



EISA's Impact on Lighting

Xcel Energy's DSM Portfolio

September 27, 2018



Xcel Energy

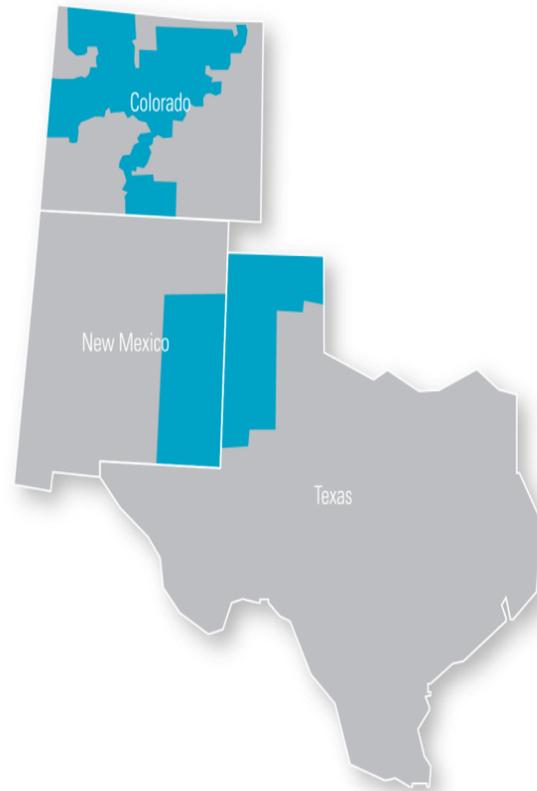


Serving eight states

- 3.6 million electricity customers
- 2 million natural gas customers

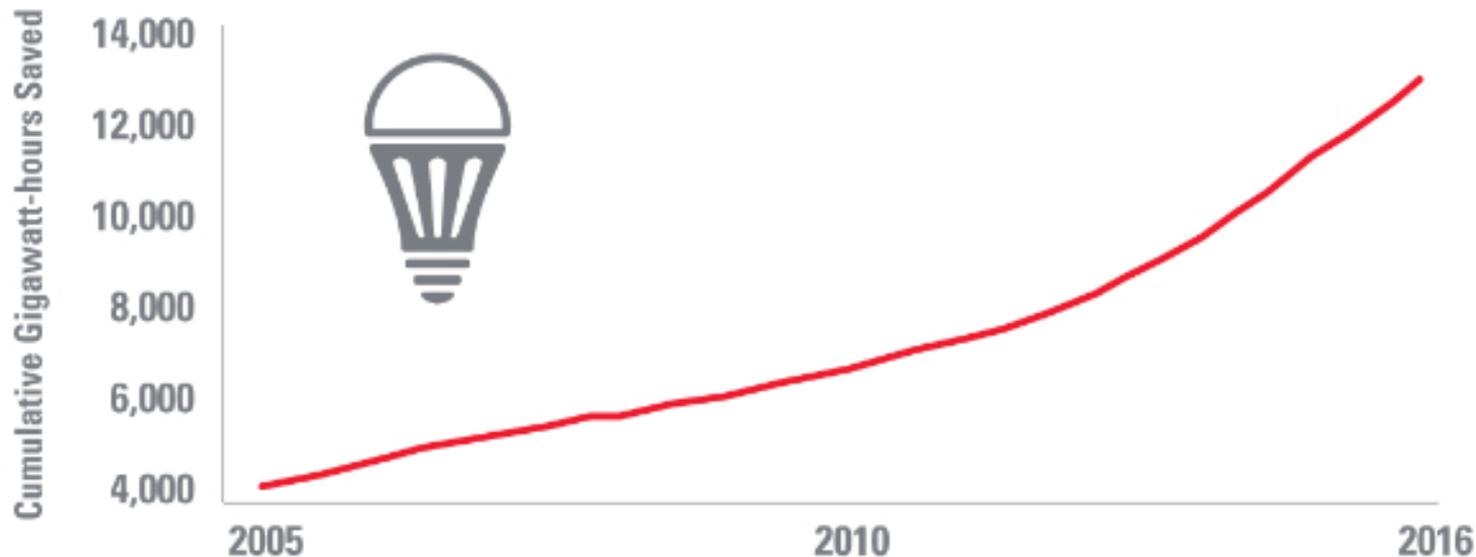
Nationally recognized leader:

- Wind energy
- Energy efficiency
- Carbon emissions reductions
- Innovative technology
- Storm restoration



Leaders in Energy Efficiency

- 150+ efficiency and rebate programs that annually save a terawatt-hour of electricity
- ACEEE ranked Xcel Energy seventh in energy savings fourth in lifetime savings, and 10th overall out of 51 utilities



EISA's Impact on a DSM Portfolio

Major Programs Impacted:

Residential Home Lighting

- 80% of program

Business Lighting Efficiency

- 10% of program

60% or 400 GWh of
2017 MN Portfolio

60% or 253 GWh of
2017 CO Portfolio

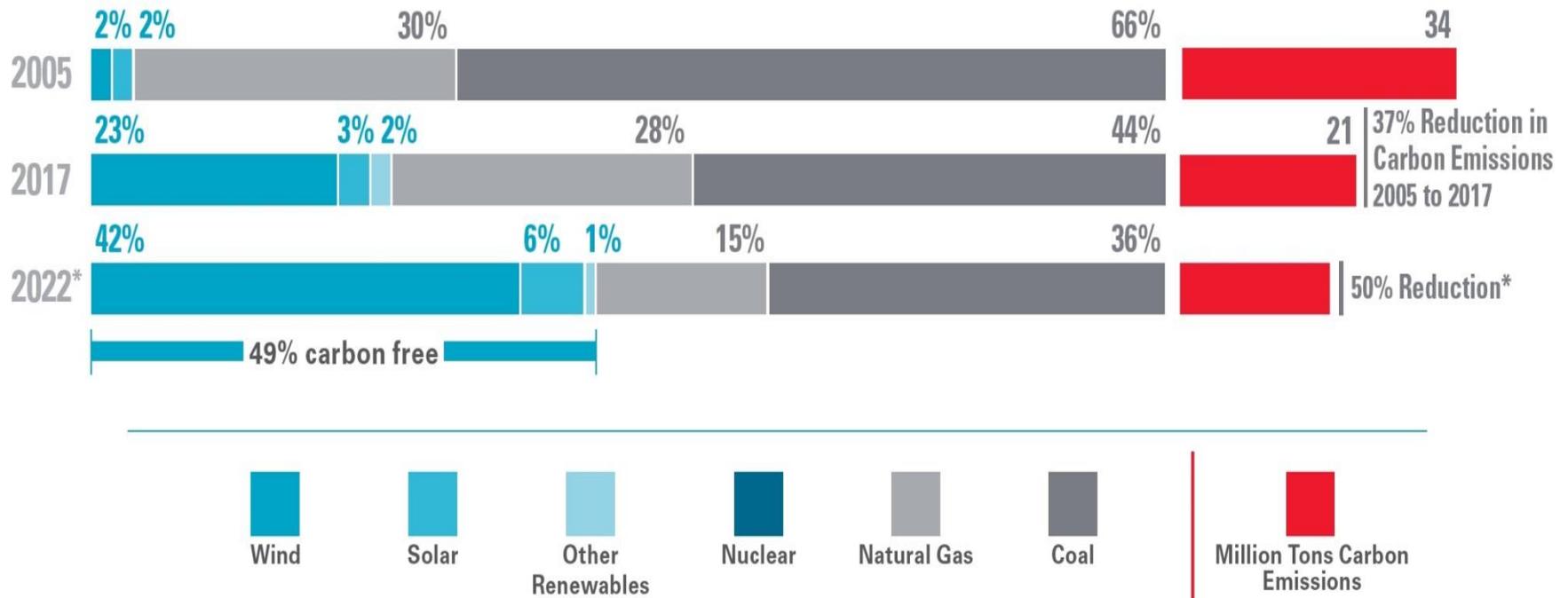
1. Energy efficiency **codes** – 45/lumen per watt
2. Energy efficiency **standards**- LED technology
3. Energy efficiency **baseline**- no longer halogen/incandescent/CFL

Portfolio Changes

A Cleaner Energy Mix

Increasing renewable and carbon-free energy

Colorado



*Projected 2022 energy mix and reductions in carbon emissions if our current plans can be achieved

Changes to Energy Efficiency

- Shift in carbon-free energy initiates a shift in conservation programs.
- The energy efficiency portfolio is moving away from night time energy savings to coincide with peak load during the day.
- Shifting conservation to the daytime allows us to provide the most value for customers by keeping bills low.



Proposed future of lighting programs 2020-2023

Assuming backstop does take effect:

- Recommend using a blended baseline
- Blended baseline of halogen and value LED would be phased in starting final EISA ruling
 - 3 year phase- Year one- starting at 25% value LED, Year two- 50% value LED, Year three 75% value LED
- CFLs will be phased out of production and market sales
- Keeping bulb rebates for hard to reach customers such as low-income and small business customers

Proposed future of lighting programs 2020-2023

Assuming backstop does not take effect:

- Keep halogen baseline until we know final outcome of EISA ruling
- CFLs will be phased out of production and market sales
- Maintain existing program model, rebates available at big box retailers
- Residential program goals decreasing in 2020 filed plan

What is Xcel Energy doing about it?

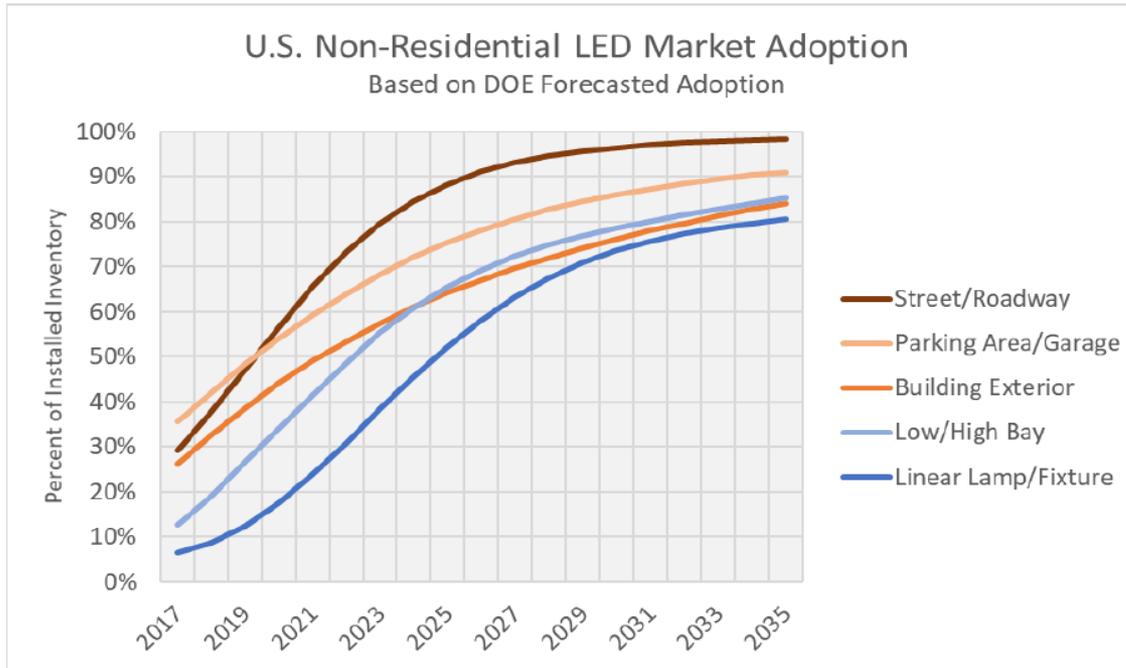
Adapting the Company's DSM portfolio to the evolving DSM landscape

- Optimize DSM portfolio to increase cost effectiveness and increased net benefits
- Adding prescriptive networked lighting controls rebates for business customers
- Night time lighting may be discontinued
- Optimizing vendor performance contracts to align with kW and net benefits targets
- Portfolio targets are moving from kWh to net benefits
- Continuous monitoring for EISA legislation updates

We still need lighting efficiency programs

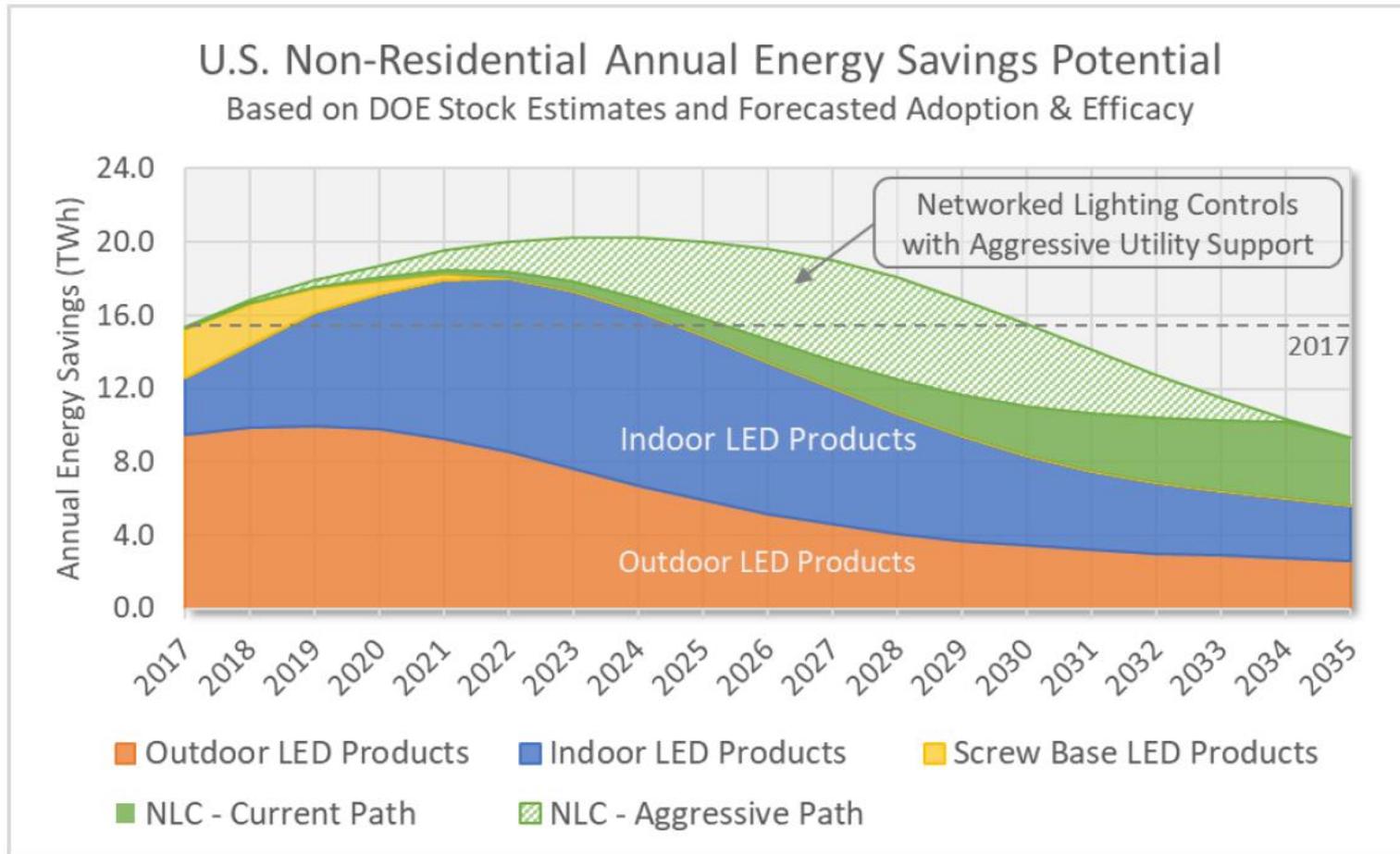
- Nationally, DOE estimates
 - 71% of U.S. homes still have no LED bulbs, as of 2016

C&I LED Adoption Forecast

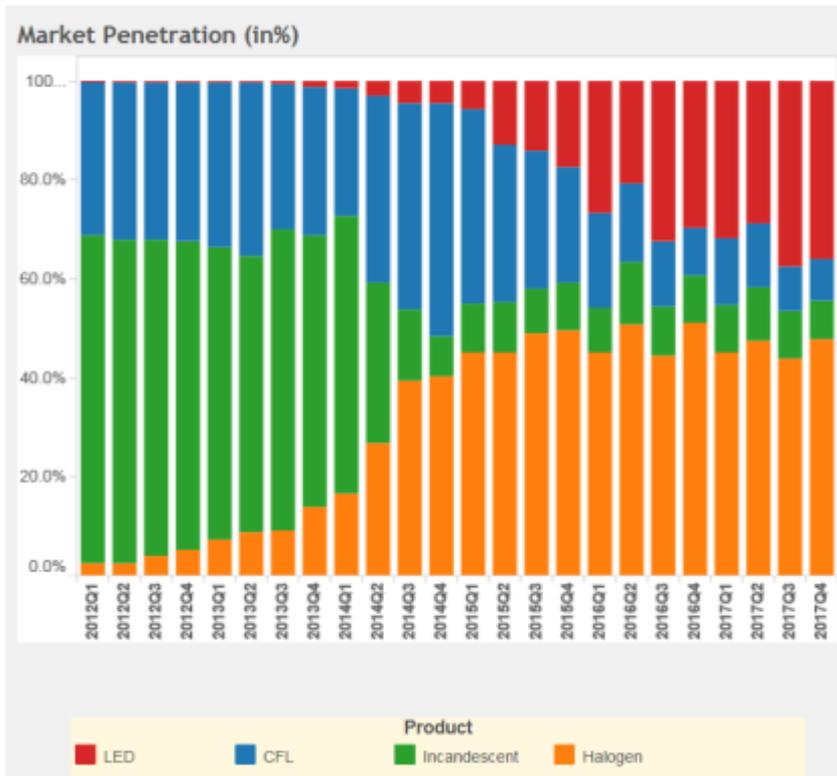


- All product categories are accelerating; none have surpassed 50%
- Outdoor products have achieved higher levels due to earlier market introductions and greater savings potential
- Linear products have achieved only 6.5% LED adoption as of 2017

Energy Savings Potential with Controls



NEMA Shipments (through Q4 2017)



- Inefficient bulbs still dominate the market
 - 2017 Q4
 - 48% halogen
 - 8% incandescent
 - 8% CFL
 - 36% LED
- LEDs are displacing CFLs, not halogens
 - Shows market is not fully transformed

<https://www.nema.org/Intelligence/Pages/Lamp-Indices.aspx>

Business Prescriptive Lighting Controls

- **\$.40 per connected watt** – deemed savings
- Control rebates are in addition to the fixtures rebate
- Applies to any LED retrofit prescriptive fixture with the exception of exterior lighting
- DLC QPL required
- Commissioning required
- Available in MN & CO markets invoices on or after Sept 1, 2018
- System requirements:
 - **High End Trim** is required at 80% or lower
 - **Daylighting** required where side and top lighting is available
 - **Occupancy sensing** for timeout set to 20 min or less



Questions?
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