

# **The Evolution of Heat Pump Water Heaters**

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## Pathway to the clean energy future

- Xcel Energy is aiming to achieve 100% carbon-free electricity by 2050.
- New energy efficiency and demand response programs will help achieve this goal.



## Efficiency in Electricity

- New EE rebate structure for heat pump water heaters
- Channels for market transformation
- Marketing
- Load shifting program

# Energy Efficiency Rebates

Two tier rebate

- \$400 for eligible HPWH
- \$500 for eligible grid enabled HPWH (CTA-2045)

Rebate options

- Instant rebates available at Lowes (in-store or online)
- Digital application
- Mail in application

# Channels for market transformation

## Challenges

- Low penetration rate for electric water heaters
- Lack of knowledge/availability
- Colorado climate
- Fuel switching

## Opportunities

- Start from the beginning – new construction
- Midstream rebates to buy down cost
- Financing

# Channels for market transformation

Three-pronged approach for transformation

- New construction – single family
- Retail – instant rebates for DIY
- Midstream – buy down cost



# Marketing

Direct mail & Email

- Targeted towards customers with electric water heaters

Onserts

- Informational piece included on bill

Vendor relationships

- Partnership with A.O. Smith



## A Gallon Shifted is Money Earned

Heat pump water heater demand response program

- Launching in Q1/Q2 2020
- Grid enabled HPWH (CTA-2045) are eligible
  - Cellular communication control
- Incentive offered in addition to the EE rebate
  - Incentive offered to home builders upon enrollment
  - Annual incentive offered to customers (TBD)



## A Gallon Shifted is Money Earned

Level 1 – Water heater will be preheated overnight to maximize renewables. Xcel Energy will automatically adjust the times the water heater heats to avoid peak hours. This algorithm is designed to be imperceptible to customers.

Level 2 - Water heater will operate as per Level 1 of the program for 355 or more days out of the year. Five to ten times per year, Xcel Energy will delay heating water for two hours during peak electricity events.

Customers can “opt out” if needed for 24 hours.



## Questions?

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