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Review of Strategic Directive BP-SD-09 Energy Efficiency

NPPD Board of Directors Meeting Strategic Session May 2024

David Rich, Sustainable Energy Manager



EnergyWiseSM Introduction

EnergyWiseSM is the Program "umbrella" for:

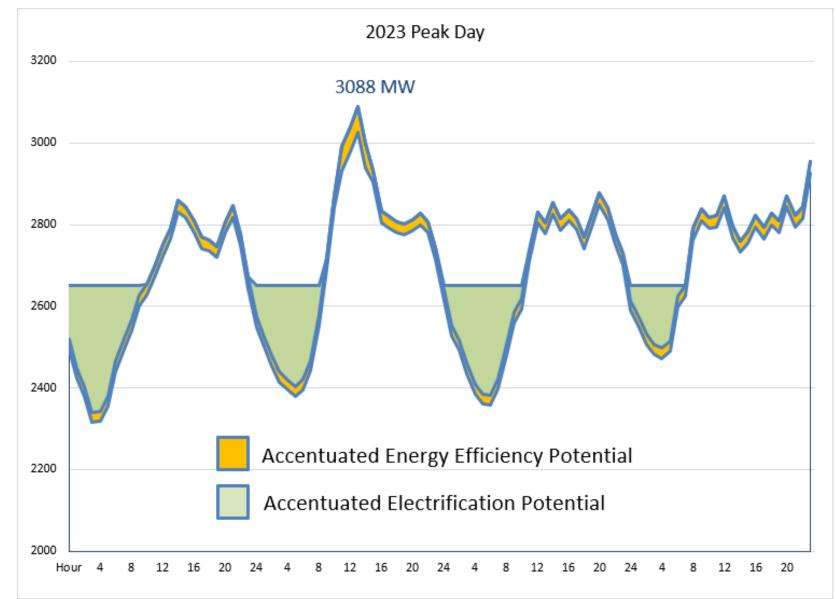
Energy Efficiency (EE)

- Save energy and reduce costs for end-use customers
- Reduce the cost to serve load during peak usage
- Examples: Ground Source Heat Pump, Variable Frequency Drive

Electrification

- Add load by converting fossil fuel sources
- Strategically add load that utilizes existing grid
- Reduction of CO2
- Save the customer money overall in energy purchases
- Examples: Electric Vehicles, Fossil Fuel Furnace / Water Heater to Electric Conversions, Battery Powered Mowers

EE and Electrification Impacts



2023 Sustainable Energy Team



Certified Energy Managers (CEM)

- In 2023, five new team members completed training and passed the required test to become Certified Energy Managers
 - Training was coordinated with NDEE
 - Four existing team members were already certified
- CEM certification:
 - Included in the team's job descriptions
 - One of the requirements for completing USDA Rural Energy for America Program (REAP) audits
 - Provides great knowledge when performing energy audits and assisting customers with their energy questions
- Some CEM topics:
 - Energy Audits, Electrical Power Systems and Motors, Lighting Systems, HVAC Systems, Building Envelope, Energy Storage Systems, Distributed Generation & Renewable Energy Systems, Industrial Systems

BP-SD-09, Energy Efficiency

Nebraska Public Power District (NPPD) is committed to:

- Using all available tools to keep electricity affordable for wholesale and end-use customers
- Reduce the cost to serve load during peak usage periods
- Partnering with our wholesale customers to develop programs and services
- Being a resource for technical information for our wholesale customers
- Help end-use customers reduce costs and improve business' bottom lines
- Provide a service that engages customers in a positive way

BP-SD-09, Energy Efficiency (Cont'd)

NPPD is committed to:

- Building relationships with business partners and community colleges
- Partnering with the Nebraska Department of Environment and Energy and other Nebraska utilities
- Taking advantage of state and federal incentives, grants, and other opportunities
- Continually sharing helpful information with customers and teammates
- Offering energy use audits, calculators, information, and recommendations

EnergyWiseSM Programs: Energy Efficiency

Residential

• Heat Pumps

- Loan or Incentive
- Attic Insulation
- Cooling System Tune-Up
- Smart Thermostat
- Heat Pump Water Heaters



Commercial / Industrial

- LED Lighting
- Variable Frequency Drives (VFD)
- Industrial Process
- HVAC Programs



Agricultural

- LED Lighting
- Agricultural Programs
- Custom Ag





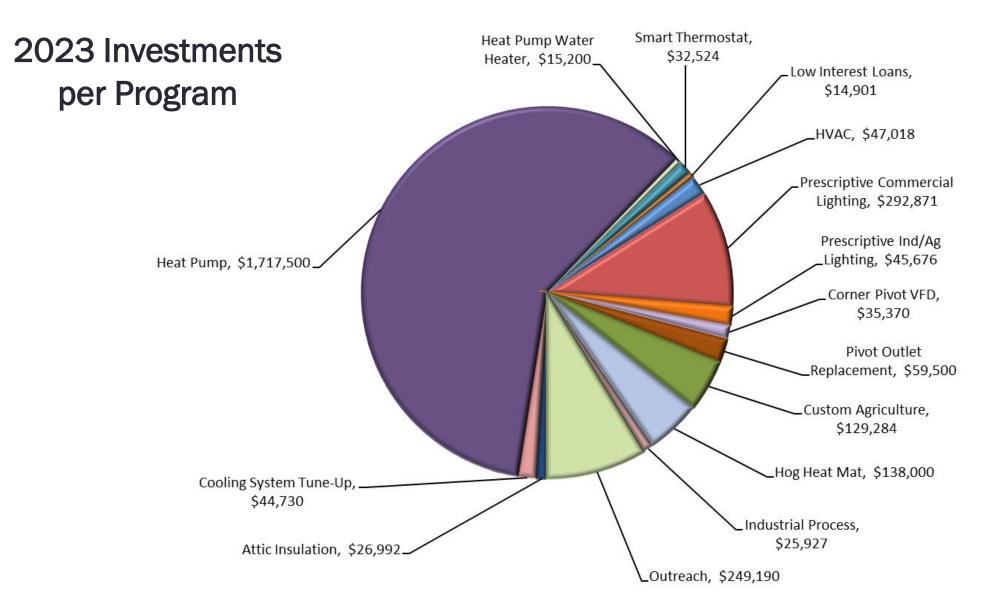
www.EnergyWiseNebraska.com

BP-SD-09, Energy Efficiency

2023 EnergyWiseSM Energy Efficiency Results

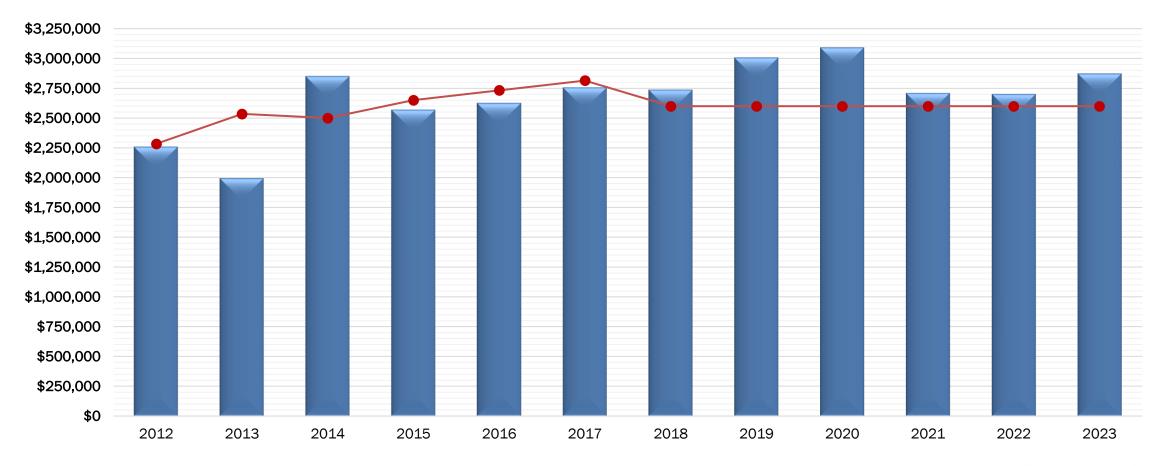
- \$2.6 M budgeted
- \$2.87 M invested*
 - ✓ \$1.72 M High Efficiency Heat Pumps (Residential)
 - 1,582 incentives
 - ✓ \$0.34 M Lighting (Commercial/Industrial/Ag)
 - 617 incentives
 - ✓ \$0.81 M Remainder of Programs
 - 2,254 incentives
- *EnergyWiseSM Annual Report for 2023, provides more details.
- Overall cost effectiveness of energy efficiency programs: \$0.013/kWh over LOM (Life of Measure)

BP-SD-09, Energy Efficiency



Energy Efficiency Incentives by Year

Budgeted amount



2024 Energy Efficiency Incentives Budget = \$2.6 M



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