



DSM & Resource Planning in Minnesota

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Minnesota Energy Policy Goals

- Emissions Reduction - Reduce greenhouse gas emissions by 15 percent by 2015, 30 percent by 2030, and 80 percent by 2050 relative to year 2005 emissions.
- EERS - Energy-saving goals for electric and natural gas utilities (1.5 percent of annual retail sales) that operate in the state of Minnesota through the Conservation Improvement Program (CIP).
- RES - A goal that twenty-five percent of electric utilities' total retail sales be met from renewable energy resources by the year 2025.
- SES - A requirement that all public utilities generate or procure 1.5 percent of electric generation through solar energy by the year 2020.

Energy Efficiency as a Resource

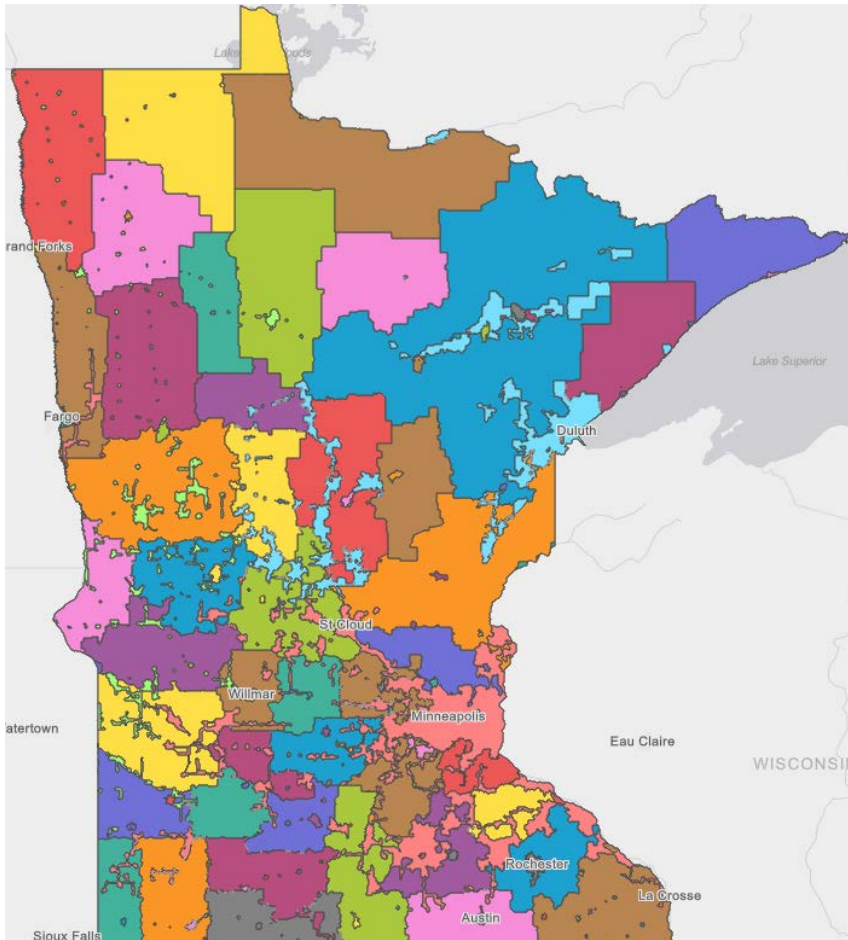
Energy Savings Policy Goal:

The legislature finds that energy savings are an energy resource, and that cost-effective energy savings are preferred over all other energy resources...[and] energy savings should be procured systematically and aggressively...

Objectives:

- Reduce utility costs for businesses and residents
- Improve competitiveness and profitability of businesses
- Create more energy related jobs
- Reduce economic burden of fuel imports
- Reduce pollution and emissions that cause climate change

Minnesota Utilities

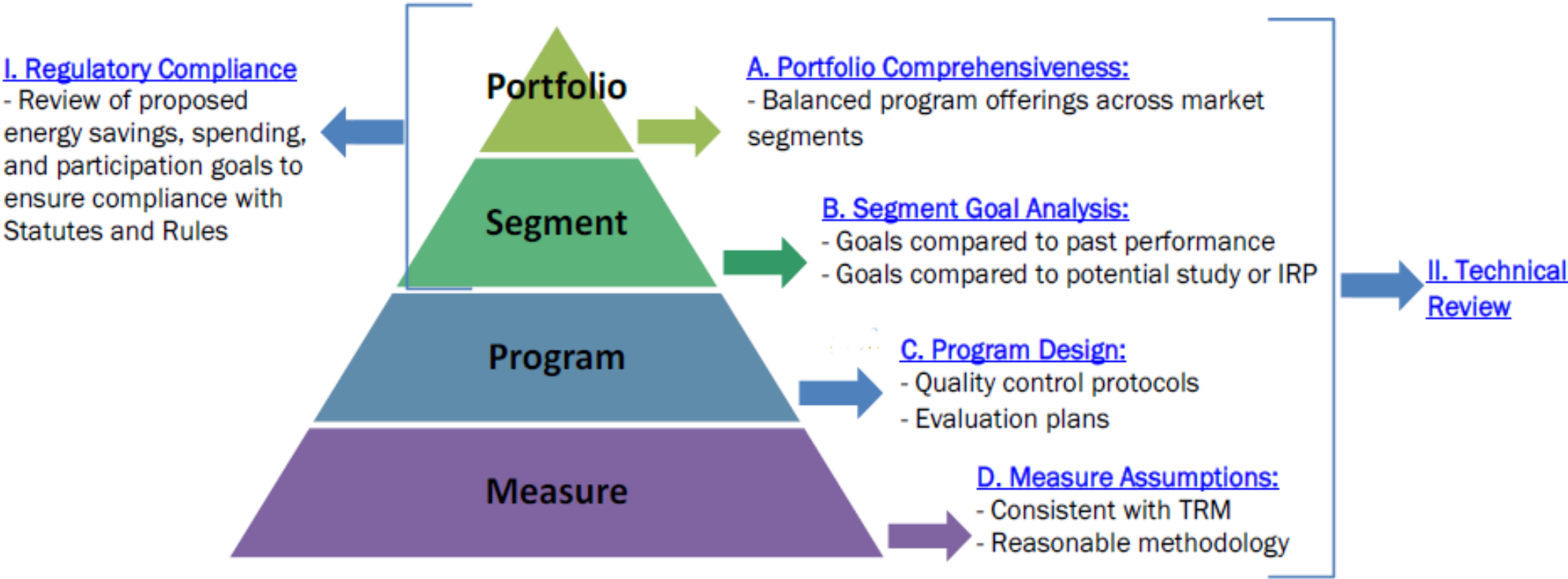


- 7 investor owned utilities
 - 65% of electricity sales, majority of gas sales
- 44 distribution cooperatives
 - 20% of electricity sales
- 130 municipal utilities
 - 15% of electricity sales

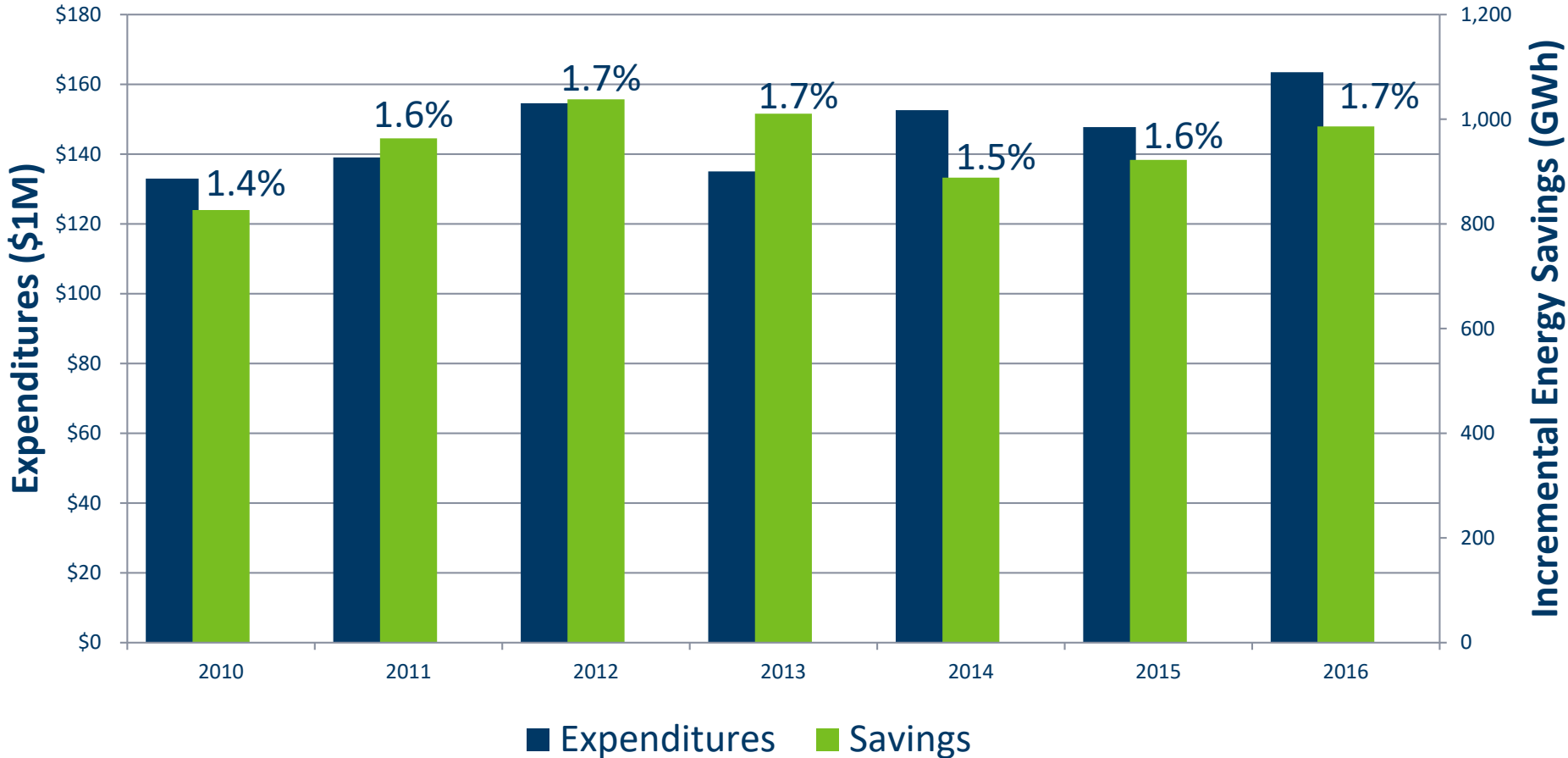
CIP Plan and Performance Reviews

- IOU CIP Triennial Plans and Status Reports
 - Currently in 2017-2019 triennial period
 - Triennial plans submitted June 1 in year prior to new triennial period
 - Annual status reports submitted March 1 (electric)/April 1 (natural gas)
- Muni and Coop CIP Annual Reports and Plans
 - Report for previous year/plans for next year, submitted June 1

CIP IOU Plan Review



CIP Electric Results 2010-2016



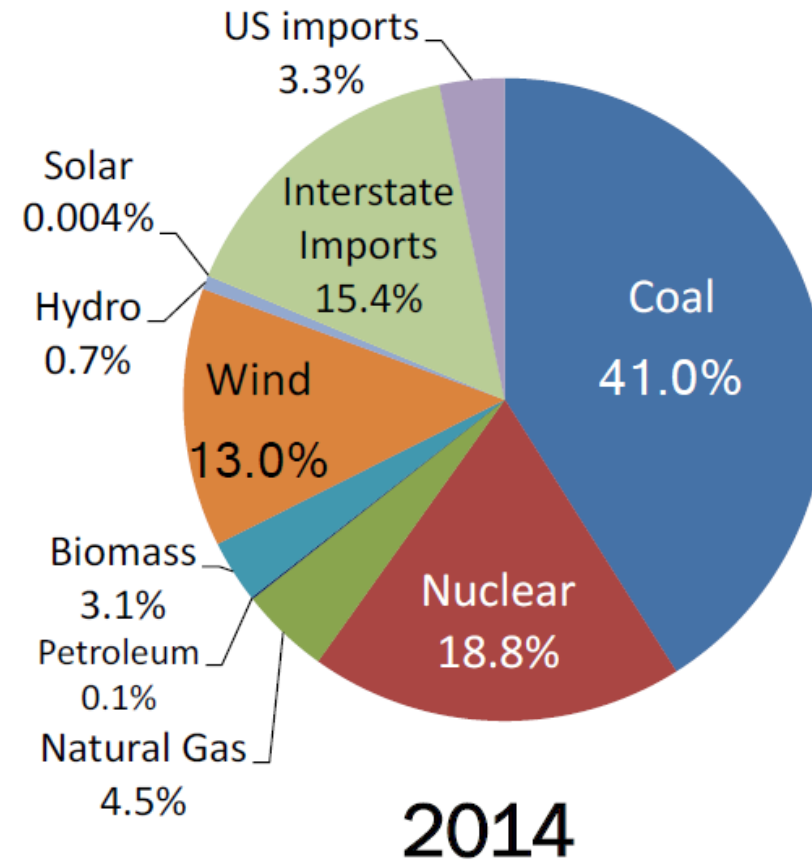
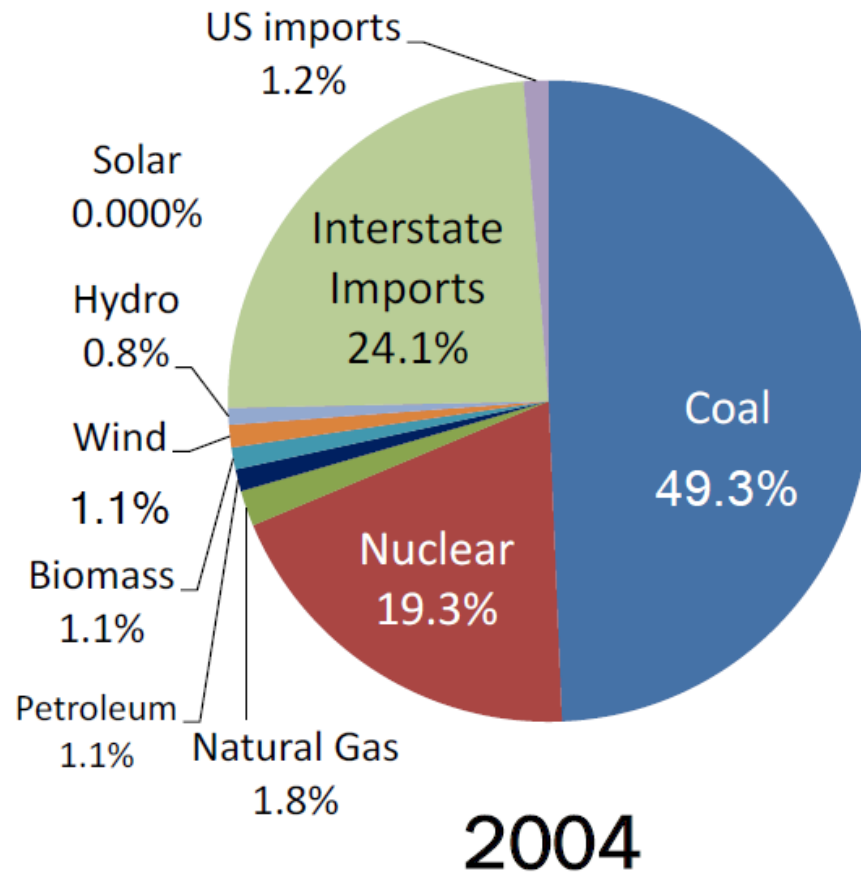
Minnesota IRP Overview

- Passed in 1993 (216B.2422), and amended numerous times since
- Originally called Least Cost Planning; modified to integrate demand-side with supply-side resources – DSM as a resource
- Minnesota IRPs use information to identify:
 - Size, type and timing of energy needs and resources
 - Least cost supply, energy efficiency, and demand response options considering environmental effects

Minnesota IRP Process

- All G&T utilities file roughly every two years, including
 - 5-year action plan (near-term actionable investments)
 - Planning horizon of 15 years
- Commission decisions are binding on IOUs (Minnesota Power, Otter Tail Power, and Xcel Energy)
- Commission gives non-binding advice to 5 cooperative and municipal G&T utilities
- PUC uses review and comment process, allowing broad participation

Minnesota Electricity Consumption by Source



Source: State Energy Data System, Energy Information Administration, U.S. Dept of Energy

Complementary Efforts: CIP Results and Plans Informing IRP Development

CIP provides PUC and stakeholders with detailed, utility specific DSM information:

- Utility CIP annual status reports
- Utility triennial/annual plans
- Energy Savings Platform with 8 years of program level data

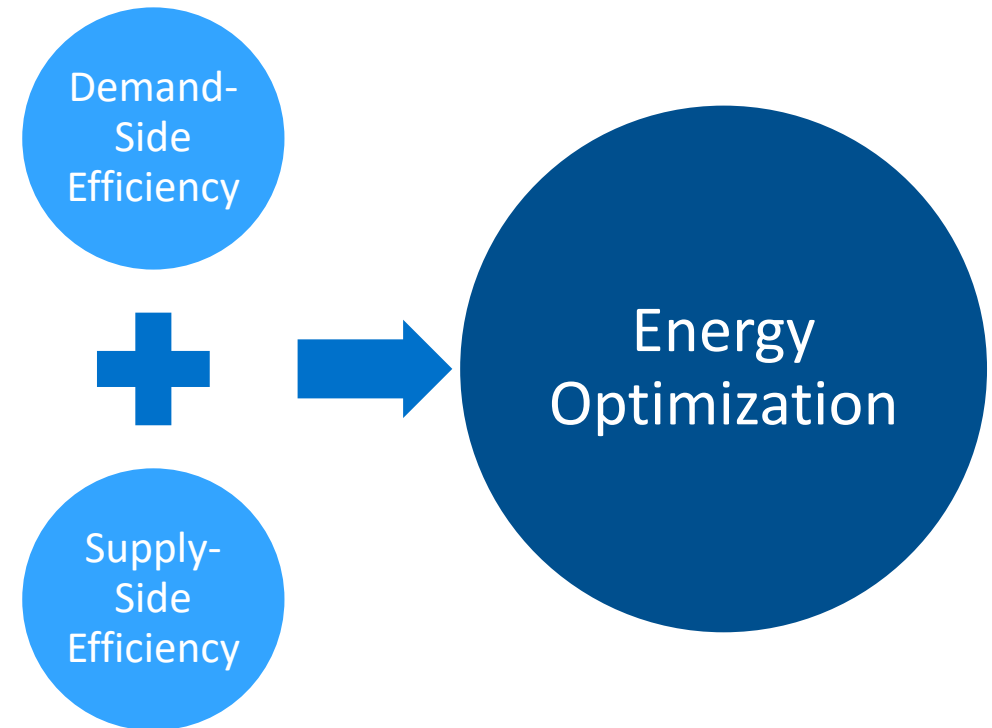
Complimentary Efforts: CIP Supply and DSM Potential Studies

Demand-side potential study:

1. CARD Statewide Natural Gas & Electric Potential Study

Supply-side (utility infrastructure efficiency) studies:

1. CARD Electric Utility Infrastructure Potential Study
2. U.S. DOE Electric Utility Infrastructure Policy Exploration



Complementary Efforts: IRP Process Driving Utilities Beyond CIP Requirements

Through IRP process, PUC can:

- Require utility DSM efforts beyond EERS, enhancing utility CIP performance
- Consider programs being implemented by other Minnesota utilities and utilities around the country
- Direct utilities to increase efforts with CIP opt-out customers

- Combination of DSM and IRP highly beneficial
- Separate regulators for DSM and IRP processes has pros and cons
- Coordination of CIP and IRP development timelines could be helpful
- Early collaboration between utilities and stakeholders could shorten and enhance IRP development process

Thank You

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