



Energy Efficiency and Renewable Energy

Delaware

March 1, 2016



Importance of Energy Efficiency



- The Delaware Energy Efficiency Potential Study (2014) determined that electric consumption could be reduced by **19% through 2025**.
- *Benefits to the Delaware economy* - the Potential Study quantified the potential net benefits of energy efficiency programs at **\$2.3 billion**.
- *Efficiency is our cheapest fuel* - according to a 2014 study by ACEEE, energy efficiency costs only **2.8 cents/kWh** compared to the Delaware average residential electric rate of 14.05 cents/kWh.
- *Energy efficiency is highly cost-effective* - investing \$1 in Delaware energy efficiency programs will return **\$2.40** to the economy.



Energy Efficiency Portfolio



- Lead By Example (EO18):
- Better Business Challenge (Portfolio Manager)
- Clean Transportation Incentive Program
- Alternative Fueling Infrastructure Program



Energy Efficiency Portfolio



- Sustainable Energy Utility (SEU)
 - Home Performance with Energy Star (HPwES)
 - High Energy Manufacturing Assistance
 - Energy Audits for non-profits
 - Green Schools Program
 - Pre-Weatherization Assistance Program (WAP)
 - Faith Efficiencies Partnership



Energy Efficiency Investment Fund



- \$5 million in grant incentives over the first 2 years.
 - Leveraged \$20 million in private funding
 - \$3.3 million in energy savings per year
 - 160 Delaware jobs created
 - 30,900 metric tons of CO₂ reduced per year
- FY15: 300 projects totaling more than \$3.9 million in incentives, saving in excess of \$25 million in energy costs of the lifetime of the projects.



Weatherization Assistance Program



- Weatherization Assistance Program (WAP)
 - Free service designed to reduce energy costs for low-income families.
 - Low Income is defined as, at or below, 200% of the Poverty Income Guidelines (DHSS).
 - Funded by: DOE, RGGI, Utility Funds.
 - CY15 the program weatherized 163 homes utilizing \$800K in funds and saved an estimated 4.9 million BTUs.
 - Pre- Weatherization Assistance Program (SEU)



Energy Efficiency Looking Forward

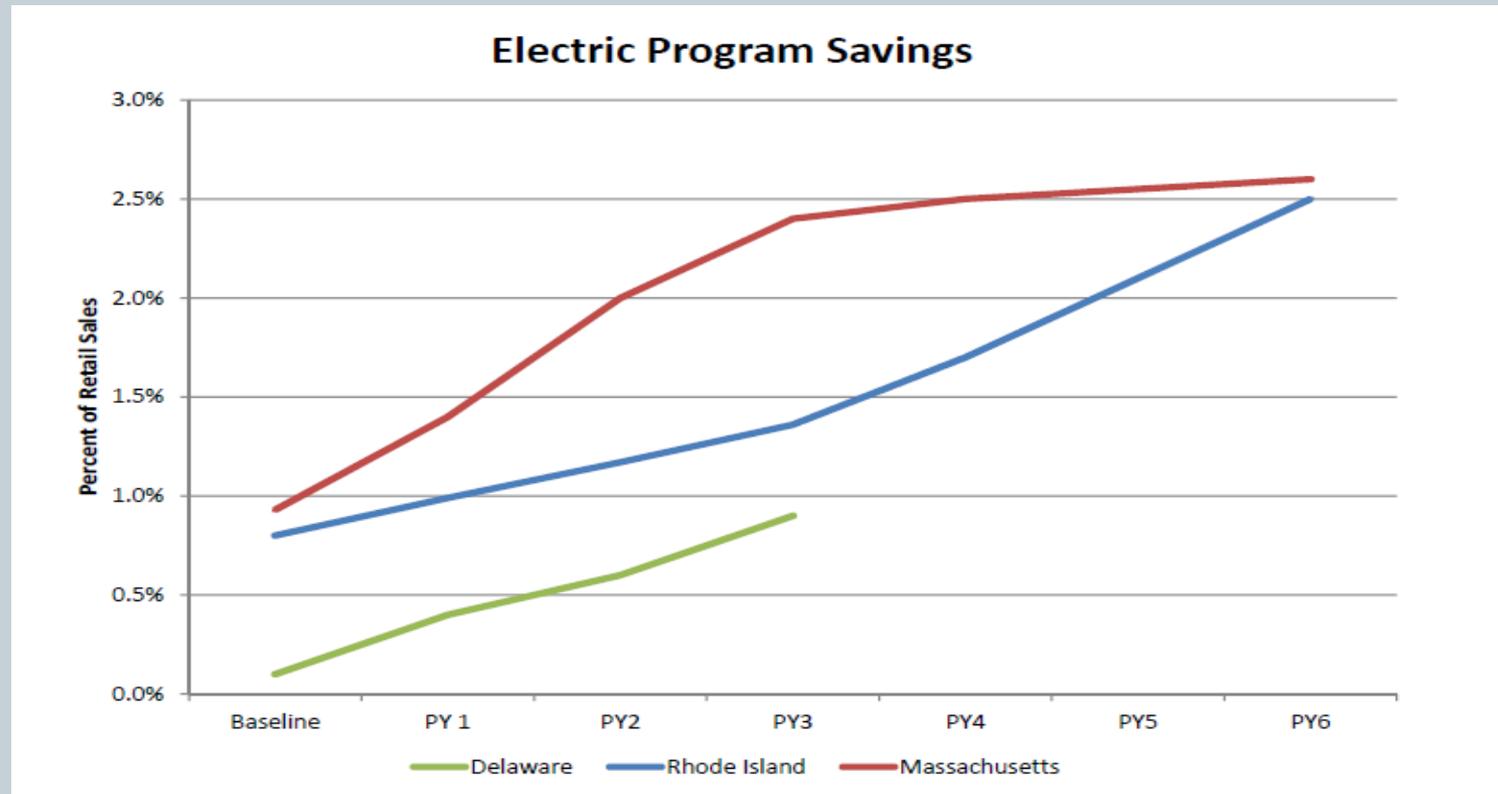


- Creation of the **Energy Efficiency Advisory Council**
- *“Each affected energy provider shall implement energy efficiency, energy conservation, and peak demand reduction programs that are cost-effective, reliable, and feasible...”*

Program Year	Energy Savings (MWh)	Gas Savings (MMBtu)
1	0.4%	0.2%
2	0.7%	0.3%
3	1.0%	0.5%



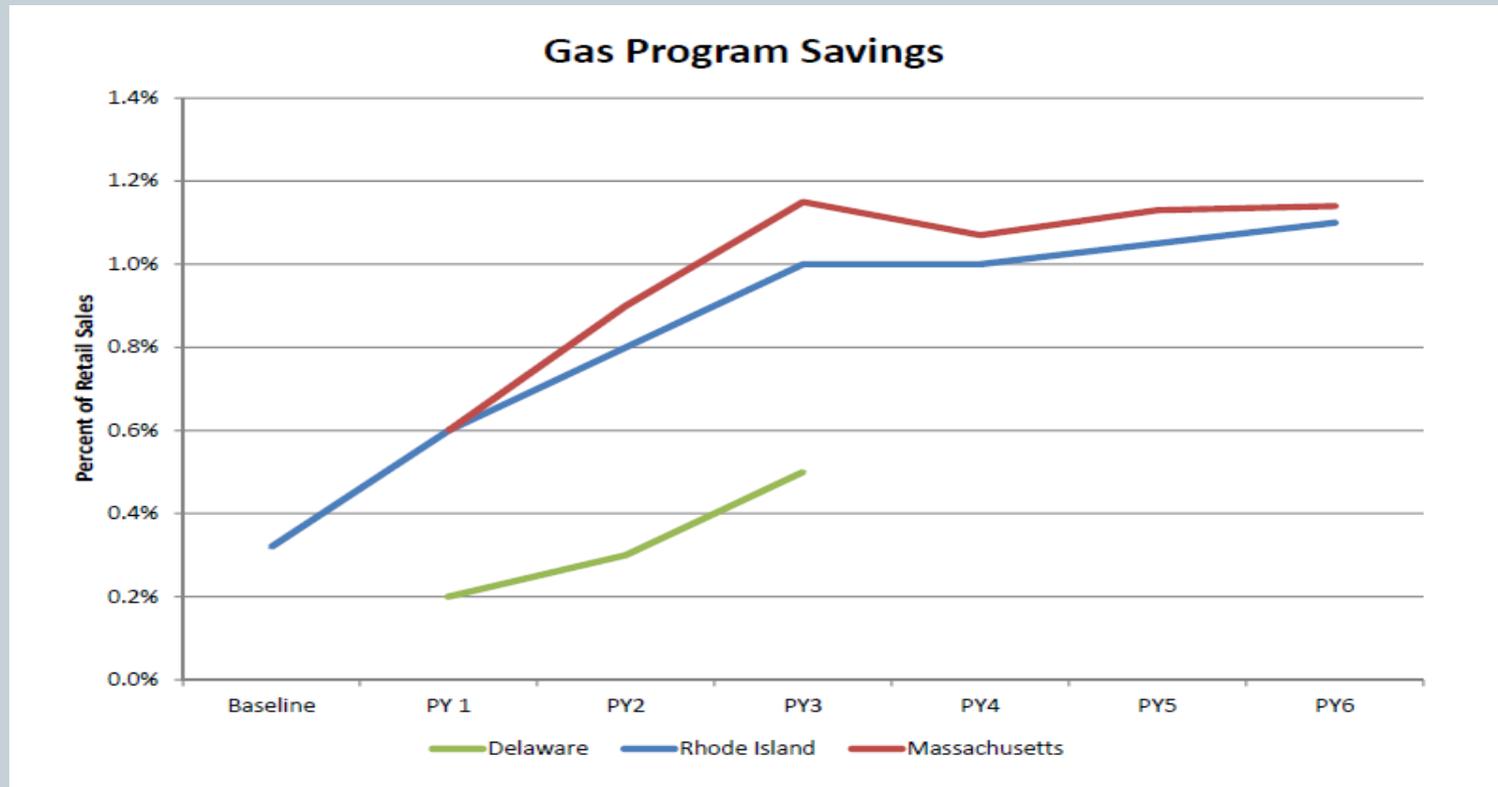
Delaware Electric Savings Comparison



* Chart: Optimal Energy, Inc. 2015



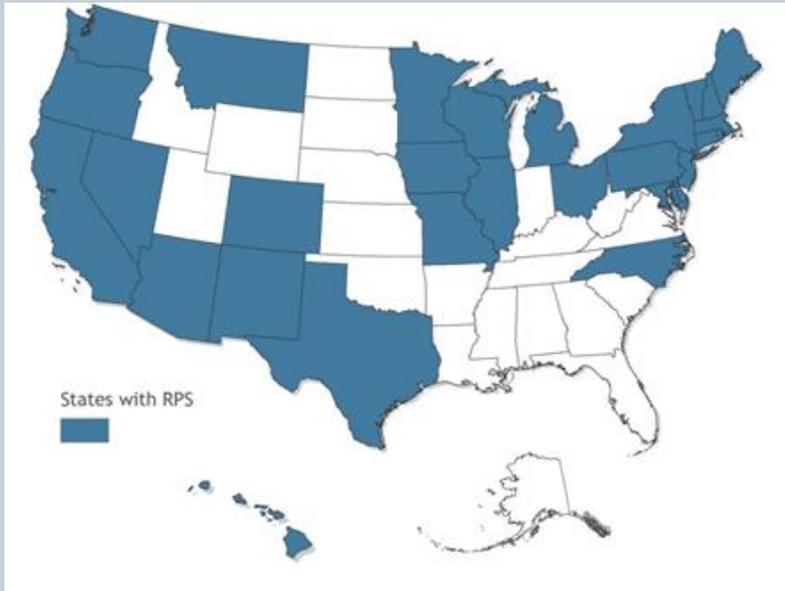
Delaware Gas Savings Comparison



* Chart: Optimal Energy, Inc. 2015



Renewable Energy Portfolio (RPS)



Delaware's RPS (by 2025):

- 25% of the state's electricity to come from renewable energy.
- 3.5 % from solar.
- In 2016: 14.50% RE and 0.8% solar.

Source: Lawrence Berkeley National Laboratory, National Renewable Energy Laboratory



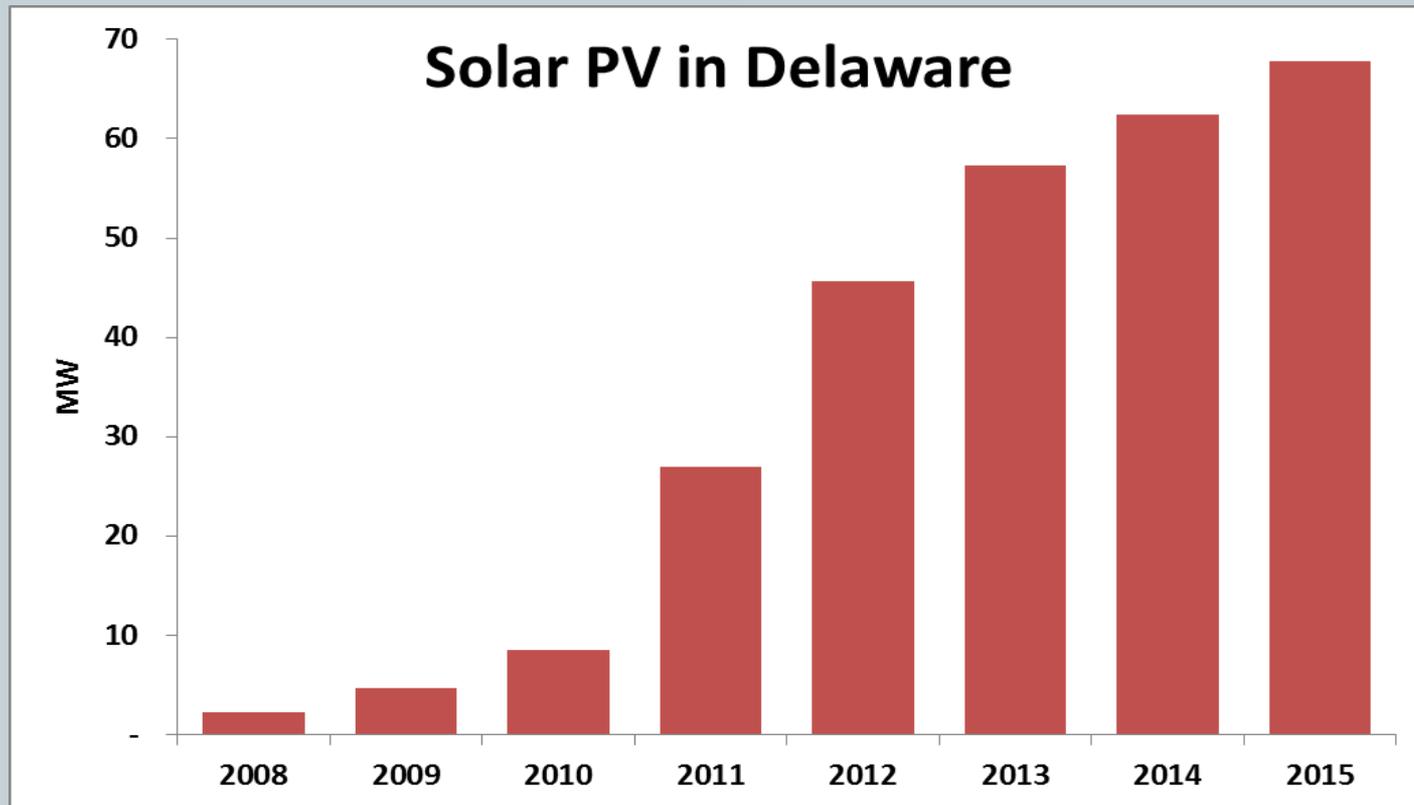
Renewable Energy



- Solar PV in Delaware has grown from 2.3 megawatts (MW) at the end of 2008 to roughly 67 MW today—a 28-fold increase.
 - ✦ About 30 MW of that 67 MW is represented by three utility scale projects of 5, 10 and 15 MW respectively.
 - ✦ The rest of Delaware’s PV capacity—37 MW—is made up of more than 2,400 distributed, small scale projects ranging from rooftop systems of 50 kW to small commercial installations up to 1.6 MW.



Growth of Solar in Delaware



Green Energy Program



- Utility Funded Renewable Energy Incentive Program

- Delaware Municipal Electric Corporation
- Delaware Electric Cooperative
- Delmarva Power and Light (Green Energy Fund)



- ✦ Green Energy Fund (CY15)

- 283 renewable energy projects
- \$1.9 million in funding
- 245 residential solar projects with an installed capacity of 2.1 MW



Path Forward...



- EE/RE Education and Outreach
- Cost effective EE/RE programs
- Evaluation, Measurement and Verification (EM&V)



Questions

