



Greenhouse Gas Emissions Reductions: Electric Power Sector Update

Presentation By: Jessica Burdette, Energy Regulation & Planning

January 19, 2021

Division of Energy Resources

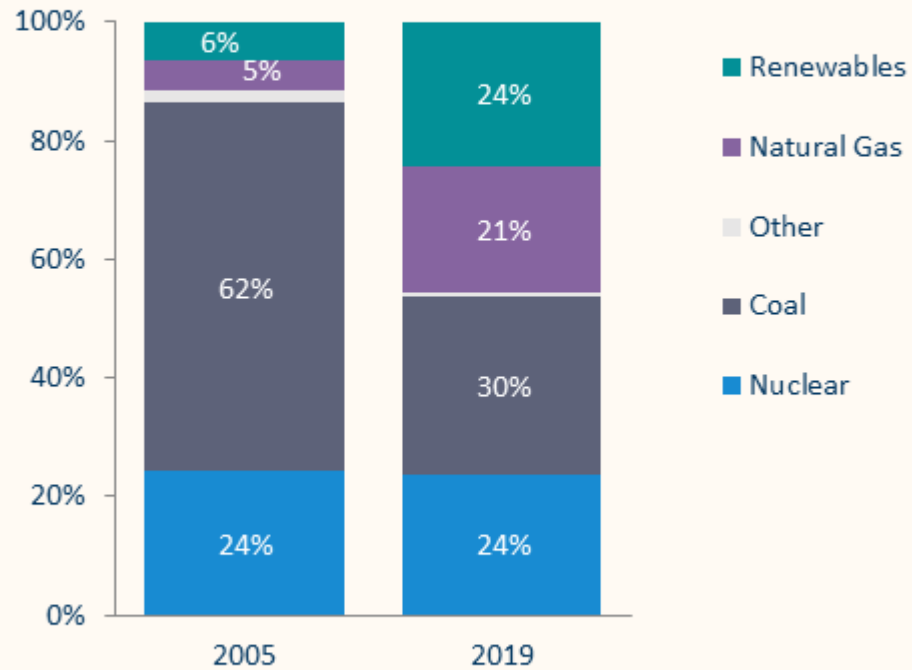
- Promote clean, reliable and affordable energy for Minnesota businesses and homes
- Advocate on behalf of the public interest in state and federal regulatory proceedings
- Maintain state emergency energy assurance and recovery plans
- Oversee the Conservation Improvement Program including Conservation Applied Research & Development
- Promote energy-efficient buildings and emerging energy technologies
- Administer the Home Energy Assistance and Weatherization Assistance Programs

Division of Energy Resources

- Energy Regulation and Planning
- State Energy Office
- Energy Assistance Program
- Energy Environmental Review and Analysis
- Telecommunications

Electricity Generation Mix Changes Over Time

**Electricity Generated in Minnesota
2005 vs. 2019**



Source: U.S. EIA

- Advancements in clean energy show we can reduce GHG emissions economically while meeting the needs of Minnesota's communities, businesses and residents.
- Emissions reductions in the electric power sector have resulted statewide policies working in tandem with market forces.
- In Minnesota, utilities continue to close coal-fired power plants and replace power generation with a mix of renewables, supported by natural gas.

Remaining Electric Utility Owned Coal-Fired Generation

Facility	Size (nameplate capacity, MW; rounded)	Status
Hibbing Public Utilities Commission		
Hibbing 3	10	Standby/backup: available for service but not normally used
Hibbing 5	20	Standby/backup: available for service but not normally used
Hibbing 6	6	Standby/backup: available for service but not normally used
Minnesota Power		
Boswell unit 3	365	Operating
Boswell unit 4	558	Operating
Taconite Harbor Energy Center unit 1	75	Standby/backup: available for service but not normally used
Taconite Harbor Energy Center unit 2	75	Standby/backup: available for service but not normally used
Otter Tail Power Company		
Hoot Lake 2	54	Operating, full retirement by 2021
Hoot Lake 3	75	Operating, full retirement by 2020
Xcel Energy		
Sherburne County 1	680	Operating, full retirement by 2026
Sherburne County 2	682	Operating, full retirement by 2023
Sherburne County 3	876	Operating, proposed retirement by 2030
Allen S King	511	Operating, proposed retirement by 2028

- Most of the emissions reductions in the electric power sector have come from utilities retiring coal-fired electricity generating facilities.
- Recent and upcoming decisions by the MN Public Utilities Commission are expected to further reduce GHG emissions.
- Additionally, some utilities are beginning to seasonally dispatch existing coal-fired generating units ensuring economic operations with the potential for lower emissions.

Efficiency and Conservation Reduces Demand and Emissions

Fuel Type	CO2 Savings (tons)	Energy Savings (1000s MMBtu)
Electric	1,345,264	7,640
Gas	445,417	7,611
Total:	1,790,681	15,251

2017-18 Emissions reductions and energy savings from the Conservation Improvement Program (CIP)

- During both 2017 and 2018, electric utilities exceeded the CIP goal of 1.5% and natural gas utilities exceeded the statutory minimum of 1.0% energy savings.
- Saving over 15 trillion Btus, CIP investments results in enough energy savings to heat, cool and power more than 160,000 homes for one year.
- Reducing CO2 emissions by 1.79 million tons is the equivalent of removing over 350,000 vehicles from the road for one year.

Thank you!

Questions?