



# Residential Energy Efficiency Trends

TPPA Marketing & Customer Service Conference  
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# Agenda

- ▶ GPL EnergySaver Program
- ▶ Began Spring 2008
- ▶ Program numbers through 2018
- ▶ Trends

# 2008 Program Overview

- ▶ GP&L issued its first bill credit for energy efficiency in April of 2008.
- ▶ Program offerings that first year included:
  - ▶ HVAC Bill Credits - two SEER steps above minimum
  - ▶ Compact Fluorescent Bulb Discount Program
    - (23) different bulbs that were marked down from 25% - 50%.
  - ▶ Wholehouse Weatherization Bill Credits
  - ▶ Low Income Weatherization Assistance

# 2008-2018 EnergySaver Program Participation Numbers

- ▶ 2008 = 206 (6 months)      2014 = 480
- ▶ 2009 = 902                      2015 = 438
- ▶ 2010 = 741                      2016 = 396
- ▶ 2011 = 546                      2017 = 357
- ▶ 2012 = 569                      2018 = 322 (as of 2/15/18)

▶ 2013 = 497

Total 5,454 participants

## 2008-2018 EnergySaver Program Participation Percentages

- ▶ Since 2010, utility bill credits to customers can be grouped according to the efficiency measure that was installed.
  - ▶ Wholehouse Weatherization - 42.93%
  - ▶ High efficiency HVAC replacement - 30.53%
  - ▶ Rooftop solar panel projects - 21.48%
  - ▶ Commercial Lighting Upgrades - 4.60%
  - ▶ Window unit air conditioning - 0.47%

## Trending Away From Solar Rooftop Bill Credits

- ▶ The GP&L Solar bill credits had a good run.
- ▶ GP&L is developing a **Green Residential Rate**
- ▶ Studies have shown that customers are willing to pay a little more per month for Renewable Power
  - **70%** willing to pay at least **\$5** per month more
  - **38%** willing to pay at least **\$10** per month more
  - **21%** willing to pay at least **\$15** per month more

# Trends in GP&Ls Rooftop Solar Program

| Year           | 2014    | 2015    | 2016    | 2017    | 2018    |
|----------------|---------|---------|---------|---------|---------|
| Participants   | 21      | 18      | 14      | 25      | 48      |
| Maximum Credit | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$2,000 |
| Average Credit | \$4,809 | \$4,685 | \$4,655 | \$4,330 | \$2,425 |
| \$ per Watt    | \$3.00  | \$1.50  | \$0.75  | \$0.75  | \$0.40  |

# The Evolution of Wind Generation

- ▶ In 1970, the oil shortages created a need for developing way to use alternative energy sources.
- ▶ In 1980, thousands of large wind turbines were installed in California.
- ▶ In the 1990s and 2000s, the government used renewable energy incentives to further push electricity generation using wind.
- ▶ In 1990, the share of electric generation from wind was less than 1%.
- ▶ In 2016, this percentage grew to 6%.
- ▶ Texas leads the way followed by Iowa, Oklahoma, Kansas and California.
- ▶ These five states produced 55% of the total US wind generation in 2016.
- ▶ The largest turbines can generate 5,000 kW to 8,000 kW.



## GP&L trends involving wind & solar energy

- ▶ GP&L has expanded its generation portfolio with energy from wind and solar power purchases.
- ▶ GP&L has 5 renewable power purchase agreements (4 wind, 1 solar) that began between September 2015 and April 2017.
- ▶ The utility sells some of this wholesale energy to smaller public utilities or cooperatives across Texas.



**Thank you!!**

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