared UCAP (MW) |
| RTO | Limited | \$106.02 | 2,322.1 | | |
| | Extended Summer | \$120.00 | 7,163.3 | | |
| | Annual | \$120.00 | 157,518.3 | \$157.80 | 166,237.1 |
| RTO Total | | | 167,003.7 | | 166,237.1 |
| PSEG | Limited | \$201.02 | 177.5 | | |
| | Extended Summer | \$215.00 | 154.8 | | |
| | Annual | \$215.00 | 5,778.4 | \$220.00 | 6,103.4 |
| PSEG Total | | | 6,110.7 | | 6,103.4 |
| PPL | Limited | \$40.00 | 41.7 | | |
| | Extended Summer | \$53.98 | 183.3 | | |
| | Annual | \$120.00 | 9,123.5 | \$157.80 | 10,543.8 |
| PPL Total | | | 9,348.5 | | 10,543.8 |

Impact of All DR and EE

Table 5 shows the results if there were no offers for DR or EE in the 2017/2018 RPM Base Residual Auction and everything else had remained the same. The RTO clearing price would have increased 135.1 percent to \$282.16 per MW-day, and the clearing quantity would have decreased 2.0 percent to 163,713.2 MW.

The net CONE for the RTO for the 2017/2018 RPM BRA was \$351.39 per MW-day. The price at Point A on the VRR Curve defines the maximum clearing price for an LDA in a BRA. The price at Point A on the VRR Curve for the RTO for the 2017/2018 BRA was 1.5 times net CONE, or \$527.09 per MW-day.

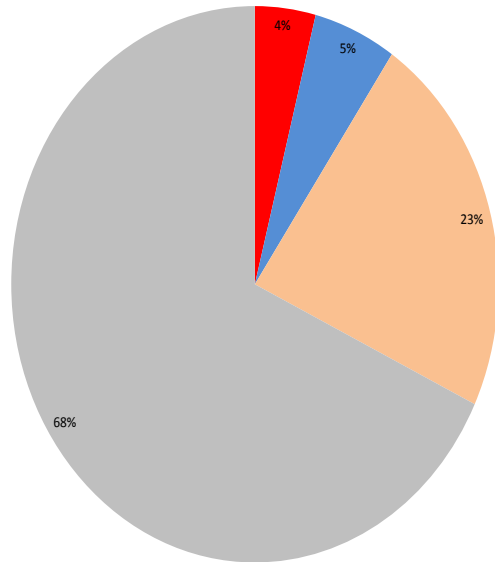
The inclusion of sell offers for Demand Resources and Energy Efficiency resources had a significant impact on the auction results.

Based on actual auction clearing prices and quantities and make-whole MW, total RPM market revenues for the 2017/2018 RPM Base Residual Auction were \$7,512,229,630. If there were no offers for DR or EE in the 2017/2018 RPM Base Residual Auction, total RPM market revenues for the 2017/2018 RPM Base Residual Auction would have been \$16,859,658,203, an increase of \$9,347,428,573, or 124.4 percent, compared to the actual results (Table 1). From another perspective, the inclusion of Demand Resources and Energy Efficiency resources resulted in a 55.4 percent reduction in RPM revenues for the

Delaware Price Suppression Benefits Minimal in 2015

DPL North Wholesale Electric Price (\$/mWh)

■ >\$100 ■ \$50 - \$100 ■ \$30 - \$50 ■ <\$30



- **68% of hrs. had an electric cost less than \$30/mWh, No price reduction here from a load reduction.**
- **23% of hrs. had a cost between \$30/mWh to \$50/mWh, very minimal price reduction.**
- **5% of hrs. had a cost between \$50 - \$100/mWh, could see some price reduction.**
- **4% of hrs. had a cost above \$100/mWh. Price reduction can occur here, **LARGE CONSUMERS ALREADY DO THIS IN PJM DEMAND RESPONSE PROGRAMS.****

Act 129 EE&C Programs Are Inefficient



PENNSYLVANIA PA ACT 129 PROGRAM



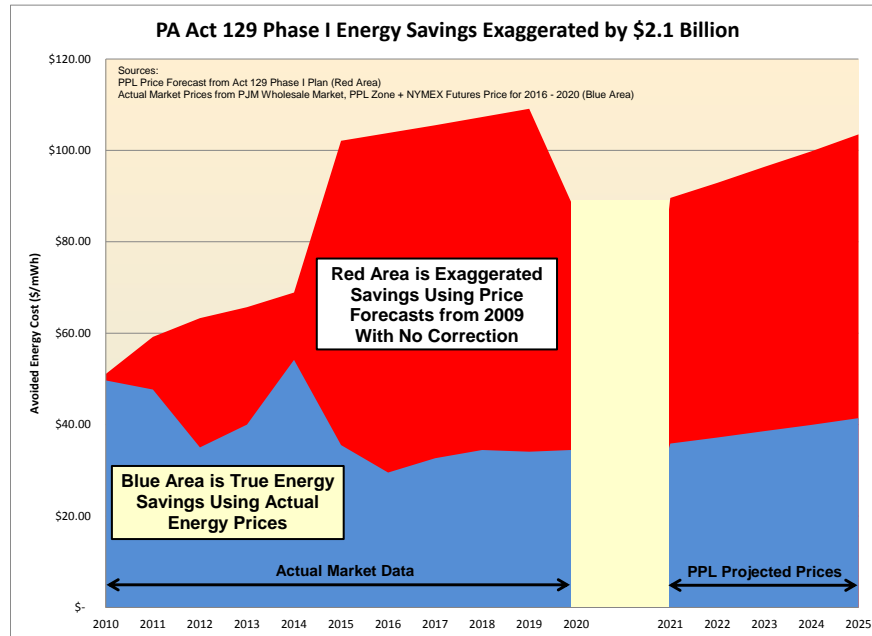
GRANT PAYMENTS ARE ONLY 41% OF INVESTMENT

| | <u>GRANTS PAID</u> | <u>PROGRAM MGMT.</u> | <u>TOTAL</u> |
|-------------------------------|----------------------|------------------------|------------------------|
| Phase I 6/1/09 – 5/31/13 | \$385,133,000 | \$417,491,000 | \$802,624,000 |
| Phase II 6/1/13 – 5/31/15 | \$141,255,000 | \$241,934,000 | \$383,189,000 |
| Phase III 6/1/16 – 5/31/21 | \$471,256,000 | \$756,575,000 | \$1,227,831,000 |
| TOTAL | \$997,644,000 | \$1,416,000,000 | \$2,413,644,000 |

Note: Figures Do Not Include 6/1/15 – 5/31/16 Period, no data Currently Available

- **59 Cents of every dollar paid by Consumers funds Program Management & Overhead.**
- **Over \$1.4 Billion Dollars in Program Management & Overhead Costs.**
- **Energy Efficiency project grants comprise only 41 Cents of every Dollar paid by Consumers or \$998 Million Total**
- **Program Management expenses are expected to increase in the 5-Year Phase**

Act 129 Phase I Benefits Overstated By \$2.1 Billion



- **SB805 Opponents Claim \$4.2 Billion Savings and High Benefit/Cost Ratios**
- **Program Auditor's (SWE) Report stated that this claim was overstated by 40% to 50%, or actual savings between \$2.1B and \$2.5B.**
- **The difference arises from use of different values for energy price.**
- **The \$4.2 B claim results from applying the energy savings to the 2009 Price Forecast.**
- **The correct \$2.1 B value results by applying the same savings to Actual Market Prices.**
- **Act 129 does not require savings claims to be based upon actual data**

Large Consumers Seek Approval of PA Senate Bill 805

PRINTER'S NO. 922

THE GENERAL ASSEMBLY OF PENNSYLVANIA

SENATE BILL

No. 805 Session of 2015

INTRODUCED BY BOSCOLA, MENSCH, YUDICHAK, BROWNE, ARGALL,
ALLOWAY, AUMENT, HUTCHINSON, SCHWANK AND VULAKOVICH,
MAY 14, 2015

REFERRED TO CONSUMER PROTECTION AND PROFESSIONAL LICENSURE,
MAY 14, 2015

AN ACT

1 Amending Title 66 (Public Utilities) of the Pennsylvania
2 Consolidated Statutes, in restructuring of electric utility
3 industry, further providing for energy efficiency and
4 conservation program.
5 The General Assembly of the Commonwealth of Pennsylvania
6 hereby enacts as follows:
7 Section 1. Section 2806.1(b)(1)(ii) of Title 66 of the
8 Pennsylvania Consolidated Statutes is amended and the section is
9 amended by adding a subsection to read:
10 § 2806.1. Energy efficiency and conservation program.
11 * * *
12 (b) Duties of electric distribution companies.--
13 (1) * * *
14 (ii) A new plan shall be filed with the commission
15 every [five years or as otherwise required by the
16 commission] three years, unless a shorter duration is
17 required by the commission. The plan shall set forth the
18 manner in which the company will meet the required

- **SB 805 offers Large Consumers the “Choice” to Opt-Out of PA Act 129 Phase III Program (6/1/16 – 5/31/21)**
- **One Time Selection for the Entire Phase III Period**
- **Implemented early enough to Support Utility Planning Efforts and Enhance Performance**
- **Process Prevents “Gaming” the Program**
- **No Impact to Residential or Small Business Consumers. Act 129 is Implemented by Consumer Class, No Loss of Funding Or Cost Increases**
- **Pennsylvania will join 15 Other States that have Already Implemented an Energy Efficiency Program Opt-Out Opportunity**