

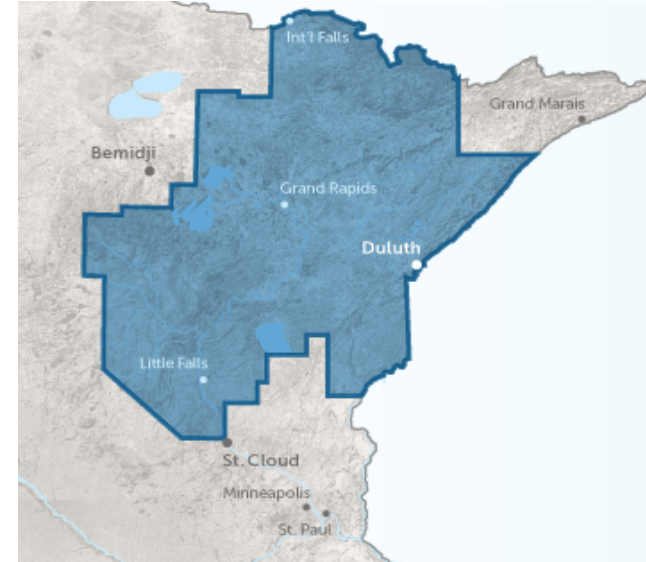


AN ALLETE COMPANY

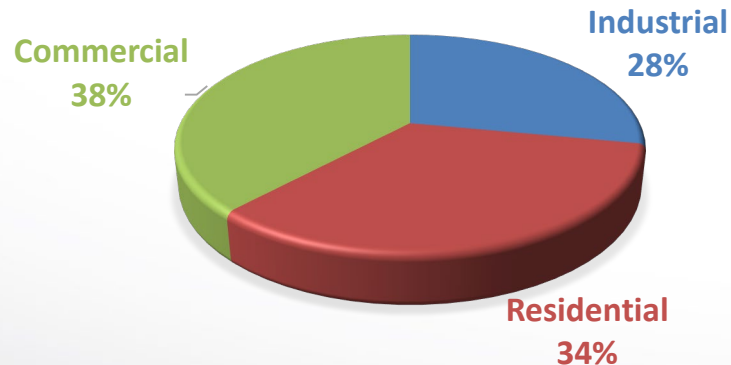
Frank Frederickson
Vice President – Customer Experience
Minnesota Power

MP OVERVIEW & CUSTOMER MIX

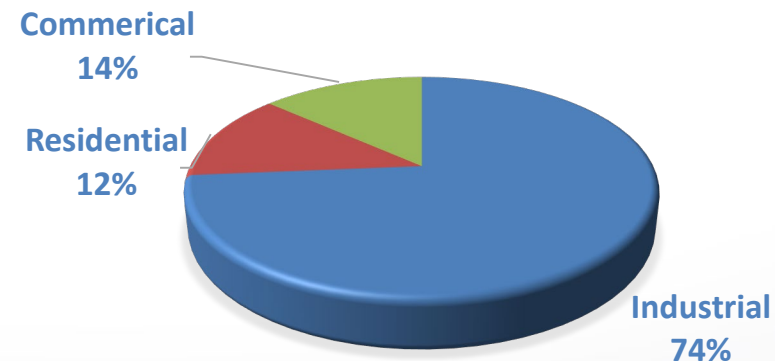
- Headquartered in Duluth, MN for more than a century
- Serve 145,000 customers & 16 municipalities across 26,000 square mile service territory
- Some of the nation's largest industrial customers
 - over 60% of MP's retail sales
 - Northeastern Minnesota is a natural-resource based economy, with mining, pulp & paper and its induced business activity accounting for 40% of Gross Regional Product



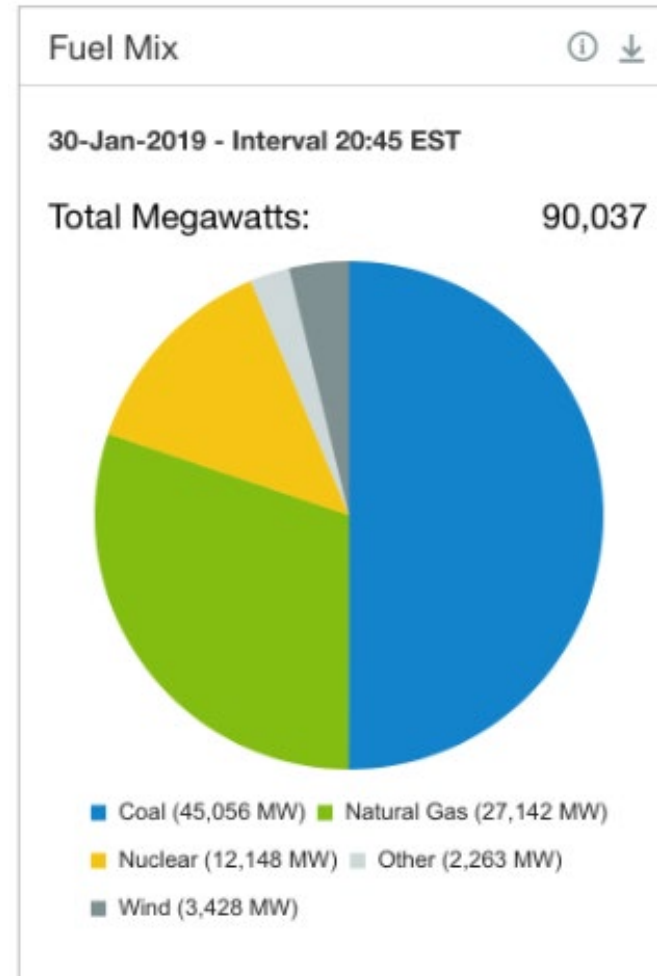
US AVERAGE



MINNESOTA POWER

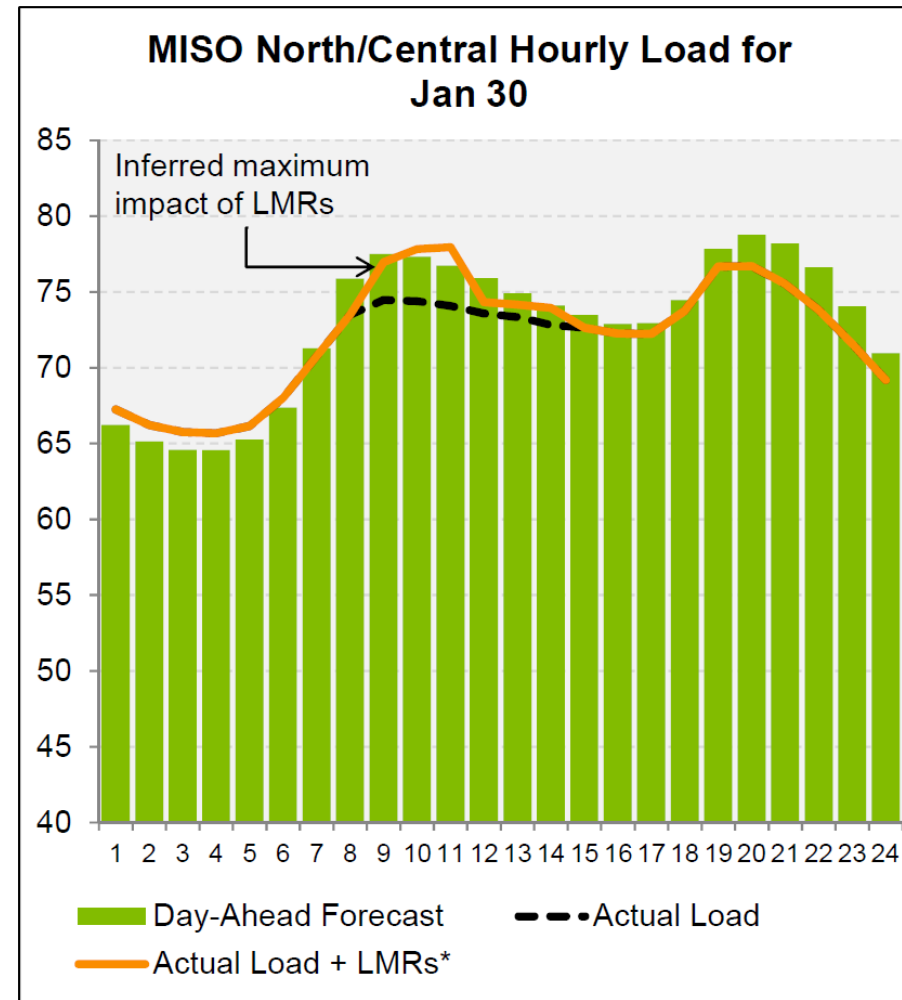
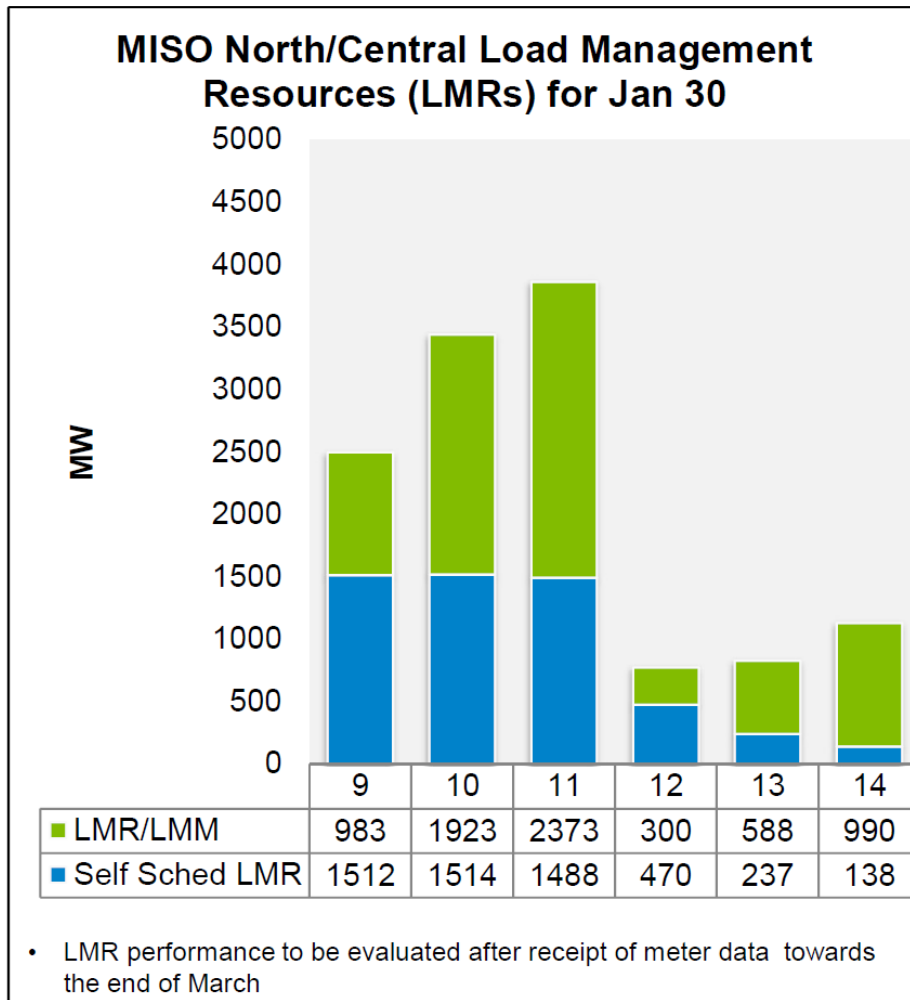


MISO POLAR VORTEX & IMPACT OF CHANGING RESOURCE MIX



- Source:
 - <https://www.misoenergy.org>

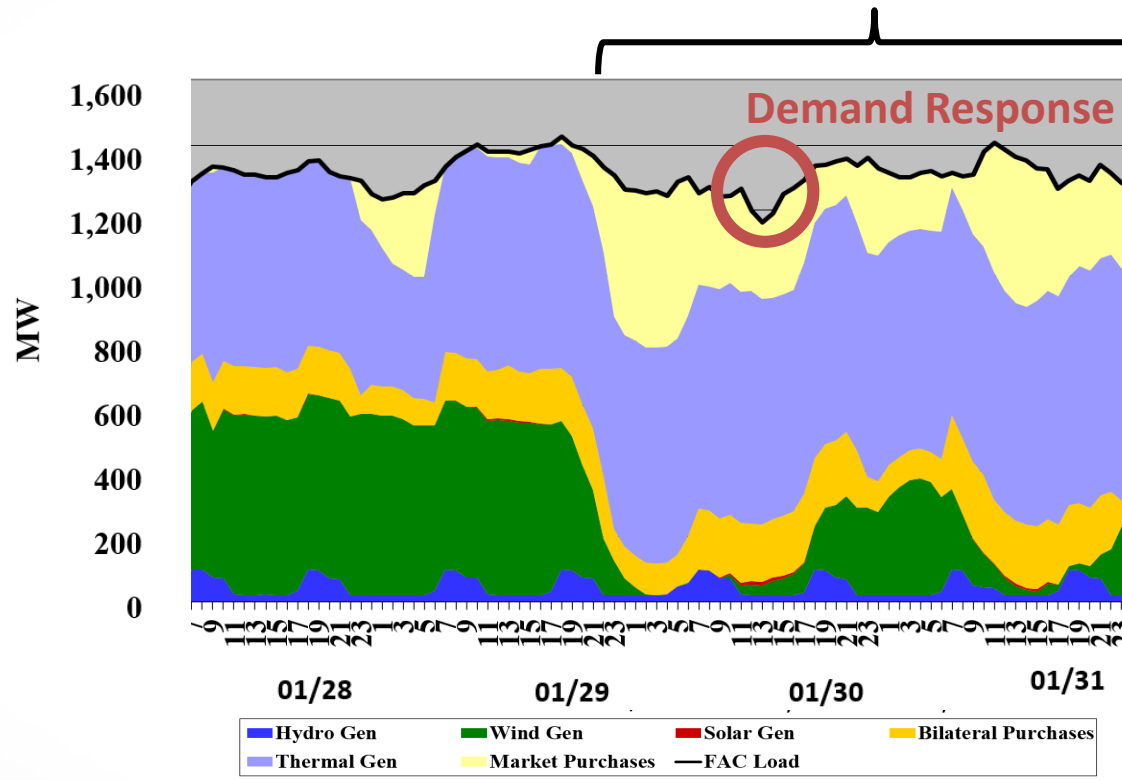
Deployed and self-scheduled LMRs, school/business closings, and other voluntary load management across the North/Central Region aided in dampening demand below expectations



* Does not include impact of closings not accounted for in forecast

2019 POLAR VORTEX: MP SYSTEM

Wind Reduction
Plus Cold Temps = *Stressed System*



- Renewable generation sources provided minimal support
 - Cold weather lock out on 2 wind farms
- Thermal and flexible generation resources “All On” required
 - Two units not available due to cold weather impacts

Minnesota Power Supply Portfolio