

The Minnesota State Energy Office Jack.Kluempke@state.mn.us

MN Department of Commerce: Divisions





Federal Statutory Authority: State Energy Program

"To promote the conservation of energy, to reduce the rate of growth of energy demand, and to reduce dependence on imported oil through the development and implementation of a comprehensive <u>State</u> Energy Program and the provision of Federal financial and technical assistance to <u>States</u> in support of such program."



10 CFR 420

State Statutory Authority: State Energy Program

"Therefore, the legislature, through its committees, must monitor and evaluate progress toward greater reliance on costeffective energy efficiency and renewable energy and lesser dependence on fossil fuels in order to reduce the economic burden of fuel imports, diversify utility-owned and consumerowned energy resources, reduce utility costs for businesses and residents, improve the competitiveness and profitability of Minnesota businesses, create more energy-related jobs that contribute to the Minnesota economy, and reduce pollution and emissions that cause climate change"

MN Statutes (216C, Executive Orders, etc.)

Buy Clean, Buy Fair Minnesota 100% Carbon-Free Electricity by 2040 **Sustainable Building Guidelines Modifications** Preference Order for Purchase of State Vehicles RDA Projects Subject to Prevailing Wage/Diversity Report Solar Reward Expansion Air Ventilation Program Act Auto dealers must employ personnel with knowledgeable of electric vehicles **Utility Reporting Due Date Modification** Repeal/Reinstatement of Intervenor Compensation Statute **Electric Vehicle Deployment Program Strengthen MN Homes** Customer's Access to Electricity Usage Data Transportation Electrification Plan **Community Solar Garden Modifications Prairie Island Nuclear Power Plan Settlement Payments** Distributed Solar Energy Standard **Energy Storage Systems Deployment Target Utility Customer Dispute Resolution Definition of Low-Income Household** Approval of Projects to Modernize Transmission and Distribution System Large Wind Energy Conversion System Certification of Need Exemption **Modification of Threshold Requiring PUC Approval** Commerce's Assessment Increase **Compensation for Certain PUC Proceeding Participants** State Competitiveness Funds (1.0 & 2.0) **Climate Innovation Finance Authority** Commissioner authority to administrator Solar for Schools Program **Pre-weatherization and Workforce Training Program Energy Benchmarking Electric School Bus Deployment Program** Solar for School Modifications from Xcel to Commerce Department Solar on Public Building Program Establishment **Energy Storage Incentive Program Distribute Energy Resources System Upgrade Program Electric Vehicle Rebates** Dealers Grants to Cover cost manufacturer certification **PACE Loan Program** Residential Electrical Panel Upgrade Grant Program **Residential Heat Pump Rebate Program Public Utility Diversity Reporting Energy Storage System Definition** Conforming Changes to definition of large energy power facilities and site permit **Gas and Hazardous Liquid Definitions Changes Greenhouse Gas Emission Reduction Goal Modifications** Modification to Annual Report on Telecommunications Access Program Restriction on single family solar installations prohibited Extension of Sunset on Gas Utility Recovery of Infrastructure Costs

Creation of a Tribal Advocacy Council on Energy

Electric Grid Resiliency Grants Community Solar Garden Study Local Climate Action Grant Program



Helping Clients & Entities

Program Title	State	Federal (Grants, Loans, Tax Credits, Rebates)	Residential Assistance	Non- Residential Assistance	Work Force Development & Training
Energy Efficiency and Decarbonization					
Pre-weatherization, weatherization, workforce training	Х	Х	Х		Х
Strengthen MN Homes	Х		X		X
Pasidontial Elastria Panal Cronts	v	v	V		V



Community Solar Gardens

Solar on Public Buildings

Solar for Schools (colleges)

Solar for Schools

Greenhouse Gas Reduction Fund

Greenhouse Gas Reduction Fund - National Clean Investment Fund

Greenhouse Gas Reduction Fund Solar - Clean Communities Investment Accelerator

Grants for Renewable Energy Projects

Bonus Tax Credits (DAC, Amercian Made, Workforce)

Benchmarking Energy Use Data	Х			
State Competitiveness Fund				
Cost-share Coverage	Х		Х	
Support for local Grant-seeking assistance	Х		X	
Grants to leverage tax-credits and loans (if projects serve Income-qualified households)	Х		X	
Minnesota Climate Innovation Finance Authority	Х	Х	X	



Describe state policy that makes residential, commercial and community renewable energy possible in Minnesota.



State Statutory Authority: State Energy Program

Two primary Minnesota Statutes

216B: Public Utilities

216C: Energy Planning and Conservation

These statutes provide the framework and guidance for most of the work we do in the Division of Energy Resources.



Minnesota Statute 216C: Energy Planning & Conservation

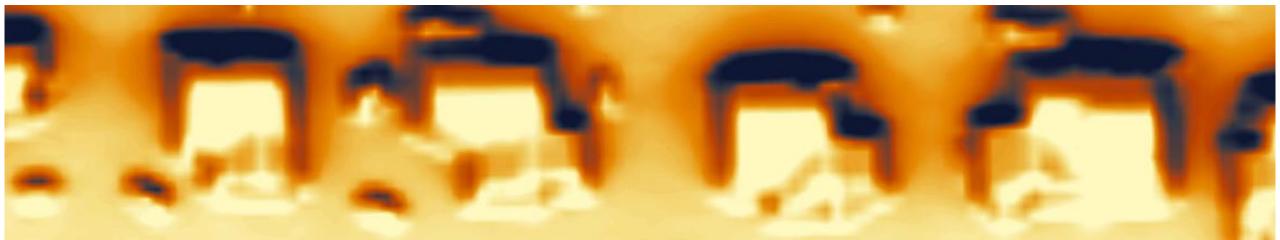
- Minnesota Statute 216C Spells out the Powers and Duties for the Commissioner of Commerce
- 216C.053 Renewable Energy Development
- 216C.11 Energy Conservation Information Center
- 216C.17 Energy Forecasts and Statistics Report
- 216C.25 Solar Energy System Standards
- 216C.417 Made in Minnesota

Minnesota Statute 216B: Public Utilities

- Most of the policies that make solar possible in Minnesota are found in Minnesota Statutes Chapter 216B: Public Utilities.
- 216B defines the framework for how our utilities interact with their customers and how they are regulated by the state, specifically the PUC (Public Utilities Commission).
- 216B.1611 Interconnection of on-site Distributed Generation
- 216B.164 Cogeneration and Small Power Production (includes net metering)
- 216B.1611 Community Solar Gardens
- 216B.1642 Solar Site Management

Net Metered Facility

- "Net metered facility" means an electric generation facility constructed for the purpose of offsetting energy use through the use of renewable energy or high-efficiency distributed generation sources.
- Subd. 3. Purchases; small facilities. In the case of net input into the utility system by a qualifying facility having less than 40-kilowatt capacity, compensation to the customer shall be at a per kilowatt-hour rate determined under paragraph (c), (d), or (f).



Minnesota's Clean Energy Goals

Renewable Energy Goal: Derive 25% by 2025 of <u>total</u> energy used in the state from renewable resources for heating, industrial processes, transportation, and electricity generation.

GHG Emissions Reduction Goal: Reduce greenhouse gas emissions (GHG) statewide to a level at least 15% below 2005 base levels by 2015, 40% by 2040, and 80% by 2050

Energy Savings Goal and the Conservation Improvement Program:

Energy savings of 1.5% of average annual retail sales each year for electric and natural gas utilities, unless adjusted by the commissioner to no less than 1.0% **Building Energy Use:** Energy savings of 1.5% of annual electricity and natural gas retail sales through conservation programs, rate design, energy codes, appliance standards, market transformation or consumer behavior.

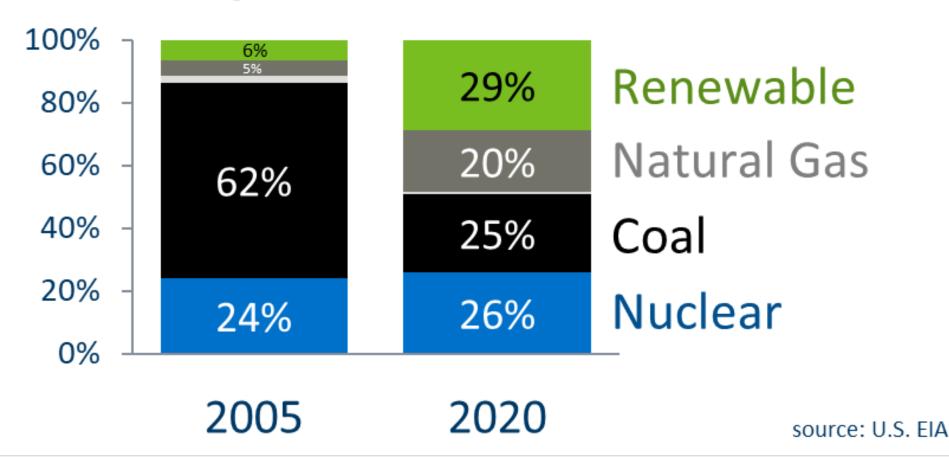
Renewable Electricity Standards: Derive 25% of retail electricity sold in the state from renewable resources by 2025; 30% for Xcel Energy by 2020

Solar Electricity Standard: Generate 1.5% of public utility retail electricity sales from solar energy by 2020, and 10% of all retail electricity sales from solar energy by 2030

MINNESOTA's ENERGY PROFILE:

Coal is dropping significantly; renewables are expanding quickly for power generated in Minnesota

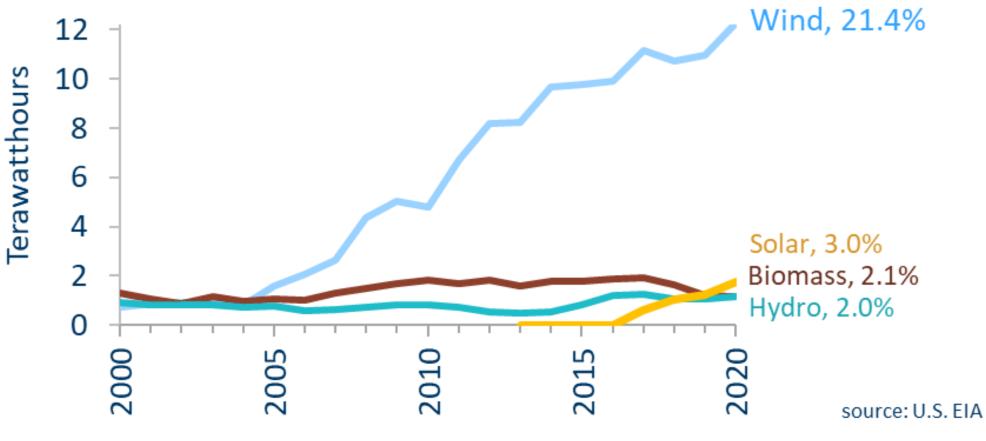
Electricity Generated in Minnesota



MINNESOTA's ENERGY PROFILE:

Wind dominates renewable electricity generation in MN; solar rising rapidly

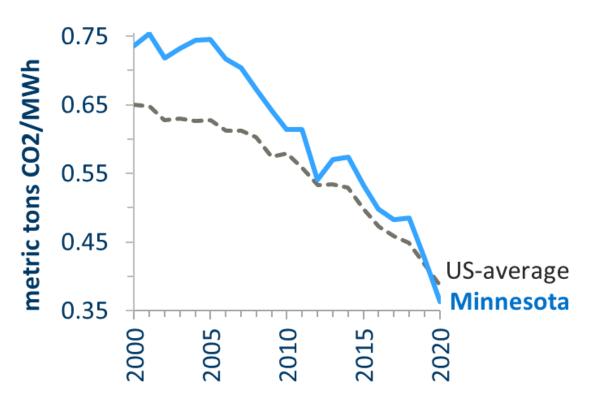
MN Renewable Electricity Generation



Generation Mix Over Time

- State policies and market forces have resulted in a rapid decarbonization of Minnesota's power sector.
- Minnesota's carbon intensity dropped below the national average in 2020

Carbon Intensity of Electricity



Source: U.S.EIA data



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