NARUC FINANCIAL TOOLBOX WEBINAR: ELECTRIFICATION

NARUC CENTER FOR PARTNERSHIPS & INNOVATION

MAY 26, 2022

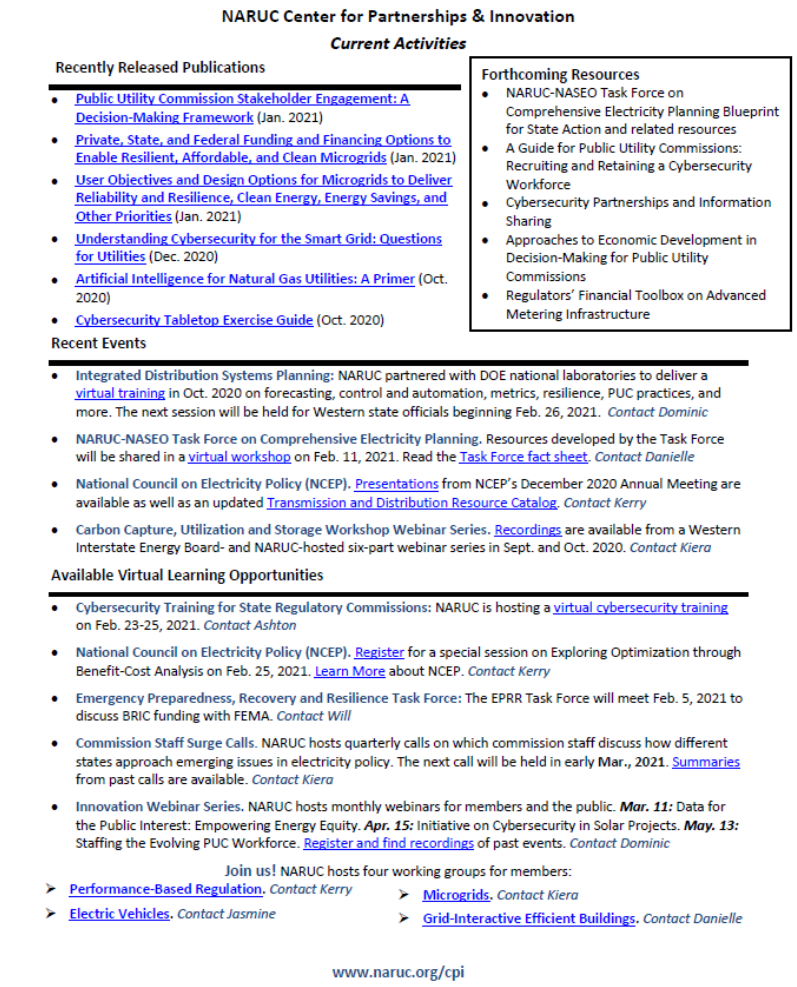
NARUC thanks the U.S. Department of Energy for its support of this resource series

ABOUT NARUC

- The National Association of Regulatory Utility Commissioners (NARUC) is a non-profit organization founded in 1889.
- Our Members are the state utility regulatory Commissioners in all 50 states & the territories. FERC & FCC Commissioners are also members. NARUC has Associate Members in over 20 other countries.
- NARUC member agencies regulate electricity, natural gas, telecommunications, and water utilities.

CENTER FOR PARTNERSHIPS & INNOVATION

- Grant-funded team dedicated to providing technical assistance to members.
- CPI identifies emerging challenges and connects state commissions with expertise and strategies to inform their decision making.
- CPI builds relationships, develops resources, and delivers trainings.



NARUC Center for Partnerships & Innovation

Current Activities

Recently Released Publications

- Public Utility Commission Stakeholder Engagement: A Decision-Making Framework (Jan. 2021)
- Private, State, and Federal Funding and Financing Options to Enable Resilient, Affordable, and Clean Microgrids (Jan. 2021)
- User Objectives and Design Options for Microgrids to Deliver Reliability and Resilience, Clean Energy, Energy Savings, and Other Priorities (Jan. 2021)
- Understanding Cybersecurity for the Smart Grid: Questions for Utilities (Dec. 2020)
- Artificial Intelligence for Natural Gas Utilities: A Primer (Oct. 2020)
- Cybersecurity Tabletop Exercise Guide (Oct. 2020)

Forthcoming Resources

- NARUC-NASEO Task Force on Comprehensive Electricity Planning Blueprint for State Action and related resources
- A Guide for Public Utility Commissions: Recruiting and Retaining a Cybersecurity Workforce
- Cybersecurity Partnerships and Information Sharing
- Approaches to Economic Development in Decision-Making for Public Utility Commissions
- Regulators' Financial Toolbox on Advanced Metering Infrastructure

Recent Events

- **Integrated Distribution Systems Planning:** NARUC partnered with DOE national laboratories to deliver a virtual training in Oct. 2020 on forecasting, control and automation, metrics, resilience, PUC practices, and more. The next session will be held for Western state officials beginning Feb. 26, 2021. *Contact Dominic*
- **NARUC-NASEO Task Force on Comprehensive Electricity Planning.** Resources developed by the Task Force will be shared in a virtual workshop on Feb. 11, 2021. Read the Task Force fact sheet. *Contact Danielle*
- **National Council on Electricity Policy (NCEP).** Presentations from NCEP's December 2020 Annual Meeting are available as well as an updated Transmission and Distribution Resource Catalog. *Contact Kerry*
- **Carbon Capture, Utilization and Storage Workshop Webinar Series.** Recordings are available from a Western Interstate Energy Board- and NARUC-hosted six-part webinar series in Sept. and Oct. 2020. *Contact Kiera*

Available Virtual Learning Opportunities

- **Cybersecurity Training for State Regulatory Commissions:** NARUC is hosting a virtual cybersecurity training on Feb. 23-25, 2021. *Contact Ashton*
- **National Council on Electricity Policy (NCEP).** Register for a special session on Exploring Optimization through Benefit-Cost Analysis on Feb. 25, 2021. Learn More about NCEP. *Contact Kerry*
- **Emergency Preparedness, Recovery and Resilience Task Force:** The EPRR Task Force will meet Feb. 5, 2021 to discuss BRIC funding with FEMA. *Contact Will*
- **Commission Staff Surge Calls.** NARUC hosts quarterly calls on which commission staff discuss how different states approach emerging issues in electricity policy. The next call will be held in early **Mar., 2021**. Summaries from past calls are available. *Contact Kiera*
- **Innovation Webinar Series.** NARUC hosts monthly webinars for members and the public. ***Mar. 11:*** Data for the Public Interest: Empowering Energy Equity. ***Apr. 15:*** Initiative on Cybersecurity in Solar Projects. ***May. 13:*** Staffing the Evolving PUC Workforce. Register and find recordings of past events. *Contact Dominic*

Join us! NARUC hosts four working groups for members:

- Performance-Based Regulation. *Contact Kerry*
- Electric Vehicles. *Contact Jasmine*
- Microgrids. *Contact Kiera*
- Grid-Interactive Efficient Buildings. *Contact Danielle*

www.naruc.org/cpi

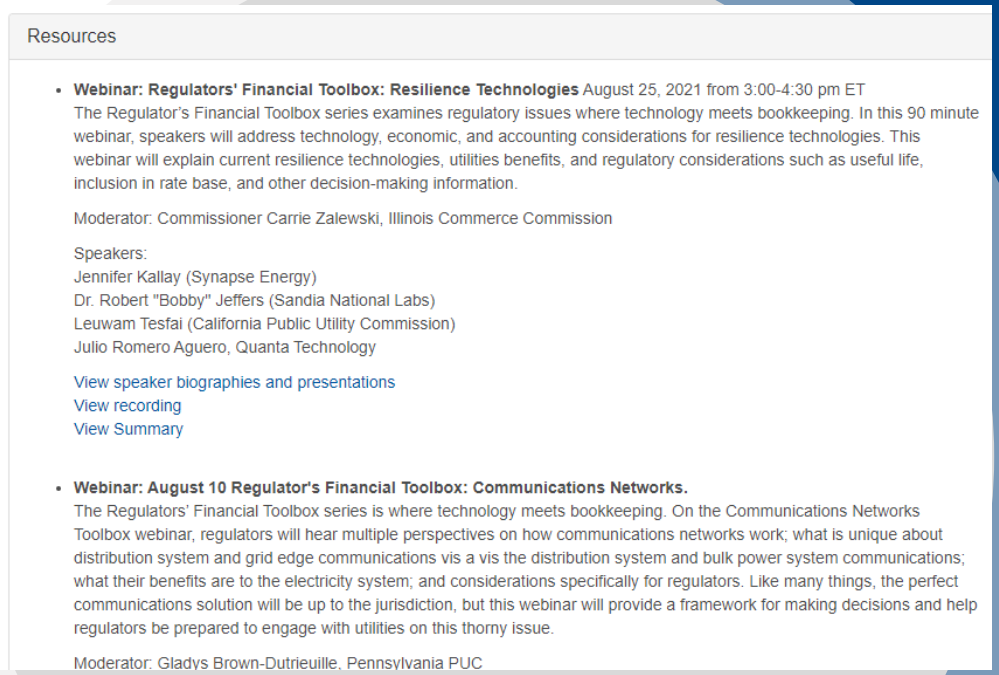
Regularly updated CPI fact sheet with recent publications & upcoming events under Quick Links at:

https://www.naruc.org/cpi-1/

PAST FINANCIAL TOOLBOX TOPICS

- Resilience Technologies
- Communications Networks
- Advanced Metering Infrastructure
- Cloud Computing

  - Presentations
  - Recordings
  - Summary briefs with links to resources for more detailed information



Resources

- **Webinar: Regulators' Financial Toolbox: Resilience Technologies** August 25, 2021 from 3:00-4:30 pm ET
  The Regulator's Financial Toolbox series examines regulatory issues where technology meets bookkeeping. In this 90 minute webinar, speakers will address technology, economic, and accounting considerations for resilience technologies. This webinar will explain current resilience technologies, utilities benefits, and regulatory considerations such as useful life, inclusion in rate base, and other decision-making information.

  Moderator: Commissioner Carrie Zalewski, Illinois Commerce Commission

  Speakers:
  Jennifer Kallay (Synapse Energy)
  Dr. Robert "Bobby" Jeffers (Sandia National Labs)
  Leuwam Tesfai (California Public Utility Commission)
  Julio Romero Aguero, Quanta Technology

  View speaker biographies and presentations
  View recording
  View Summary

- **Webinar: August 10 Regulator's Financial Toolbox: Communications Networks.**
  The Regulators' Financial Toolbox series is where technology meets bookkeeping. On the Communications Networks Toolbox webinar, regulators will hear multiple perspectives on how communications networks work; what is unique about distribution system and grid edge communications vis a vis the distribution system and bulk power system communications; what their benefits are to the electricity system; and considerations specifically for regulators. Like many things, the perfect communications solution will be up to the jurisdiction, but this webinar will provide a framework for making decisions and help regulators be prepared to engage with utilities on this thorny issue.

  Moderator: Gladys Brown-Dutrieuille, Pennsylvania PUC

www.naruc.org/cpi-1/electricity-system-transition/valuation-and-ratemaking/

MODERATOR

JOAN WHITE, VERMONT PUBLIC UTILITY COMMISSION

PANELISTS

EDWARD YIM & DAN YORK, AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY (ACEEE)

MARK SCHOENHEIDER, XCEL ENERGY

ANTHONY FRYER, MINNESOTA DEPARTMENT OF COMMERCE

- Please submit questions through chat or Q&A at any time.
- Clarifying questions after each presentation.
- Q&A session after all three presentations.

Beneficial Electrification: Context

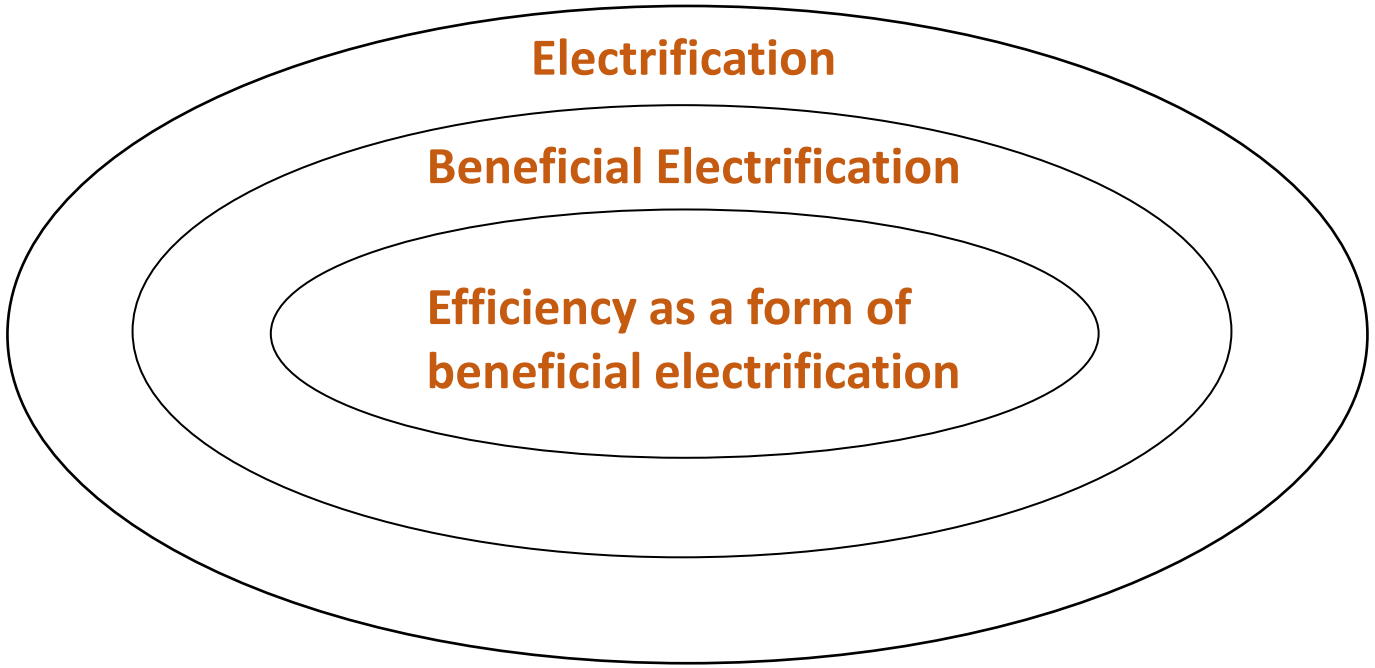
Edward Yim

Director, State and Utility Policy

ACEEE
American Council for an Energy-Efficient Economy

Beneficial Electrification

Electrification that provides net societal benefits
(ex: reductions in GHG emissions, primary energy use, costs)



Drivers of Beneficial Electrification

A central piece of decarbonization strategy in climate action plans and in comprehensive energy plans:

- IPCC Report (2018): Net zero emissions around 2050
- US Deep Decarbonization Pathway Project (2012)

Figure 10. Decarbonization Wedges for the U.S., Mixed Case

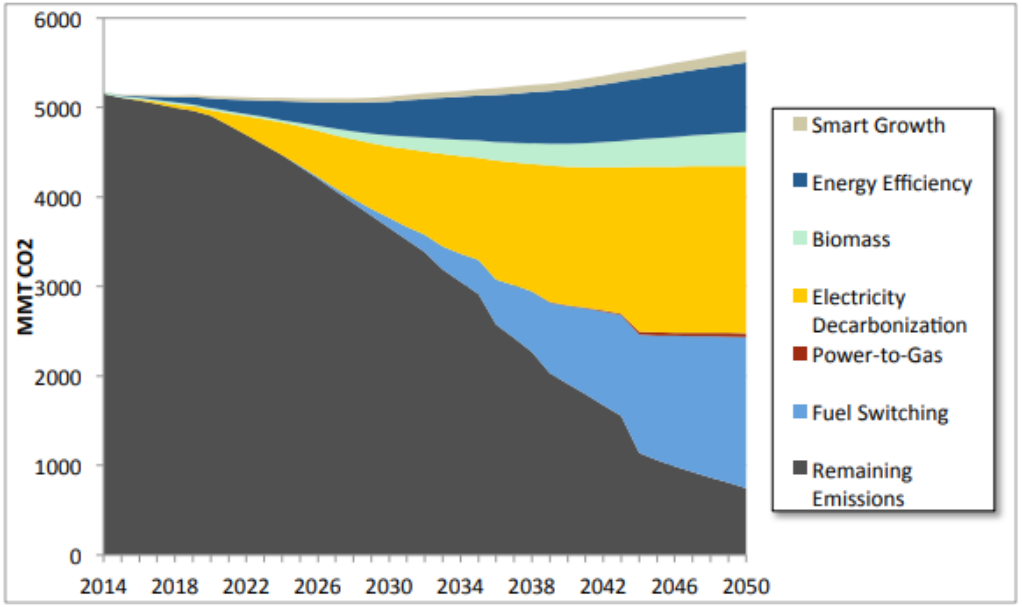
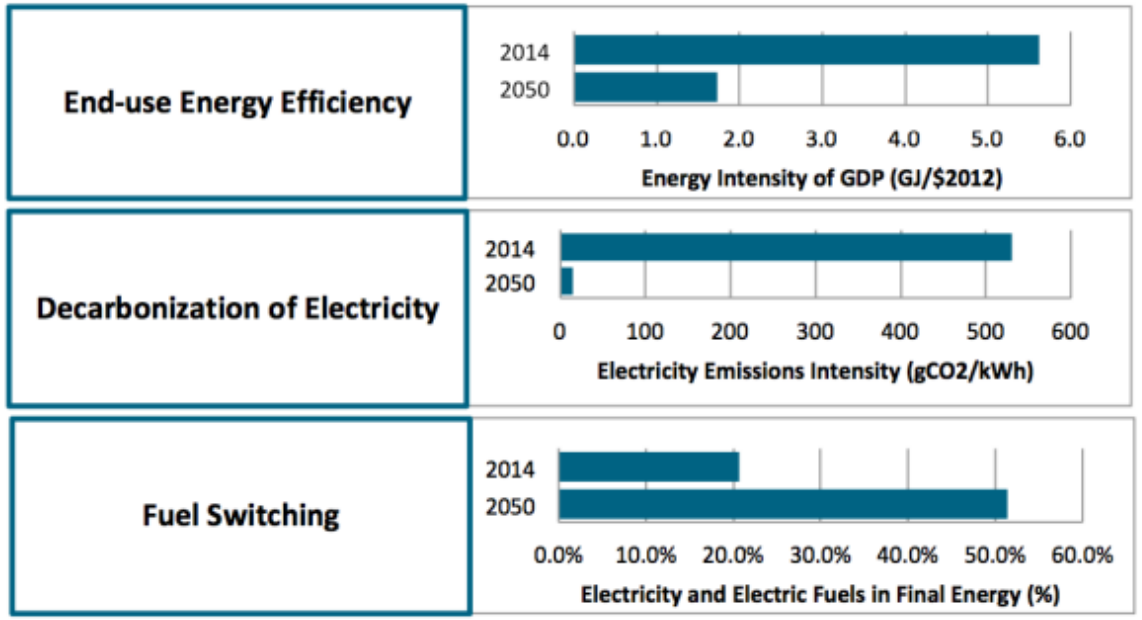


Figure 11. Indicative Metrics for the Three Main Decarbonization Strategies, Mixed Case Compared to 2014



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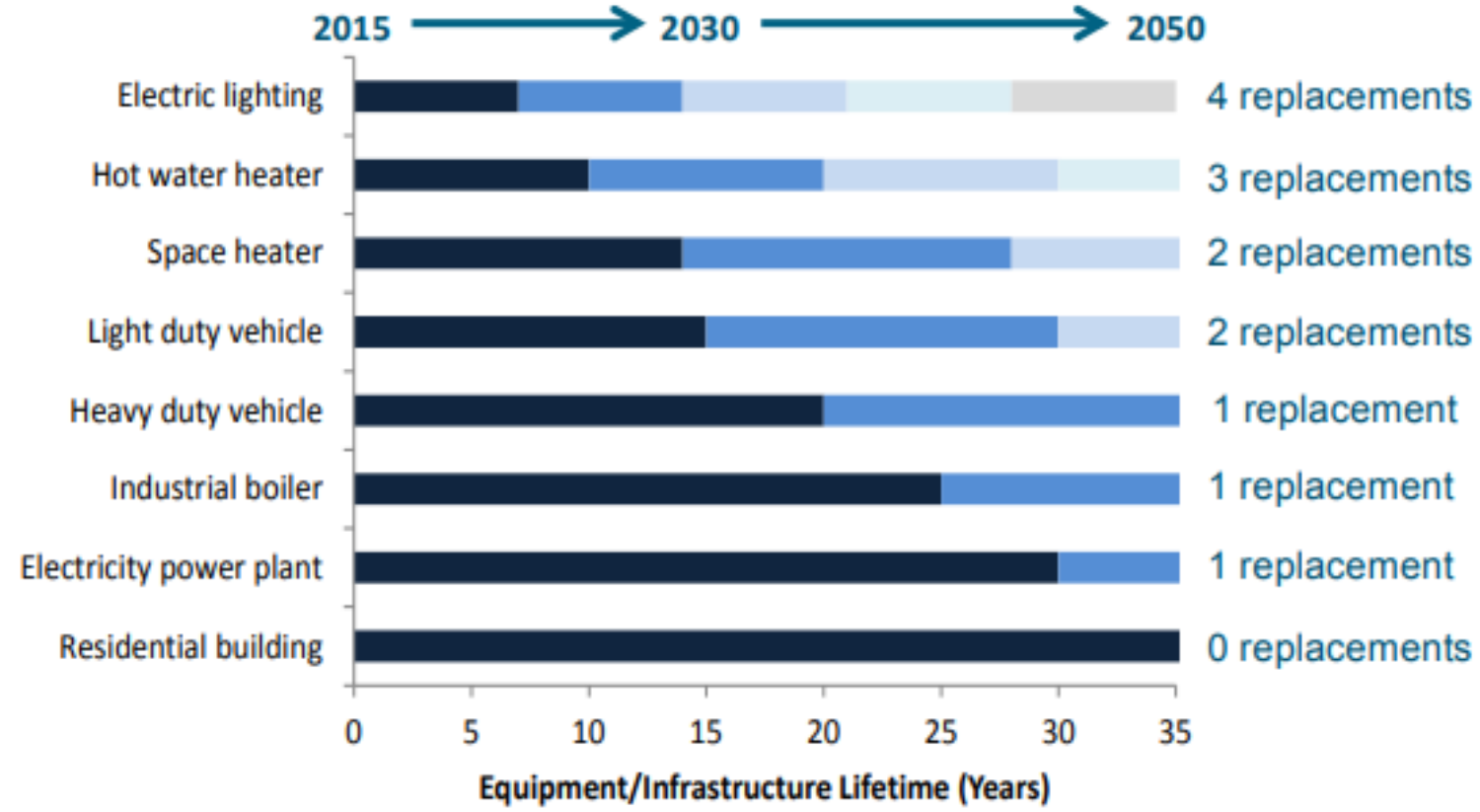
Drivers of Beneficial Electrification

Limited opportunities to electrify:

- Deep Decarbonization Pathway Project

Figure ES 2. Stock Lifetimes and Replacement Opportunities



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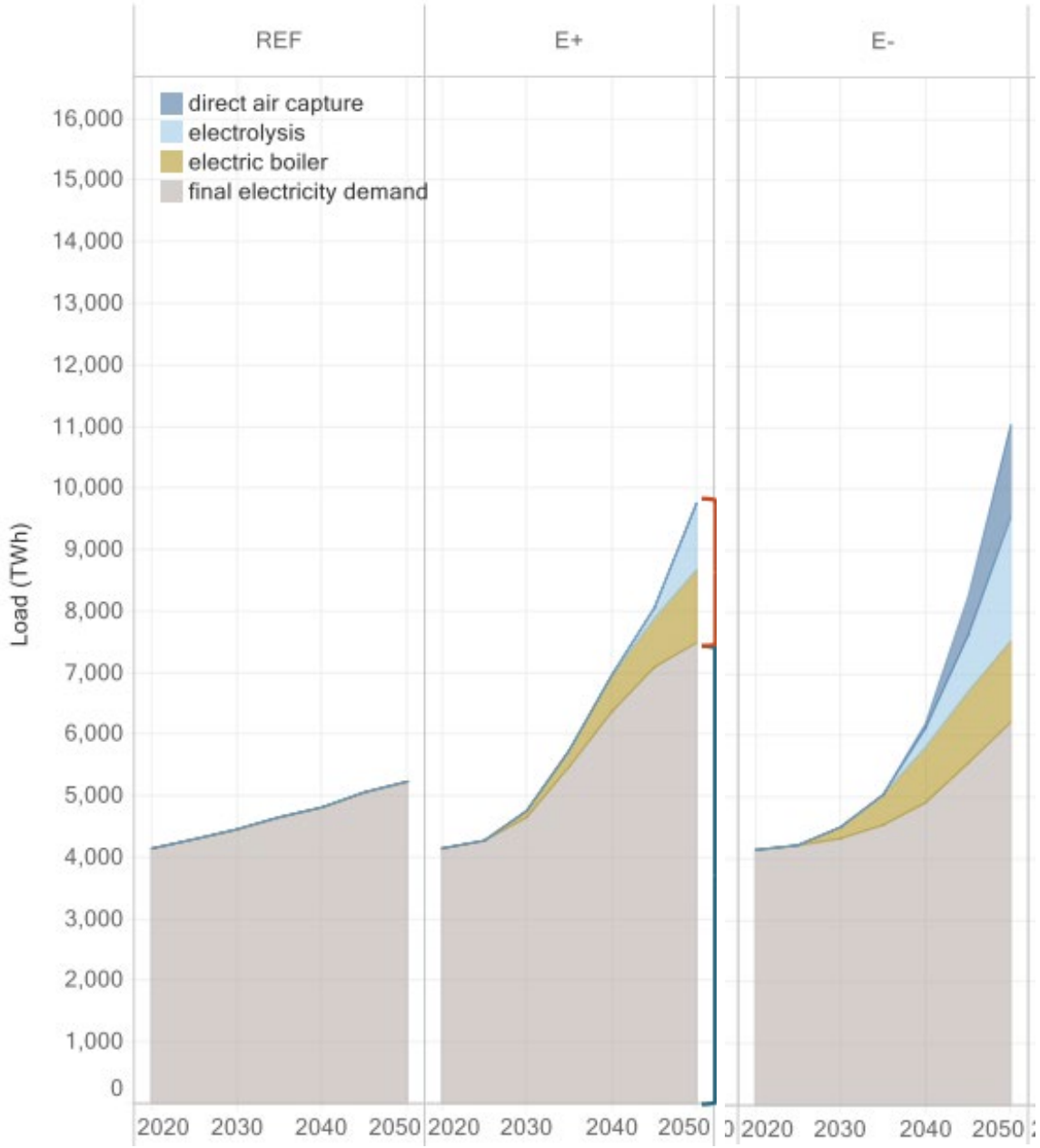
Drivers of Beneficial Electrification

Recent analysis:

- Net Zero America 2050 (Princeton)

  High E: $3.99T

  Low E: $5.57T



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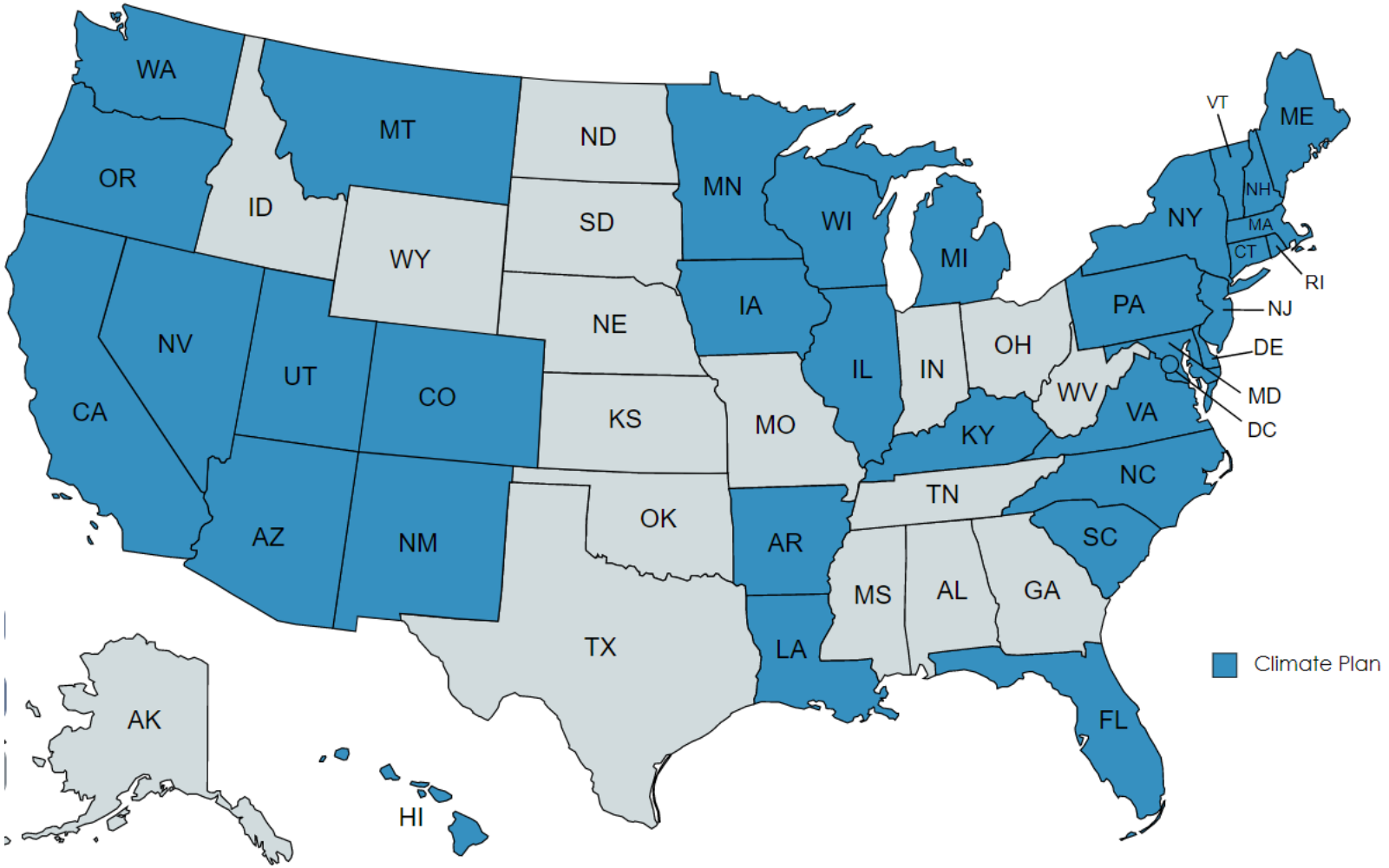
States with climate action plans

Climate Action Plans

- Many, but not all, climate plans use the deep decarbonization framework

https://www.c2es.org/content/state-climate-policy/



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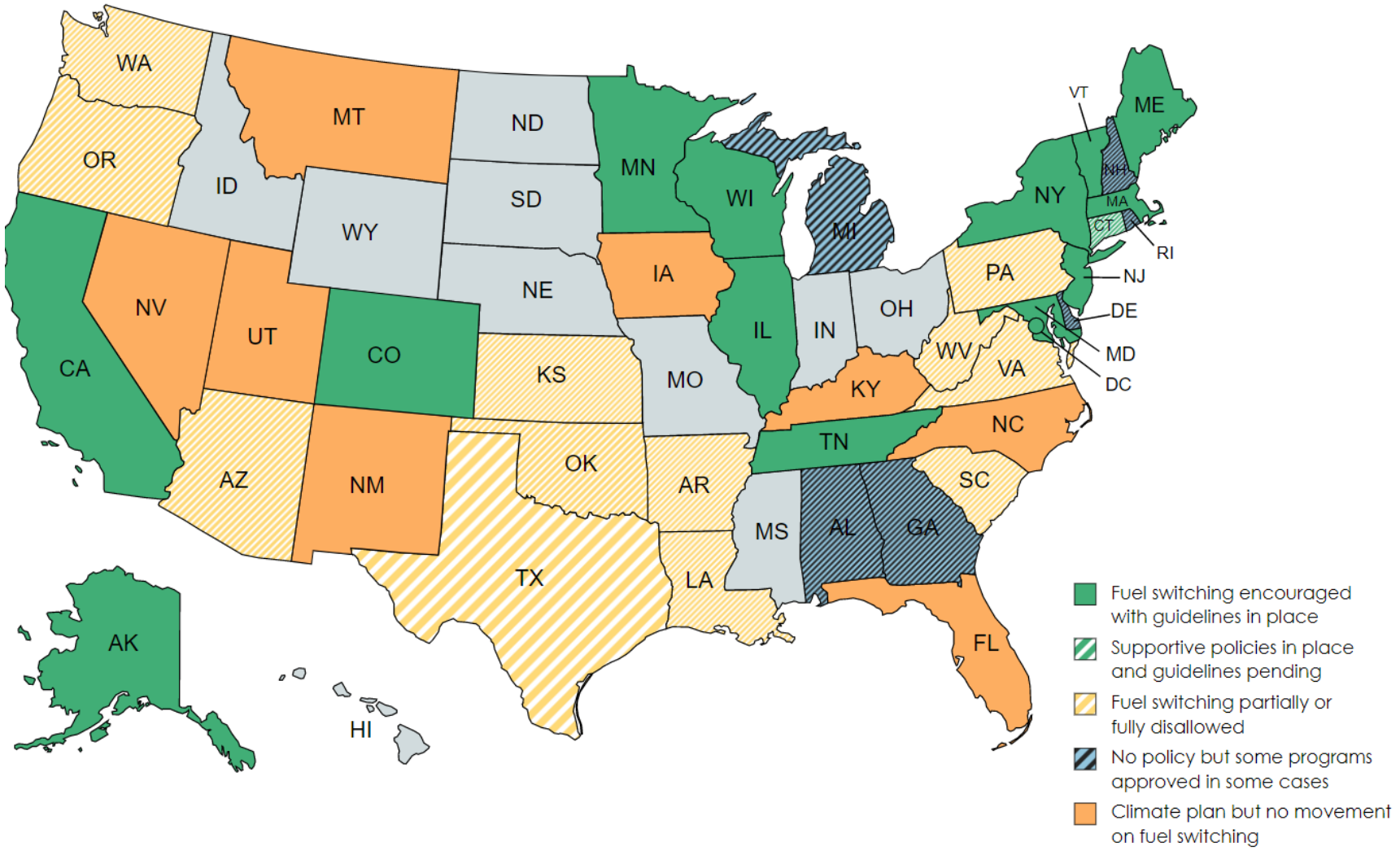
Fuel Switching Policies

Rules on Fuel Switching

- Although climate change is a strong driver of beneficial electrification, implementation of BE is fragmented

From ACEEE's draft report on fuel-switching policy (2022)



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Building Electrification Programs for Decarbonization

Dan York, PhD

Senior Fellow, State and Utility Policy

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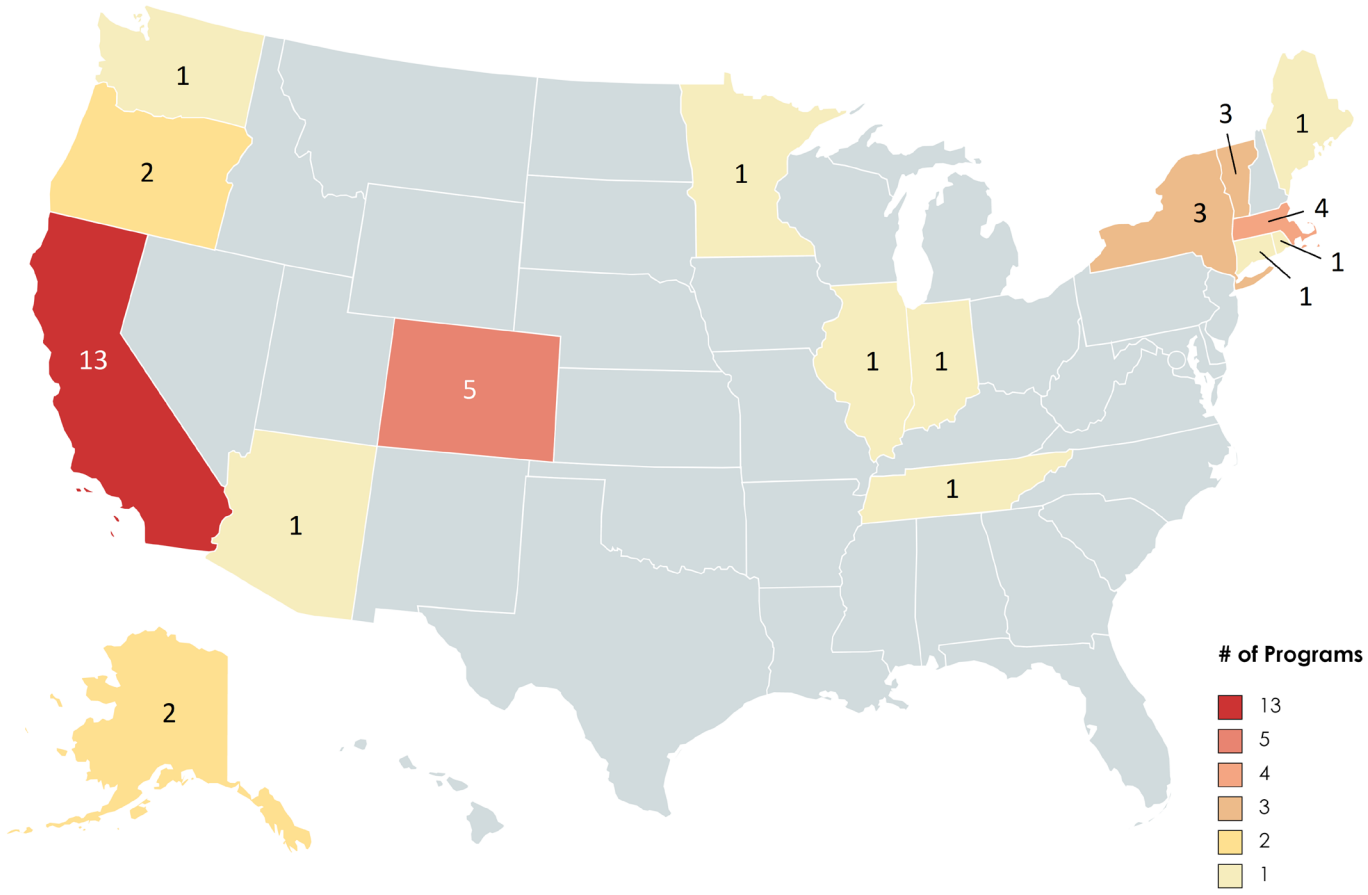
Synergies of Energy Efficiency & Electrification

Building shell and other efficiency measures reduce loads, e.g., space heating, which can reduce equipment sizing and therefore costs

At the system level, aggressive EE can keep electricity demand in check, and can lower overall costs to meet new demand from electrification (especially in winter)

EE and DR programs also provide opportunities for important value as load flexibility, which becomes increasingly important under electrification

Growing Wave of Building Electrification Programs



- Our 2021 research identified 42 examples of programs to electrify fossil fuels in buildings
- Leading states were mostly those that set goals and mandates for building decarbonization
  - CA, CO, MA, NY

Full report: *Building Electrification: Programs and Best Practices*
https://www.aceee.org/research-report/b2201

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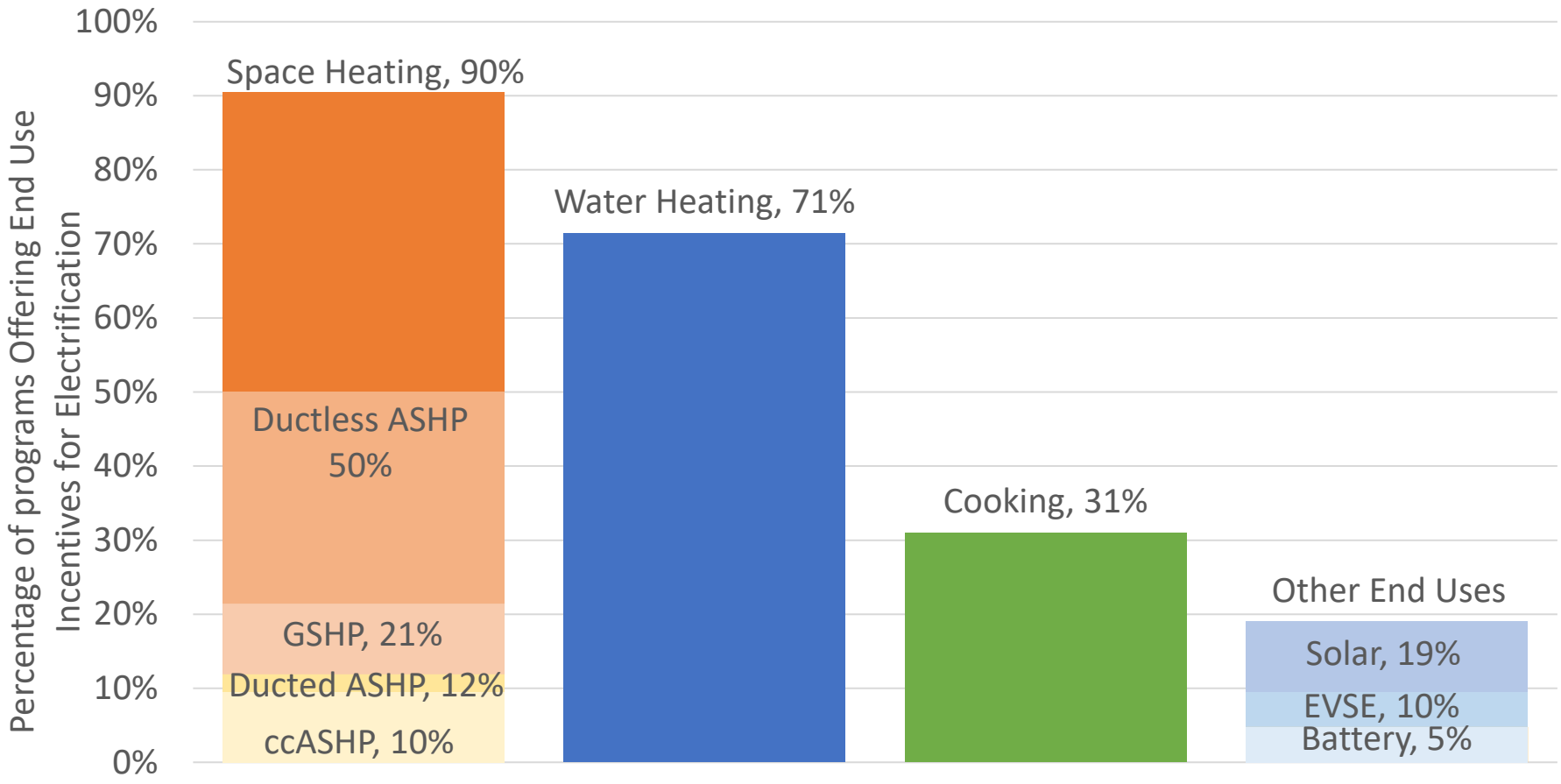
Most Programs Offer Appliance Incentives

- 42 programs reviewed in the report
- Some programs offered incentives for more than one technology type



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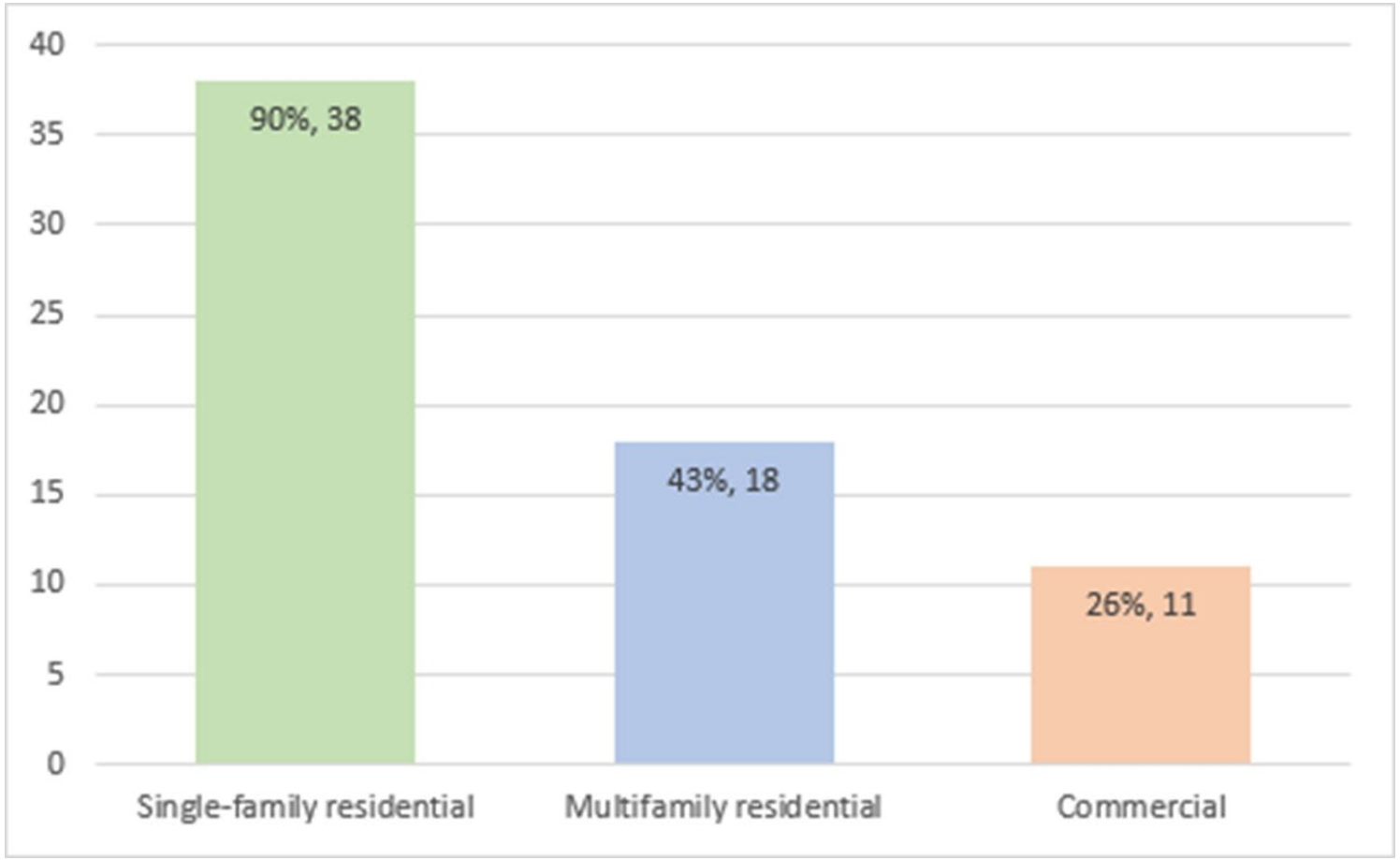
Programs by Building Types



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Key Findings

- **Electrification in buildings is growing** – programs had a collective annual budget of $166 million ($108 million reported in 2020)

- **Space Heating** with heat pumps was the most frequently targeted end use for incentives

- Most programs were focused on **rebates to end users** – but other methods may be more effective at reaching customers and reducing barriers, such as braiding electrification measures into preexisting home energy upgrade programs or providing midstream or upstream rebates (to distributors/suppliers and manufacturers)

Key Findings (Cont'd)

- Pairing electrification measures with weatherization and conventional energy efficiency is important to maximize impact

- **Low- and moderate-income (LMI)** customers face more barriers to building electrification that programs need to work harder to overcome (few programs in place as I'll detail next)

- **Contractors** play a crucial role in electrification – their support is important for selling electrification but there is a workforce deficit when it comes to qualified installers of heat pumps in many markets. Contractor bias and unfamiliarity with heat pumps also inhibits market development.

Recommendations by Actor

Actor	Recommendations
State Legislatures / Government	• Set concrete building electrification targets within climate plans • Provide funding for programs for hard-to-reach sectors • Adopt clean energy / net zero building codes • Provide workforce training and incentivize heat pump adoption
Regulators	• Remove barriers to fuel switching incentives • Value climate/GHG impacts in cost effectiveness testing
Utilities	• Expand program offerings • Phase out incentives for fossil fuel equipment
Contractors	• Receive education & training to install heat pumps
Homeowners / property managers	• Plan ahead for replacement of fossil fuel equipment • Implement energy efficiency & weatherization alongside

What about Energy Equity? Programs for LMI Customers?

Barriers for Affordable Decarbonization Retrofits

- Access to funding and financing
- Renter/owner split incentive
- Higher electricity costs
- Retrofit challenges in older buildings
- Multi-unit dwellings
- Customer/contractor confidence/unfamiliarity

Research by ACEEE on decarbonization for affordable housing found few examples of utility programs

- Programs still early in development although need and benefits are widely acknowledged
- Federal, state, and local efforts also in early development

Full Report: *Building Decarbonization Solutions for the Affordable Housing Sector*
https://www.aceee.org/research-report/u2204

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Federal Efforts for LMI Decarbonization

Federal Low-income Housing Tax Credit (LIHTC): Long-standing, prominent tool that could be used

- Through LIHTC state housing finance agencies can incorporate and incentivze green practices into O&M, construction, and rehabilitation of affordable housing properties
- Some states may supplement these with state tax credits

Weatherization Assistance Program

- Traditionally focused on improvements to building envelope and building equipment/systems.
- Through infrastructure package passed in 2021, will get $3+ billion in additional funding for EE and electrification – enough to retrofit about 450,000 homes

Examples of State Programs

California: Low Income Weatherization Program:

- one of largest building electrification programs in the US
- Since 2016 has delivered more than $33 million in incentives serving more than 8,100 low-income rental households
- First state program to focus on decarbonization specifically

New York: Empire Building Challenge and Affordable Housing Decarb Pilot

- Leverage $50 million in public funding to develop scalable decarbonization strategies for large commercial and multifamily building retrofits
- NYSERDA is responsible for implementation
- First cohort of Challenge is committed to achieve carbon neutrality in 131 large comm/MF buildings in next 10-15 years
- NYSERDA also implementing a $24 million pilot program in partnership with NY City Dept of Housing Preservation and Development to fund electrification in affordable housing

Utility Program Examples

Sacramento Municipal Utility District

- To reach SMUD's goal of 100% carbon-free power by 2030, it offers several incentive programs to address the affordable housing sector, including low-income SF and MF subsidized housing and market-rate programs
- Partnerships with various community organizations, including Habitat for Humanity, Sacramento Housing and Redevelopment Agency, and the Mutual Housing Fund.
- Initiatives and incentives:
  - Low-income electrification
  - Existing multifamily
  - New homes electrification

Utility Program Examples

DC Sustainable Energy Utility: Low Income Decarbonization Pilot

- Pilot program concluded its initial run with 10 total units receiving partial or full conversion to all-electric heating, hot water, and cooking, with distributed solar on the single-family units and a community solar subscription for the 4-unit MF complex
- Provided at no cost to income-qualified participants
- High satisfaction rates among participants
- Onset of COVID pandemic created unexpected challenges and complexities
- Based on the success of the pilot, DCSEU moving forward with more building decarbonization incentives beginning in 2022

Local Program Examples

Minneapolis: 4D Affordable Housing Incentive and Green Cost Share

- 4d program was created to preserve unsubsidized affordable housing while addressing energy efficiency, resident health, and owner's bottom line
- Decarbonization not a specific goal, but elements of the program can apply:
  - 40% property tax reduction for low-income properties
  - Owners can receive up to $50,000 per building and 90% of project cost for energy efficiency improvements

Boston

- In 2020 announced that about $30 million would be available to affordable housing developers seeking financial support from the city for the construction or rehabilitation of affordable housing
- New construction must comply with carbon neutral performance standards to support the city's climate impact reduction goals

Keys to Success

- Setting specific carbon reduction goals
- Securing adequate funding and financing
- Establishing collaborations among affordable housing stakeholders
- Engaging with affordable housing residents
- Educating residents, building owners, contractors, and suppliers

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Questions?

Edward Yim & Dan York

State and Utility Policy

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NARUC FINANCIAL TOOLBOX ON ELECTRIFICATION

Mark Schoenheider, Manager, Customer Energy Solutions

May 26, 2022

XCEL ENERGY OVERVIEW

- Xcel Energy is a major U.S. electricity and natural gas company headquartered in Minneapolis
- 3.7 million electricity customers across eight Western and Midwestern states
- Natural gas service to 2.1 million customers in five of our states

VISION

We will be the **preferred** and **trusted** provider of the energy our customers need.

MISSION

We provide our customers the safe, clean, reliable energy services they want and value at a competitive price.

VALUES

STRATEGIC PRIORITIES

Lead the Clean Energy Transition

- Electricity: 80% carbon reduction by 2030, 100% carbon-free electricity by 2050
- Natural Gas: 25% GHG reduction by 2030, net-zero by 2050

Enhance the Customer Experience

- Conservation, new products/services
- 1.5 million electric vehicles enabled by 2030

Keep Bills Low

- Average bill increases $\leq$ rate of inflation

Xcel Energy®

NATURAL GAS GOAL DETAILS

Our strategy for natural gas will reduce methane and carbon dioxide emissions associated with the production, delivery and final use of natural gas in buildings.

- By 2030, our goal is to reduce greenhouse gas emissions 25% below 2020 levels, achieve net-zero methane emissions and exclusively purchase certified natural gas for gas distribution and power generation.

- By 2050, our vision is to deliver gas service to customers with net-zero emissions

Approach	Strategic Reduction Opportunities
Reducing Methane Emissions from Production and Delivery	Purchasing natural gas with a certified low methane emissions rate
	Operational and pipe material changes to reduce emissions on our system
	Leak detection and repair
Reducing Use	Expanding energy efficiency
Beneficial Electrification	All-electric new builds
	Grid-integrated, managed electric water heaters
	Heat pump systems with natural gas backup for cooling and heating
	District geothermal and other emerging technologies
Lower Carbon Supply	Renewable natural gas
	Hydrogen
	Power to gas
Negative Emissions	Carbon offsets
	Direct air capture

COLORADO 2021 LEGISLATIVE SESSION

- Gas DSM Bill (HB21-1238)
  - Decoupling, Societal cost of methane, aiming to increase oversight, add commission goals and strategic issues-type proceeding
- Beneficial Electrification (BE) Bill (SB21-246)
  - Required to file a plan, Commission sets targets, Amended to allow combined filings (DSM, BE, TEP-transportation electrification plans)
- Clean Heat Bill (SB21-264)
  - 4% GHG reduction by 2025, 22% by 2030 from 2015 baseline - technology agnostic - assembles the pieces (RNG, Hydrogen, DSM, BE, recovered methane) - 2.5% cost cap

COLORADO DSM HISTORY AND FRAMEWORK

- Gas DSM launched and electric expanded in 2009
- Strategic Issues docket every 5 years sets the rules
  - Primary focus is electric
  - Cost effectiveness methodology, budget caps, goals, avoided cost methodologies
  - Defines Company incentive mechanism
  - 2012, 2017, 2022
- Biennial plans (typical) set program details

COLORADO 2021-2022 DSM PLAN FILING

- 500 GWh goal (set in 2017 Strategic Issues Docket)
- Xcel sets gas goal – proposed ~20% increase from 2020
  - ~0.5% retail sales
  - Waiver required for proposed budget ($18 million)
- Xcel proposed limited Beneficial Electrification measures ($1 million)
  - HPWH, Duel-Fuel ASHP, All Electric new construction, Custom BE
  - Proposed under Gas DSM
  - kWh do not count against Electric DSM Goals
  - Limited and Voluntary due to individual customer bill impacts
- Hourly marginal energy price as a surrogate for carbon
  - Decreasing Carbon Intensity from ERP
- Societal Cost of Carbon shown in Cost Bens

COLORADO Q2 2022 PARTICIPATION

Heat pump participation

	Electrification	Non-Electrification	Total
Mini-Split HP	71	16	87
CC Mini-Split HP	64	9	73
HP Water Heater	1	15	16
Central ASHP	13	2	15
GSHP	1	0	1
CC Central ASHP	1	0	1
Total	151	42	193

	Traditional
Central AC	573
Evap Cooler	124
NG Furnace	1,278
NG Tankless Wtr Htr	149
NG Storage Wtr Htr	23
NG Boiler	22

Minnesota Energy Conservation & Optimization Act

NARUC Webinar
May 26, 2022

Anthony Fryer
Supervisor, Conservation Improvement Program
Minnesota Department of Commerce

Presentation Overview

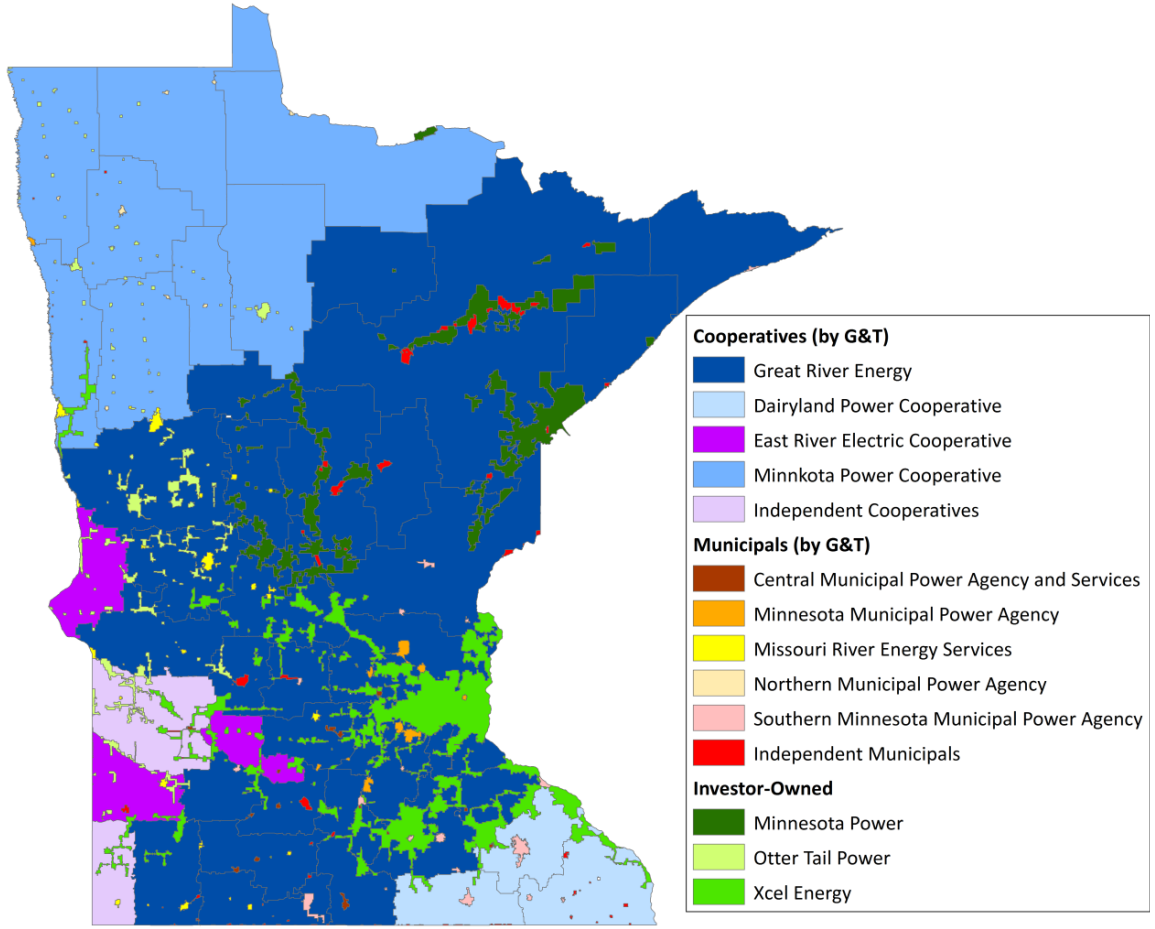
1. Conservation Improvement Program (CIP) Overview
2. 2021 Energy Conservation & Optimization Act (ECO)
    a. Development of ECO legislation
    b. ECO Act highlights
    c. Utility savings goals and plans
    d. New program approaches
    e. Next steps
3. Natural Gas Innovation Act (NGIA)

Minnesota Energy Policy Goals

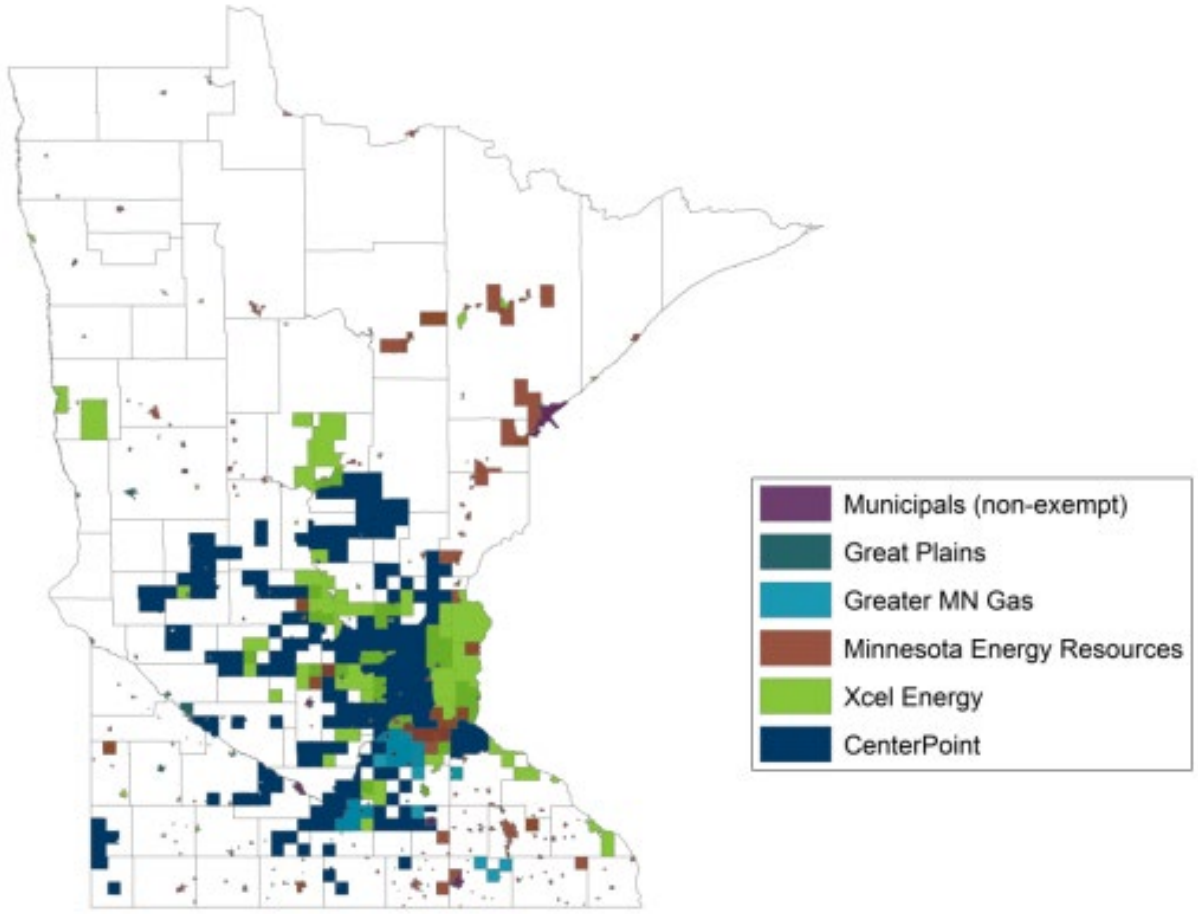
- **Emissions Reduction** - Reduce greenhouse gas emissions 30 percent by 2030, and 80 percent by 2050 relative to year 2005 emissions.
- **Renewable Energy Standard** - A goal that twenty-five percent of electric utilities' total retail sales be met from renewable energy resources by the year 2025.
- **Energy Efficiency Resource Standard** - Energy-saving goals for electric and natural gas utilities that operate in the state of Minnesota through the Conservation Improvement Program (CIP).

Minnesota Utilities

Electricity

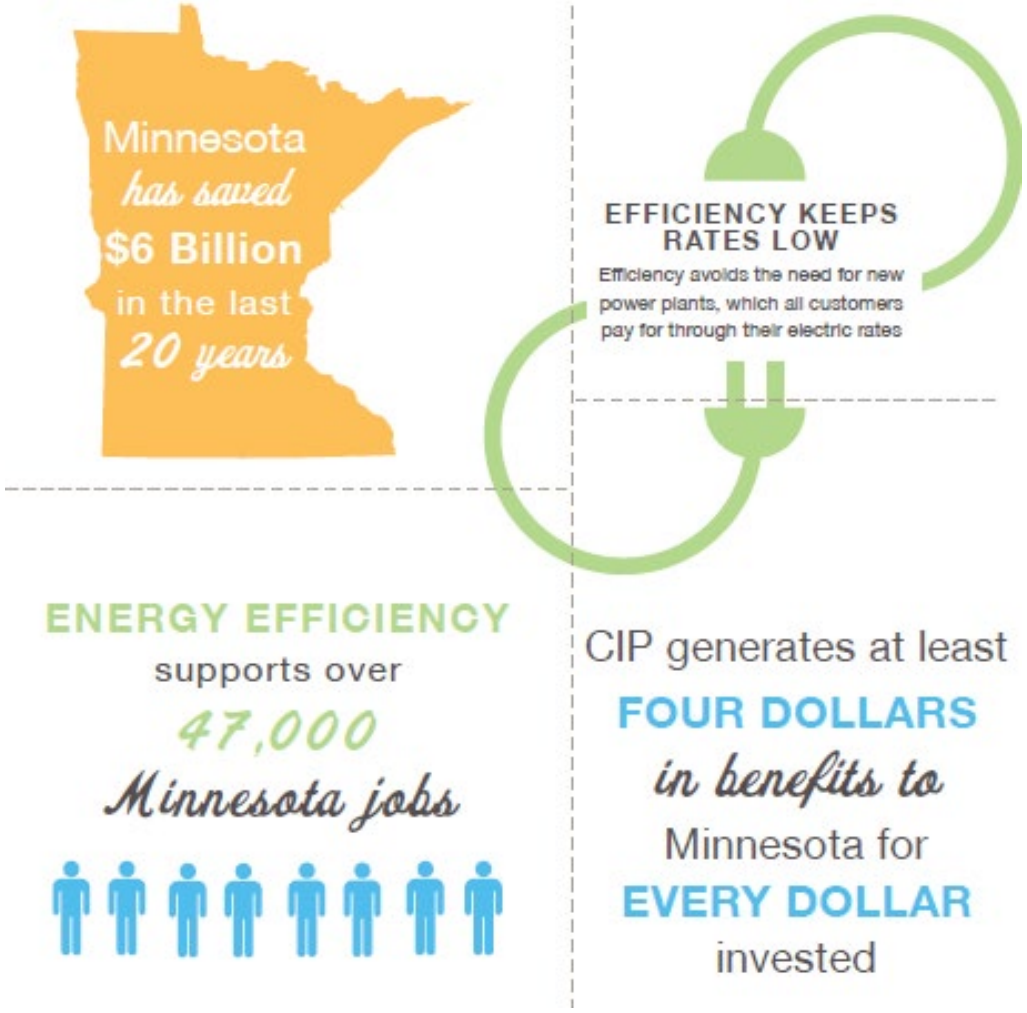


Natural Gas



CIP Progress

- Minnesota's Energy Efficiency Resource Standard
- ~120 electric and natural gas utilities required to participate
- Helped Minnesota achieve top 10 ranking in ACEEE state efficiency scorecard for over a decade



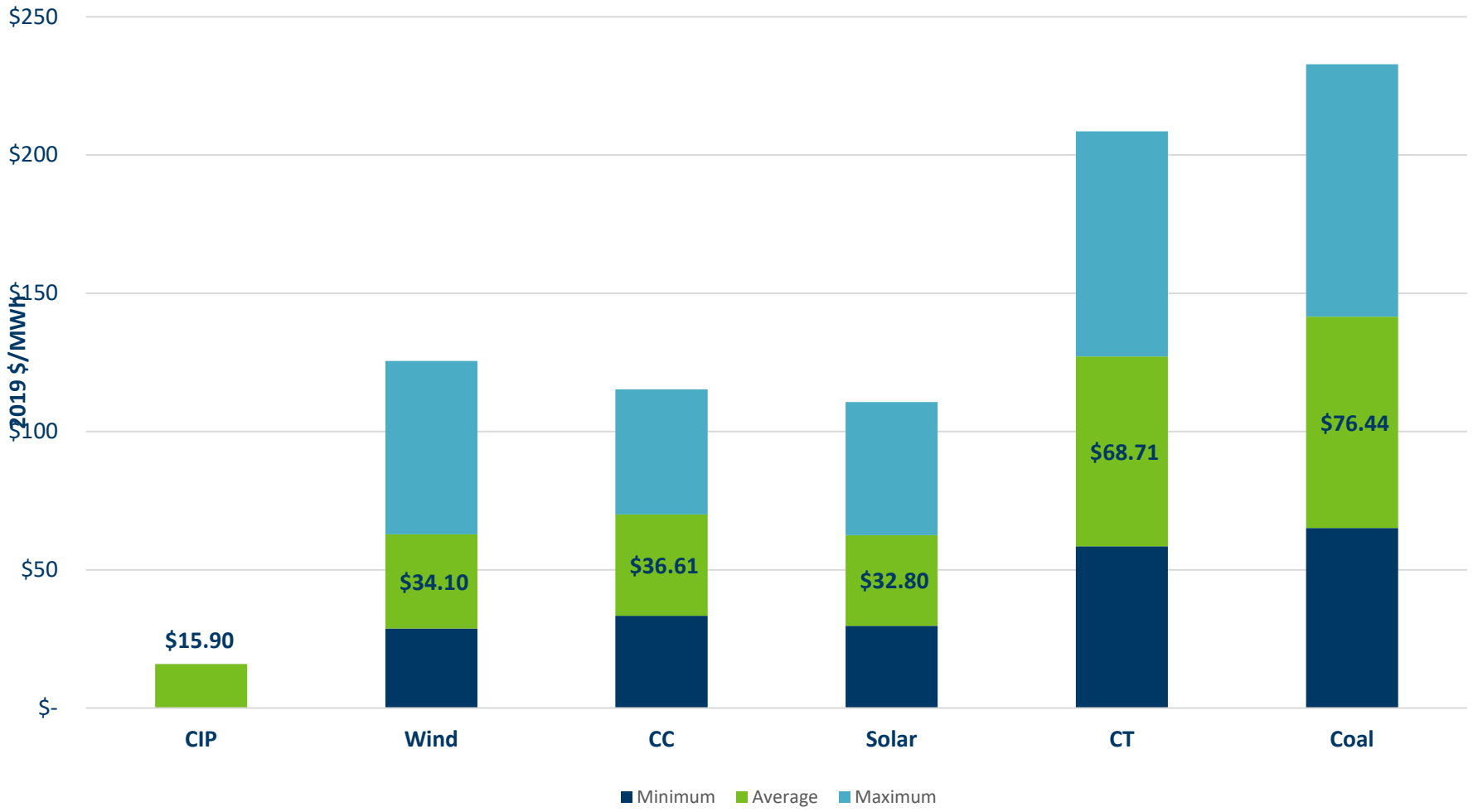
Source: Center for Energy and Environment

216B.2401 – Energy Savings & Optimization Policy Goal

(a) The legislature finds that energy savings are an energy resource, and that cost-effective energy savings are preferred over all other energy resources. . .

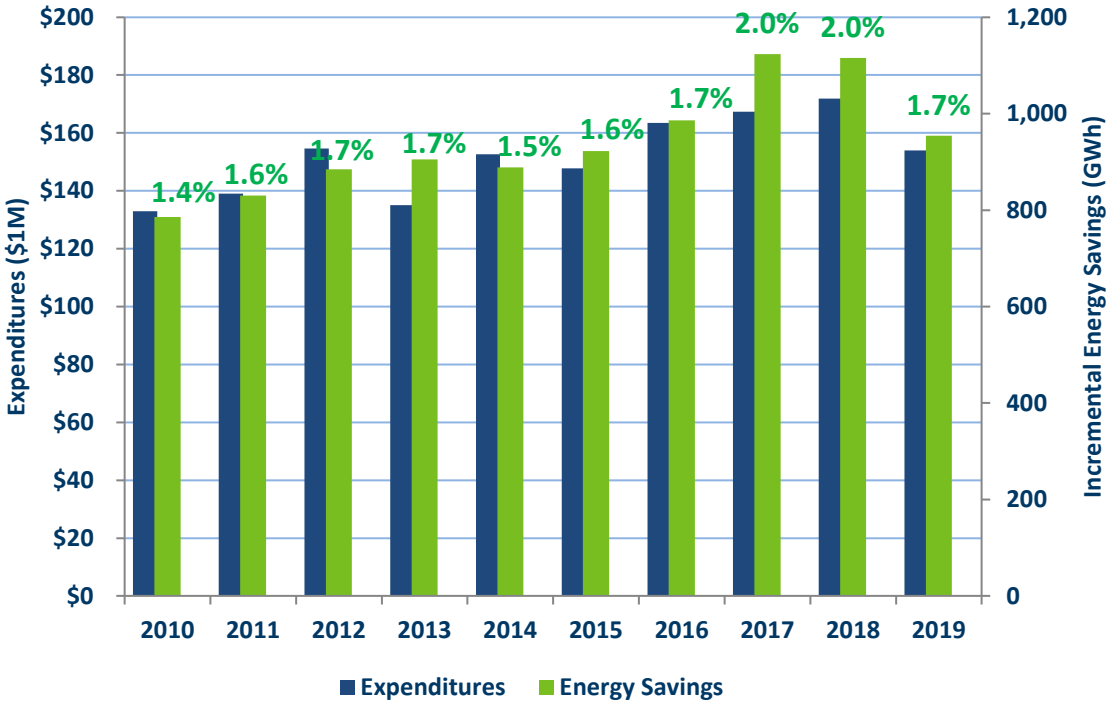
The legislature further finds that cost-effective energy savings and load management programs should be procured systematically and aggressively . . .

CIP Costs vs. Electric Generation Options

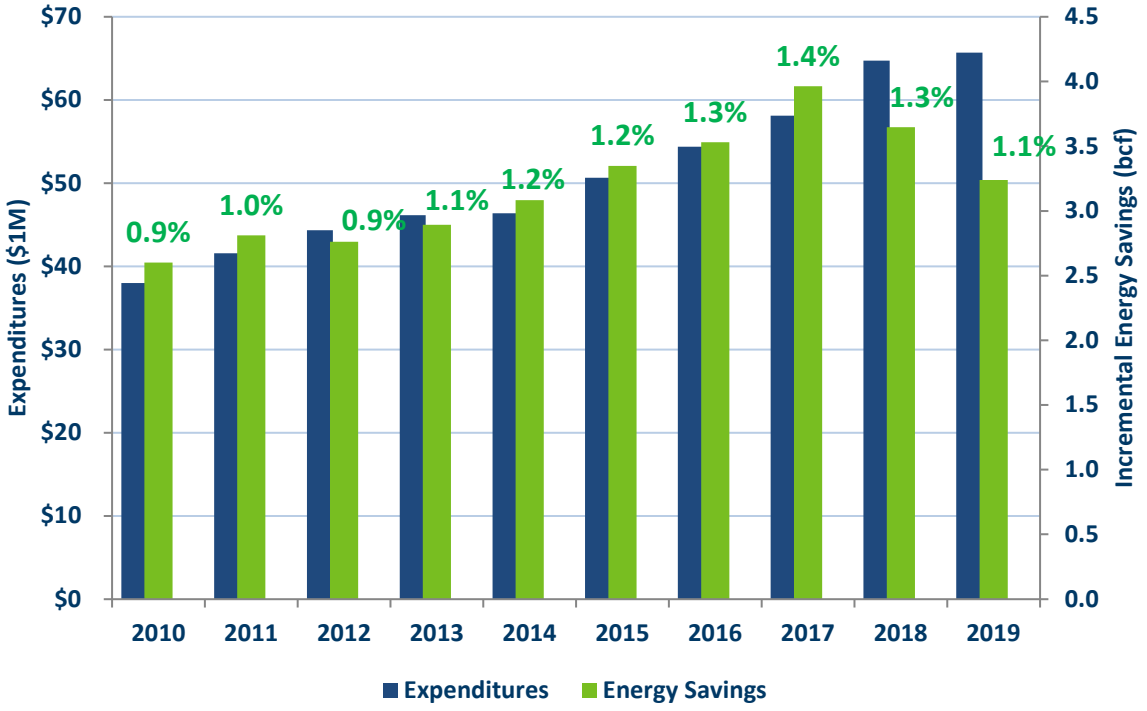


Minnesota Utilities CIP Performance

Electricity



Natural Gas



2021 Energy Conservation & Optimization Act (EC0)

- Signed into law by Governor Walz (May 25, 2021)
- ECO Act was result of multiple years of discussion and development
- Primarily modernizes CIP framework to provide more wholistic approach to efficiency programming

Pre-ECO Legislation Development

- Initial small stakeholder group convened to determine possible areas of change to CIP.
- Once areas of agreement were established, a broader stakeholder group developed specifics related to savings goals, low-income requirements, fuel switching, load management, etc.
- First ECO bill introduced in 2019. Passed on third attempt in 2021.

Pre-ECO Department of Commerce Initiatives

ECO Highlights

- Provides utilities with the opportunity to optimize energy use and delivery through inclusion of:
  - Load management programs
  - Efficient fuel switching programs
- Raises the energy savings goals for the state's electric investor-owned utilities (IOUs)
- More than doubles the low-income spending requirement for all IOUs
- Includes activities to improve energy efficiency for public schools

Electric IOUs: Energy Savings Goal and Spending Requirements

Requirement	Metric	Citation
Energy Savings (kWh)	• 1.75% of average weather-normalized retail sales at the generator, less sales to exempt customers • 1.0% of goal must be met with energy conservation measures • 0.75% of goal can be met with additional conservation measures, EUI measures, and CHP	Minn. Stat. §216B.241 subd. 1c(b) and subd. 1c(d)
Total Spending ($)	• Until July 1, 2026, spending on fuel-switching improvements must not exceed 0.35% per year	Minn. Stat. §216B.241 subd. 1c(g)
Low-Income Spending ($)	• Beginning 2022: 0.4% of residential gross operating revenue • Beginning in 2024: 0.6% of residential gross operating revenue	Minn. Stat. §216B.241 subd. 7(a)

Natural Gas IOUs: Energy Savings Goals and Investments

Requirement	Metric	Citation
Energy Savings (Dth)	• 1.0% of average weather-normalized retail sales at the generator, less sales to exempt customers • 1.0% of goal must be met with energy conservation measures	Minn. Stat. §216B.241 subd. 1c(c) and subd. 1c(d)
Total Spending ($)	• Until July 1, 2026, spending on fuel-switching improvements must not exceed 0.35% per year	Minn. Stat. §216B.241 subd. 1c(g)
Low-Income Spending ($)	• Beginning in 2022: 1.0% of residential gross operating revenue	Minn. Stat. §216B.241 subd. 7(a)

Required Technical Guidance

Multifamily Buildings

By August 1, 2021, develop guidelines for eligibility of multifamily buildings to participate in low-income programs.

Electric Vehicle Charging Sales

By December 31, 2021, develop methodology for determining electric sales associated with EV charging. These sales will be excluded from gross annual retail sales until after December 31, 2032.

Efficient Fuel Switching

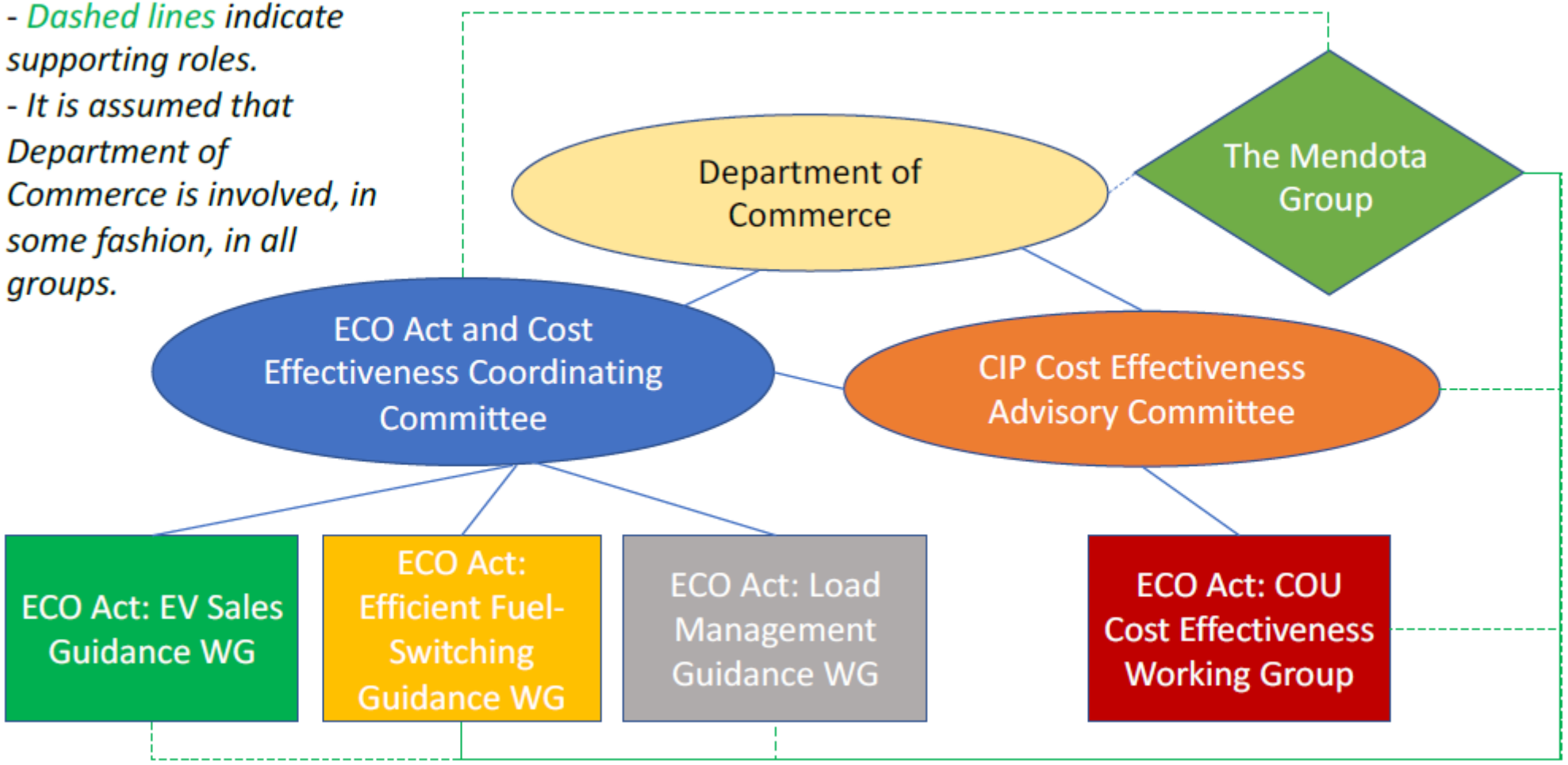
By March 15, 2022, develop technical guidelines to determine whether a fuel switching program meets the criteria and calculate amount of energy saved due to a fuel switching improvement.

Stakeholder Engagement

- ECO Coordinating Committee
  - November 10, 2021
- ECO Coordinating Committee/Working Group Process
  - November – Early January 2022
- ECO Stakeholder Meeting
  - Early January 2022
- Proposed Decision: ECO Technical Guidance
  - Filed mid-January 2022
- Commissioner Decision: ECO Technical Guidance
  - Filed by March 15, 2022

Stakeholder Engagement Approach

- *Dashed lines indicate supporting roles.*
- *It is assumed that Department of Commerce is involved, in some fashion, in all groups.*



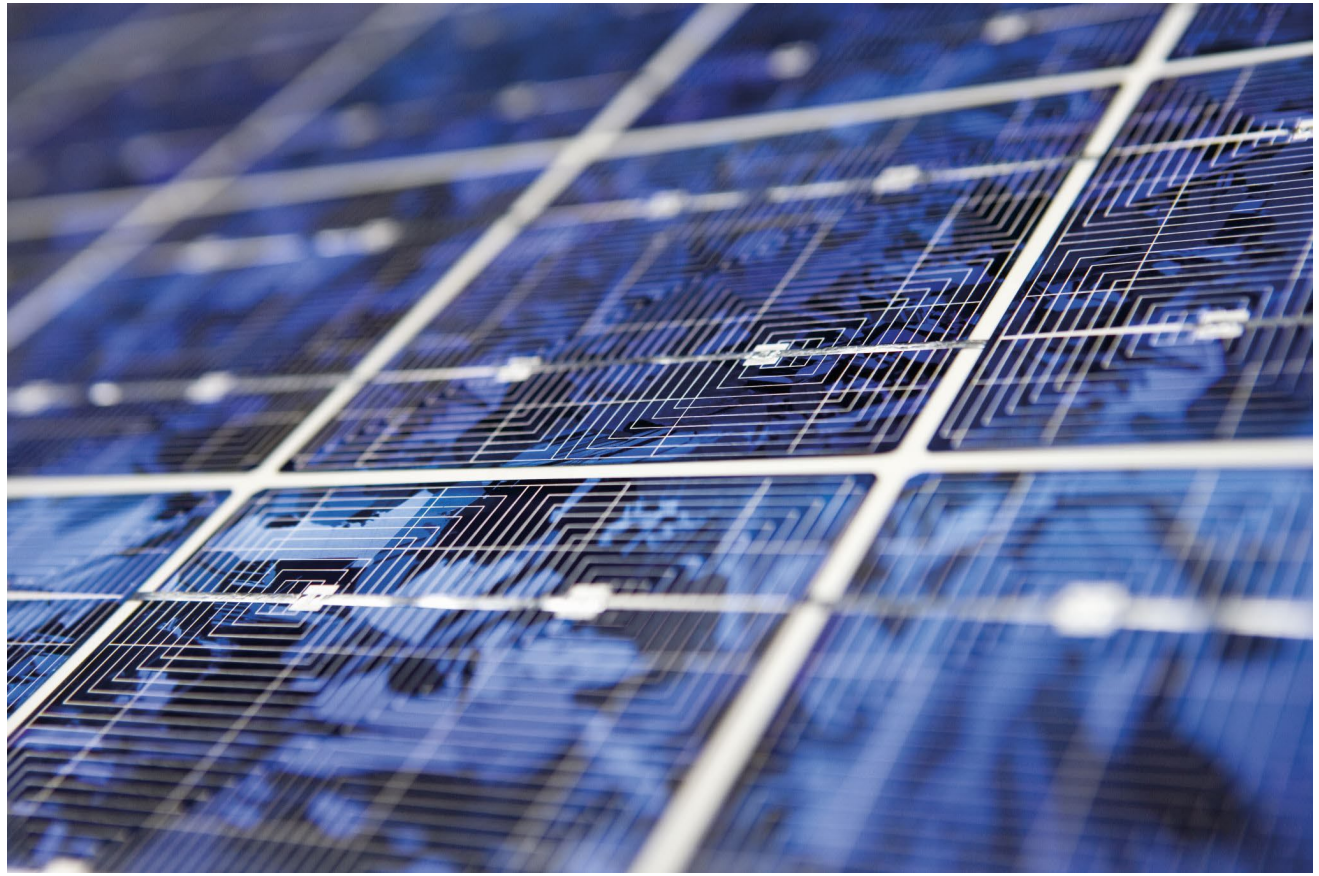
Efficient Fuel-Switching Criteria

A fuel-switching improvement is deemed efficient if . . . the improvement, relative to the fuel being displaced:

1. Reduces the amount of source energy consumed;
2. Reduces statewide greenhouse gas emissions over the lifetime of the improvement;
3. Is cost-effective, considering the costs and benefits from the perspective of the utility, participants, and society; and
4. Is installed and operated in a manner that improves the utility's system load factor.

Load Management Programs

- Allow utility to manage and reduce total system demand
- Temporarily reduce energy use or shift energy use to non-peak period
- Cost-effective load management programs now allowed in CIP

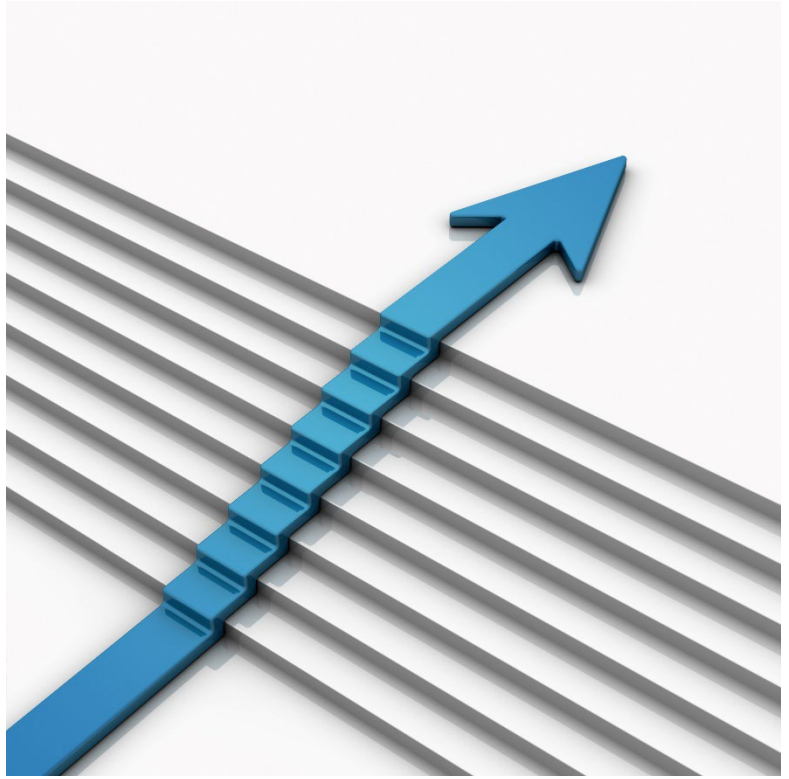


Investor-Owned Utilities: Plans and Annual Status Reports (216B.241 subd. 2)

- Schedule for plans and annual status reports likely to remain unchanged (i.e. submission of triennial plans and annual status reports.)
- 2021-2023 triennial plans will be implemented as planned with the following considerations:
  - After the March 15, 2022, technical guidance is issued, modifications to incorporate efficient fuel-switching and load management programs into current triennial plans may be considered
- 2024-2026 triennial plans likely to represent first significant introduction of efficient fuel-switching and load management programs

ECO Next Seps

1. Technical Reference Manual v4.0
2. Cost-effectiveness assumptions
3. Low-income stakeholder meetings
4. Research needs



Natural Gas Innovation Act (NGIA)

- **What it does:**
  - Statute provides distribution natural gas utilities a regulatory pathway for achieving GHG emission reductions through alternative non-natural gas resources
  - Eligible resources include energy efficiency, strategic electrification, renewable natural gas, power-to-hydrogen, power-to-ammonia, biogas, carbon capture, and district energy
  - MN Public Utilities Commission to issue greenhouse gas emissions and cost-benefit assessment frameworks by June 1, 2022
  - Utilities implement eligible resources through voluntary five-year plans, first plans expected to be filed in late 2022 and early 2023

Natural Gas Innovation Act (NGIA)

- **Issues being addressed in June 1 Order:**
  - How to calculate the greenhouse gas emission impacts of eligible resources to ensure utility plans lead to emission reductions compared to natural gas
  - How to calculate the costs and benefits of eligible resources to ensure utility plans provide net benefits and promote local economic development
- **Other considerations:**
  - Statute imposes overall spending limits on utility plans that increase over time
  - As required in statute, Minnesota PUC has opened a broader docket to evaluate changes to natural gas utility regulatory and policy structures needed to meet or exceed the state's GHG reduction goals

Thank You!

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Upcoming Virtual Events

All NARUC members and stakeholders are invited

DER Aggregation Participation in Electricity Markets: NASEO and NARUC Webinar on EPRI Collaborative Forum Final Report and FERC Order 2222 Roadmap

June 2, 2022 | 3:00 - 4:00 PM ET

Alleviating the Energy Burden: Regulatory Approaches to Supporting Affordability

June 16, 2022 | 3:30 - 4:30 PM ET

NRRI RTI: Including Equity and Energy and Environmental Justice in State PUC Decisions

June 14, June 17, June 21, June 23, 2022 | 3:00 - 4:30 PM ET (*registration fee*)

NARUC members only

Delivering Grid Modernization Value by Design | June 9, 2022

State Regulatory Approaches for Distribution Planning | June 16, 2022

Microgrids for Community and City Resilience Planning | June 23, 2022

Details and Registration Links: *https://www.naruc.org/cpi-1/cpi-events/*