



2024 Lake Country Power District Meetings



2024 District Meetings

Derek Howe
Chief Operations Officer





- Substations
- System Improvement
- Aged Infrastructure

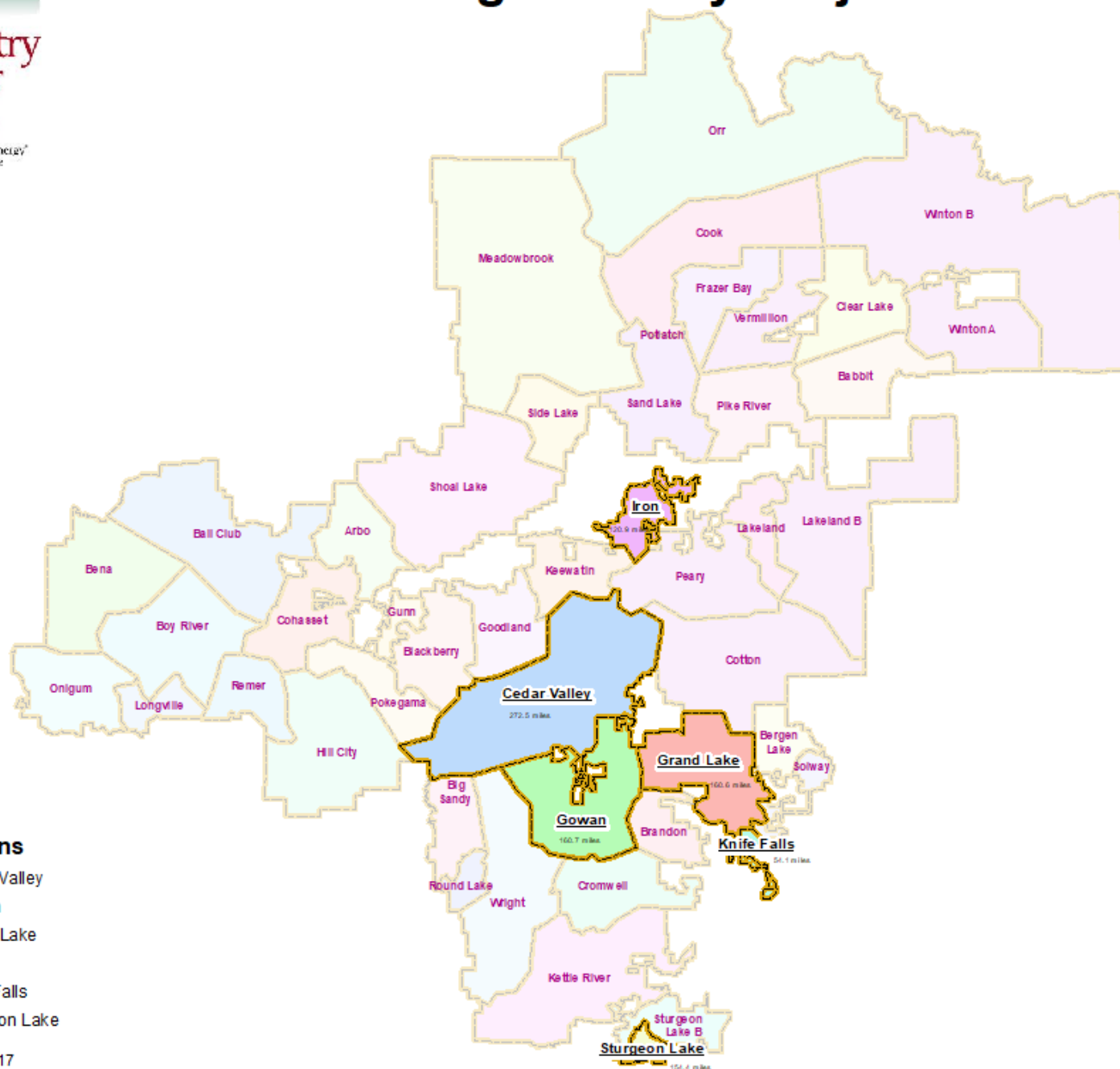
2024 Right of Way Projects

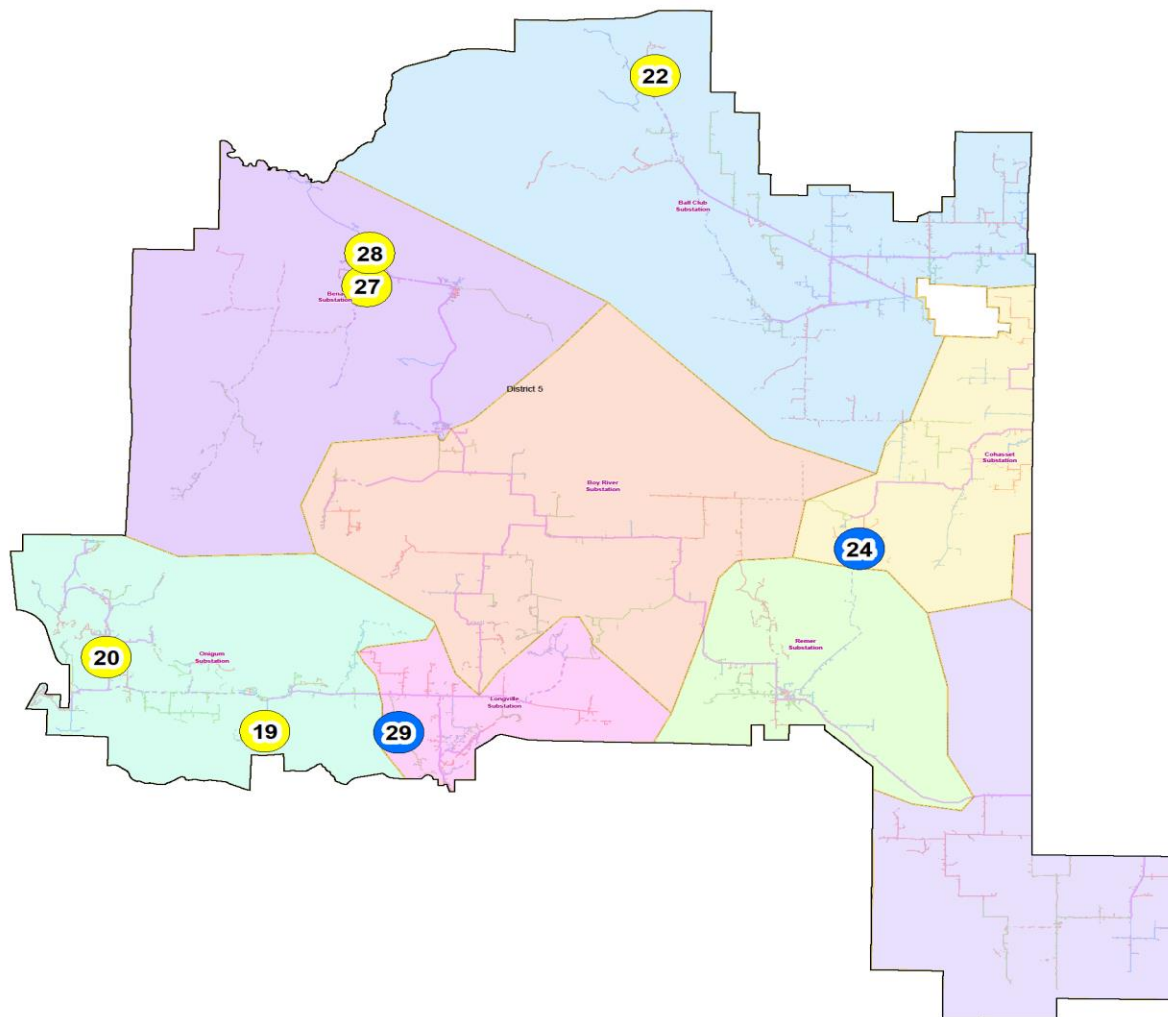


Substations




-  Cedar Valley
-  Gowan
-  Grand Lake
-  Iron
-  Knife Falls
-  Sturgeon Lake

Total miles: 917



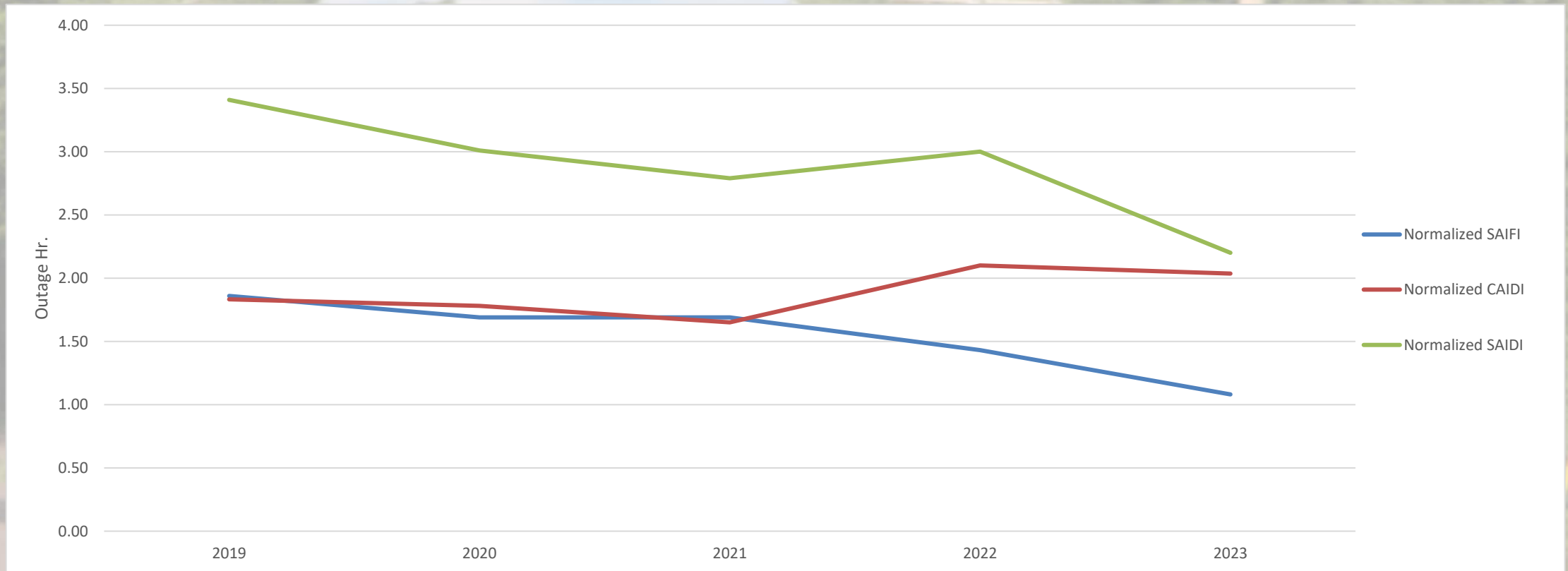


Projects

-  Substations
-  System Improvement
-  Aged Infrastructure

2024 System Projects District 5

Reliability Measures



Reliability O&M



Tree Crews & Construction Crews

- Tree Crews
 - Completed 968 Member Tree Orders and 24 Tree Requests
 - Removed 350 Danger Trees (DT's)
 - Completed 29 Work Orders
- Construction Crews
 - Completed 40.3 miles of OH line rebuilds
 - Came in \$250,000 under-budget
 - Would not have been able to contract out this body of work in 2024

In-house Boring Crew

- **Lead operator and operator**
 - **Only body of work that we are 100% reliant on**
 - **Expect to complete 32,000 feet/year**
 - **Cost savings of \$8.62/ft over contractor rates (48% savings)**
 - **Late 2024/early 2025**

Grants

- Bipartisan Infrastructure Law or IIJA (Infrastructure Investment and Jobs Act)
- GRIP (Grid Resilience and Innovation Partnerships) Round 2
 - 66% grant funded
 - \$12 million to rebuild old lines RASP (Resilience Assessment Systems Prediction Tool)
 - \$8 million for substation hardening (UG substations)
- New ERA (Empowering Rural America)
 - \$1.4 million for load control receivers (25% \$5.6 million ask)



2024 District Meetings

Dan Cooper
Key Accounts and Business
Development Manager

Lake Country Power Programs and Demand Side Management





The Basics:

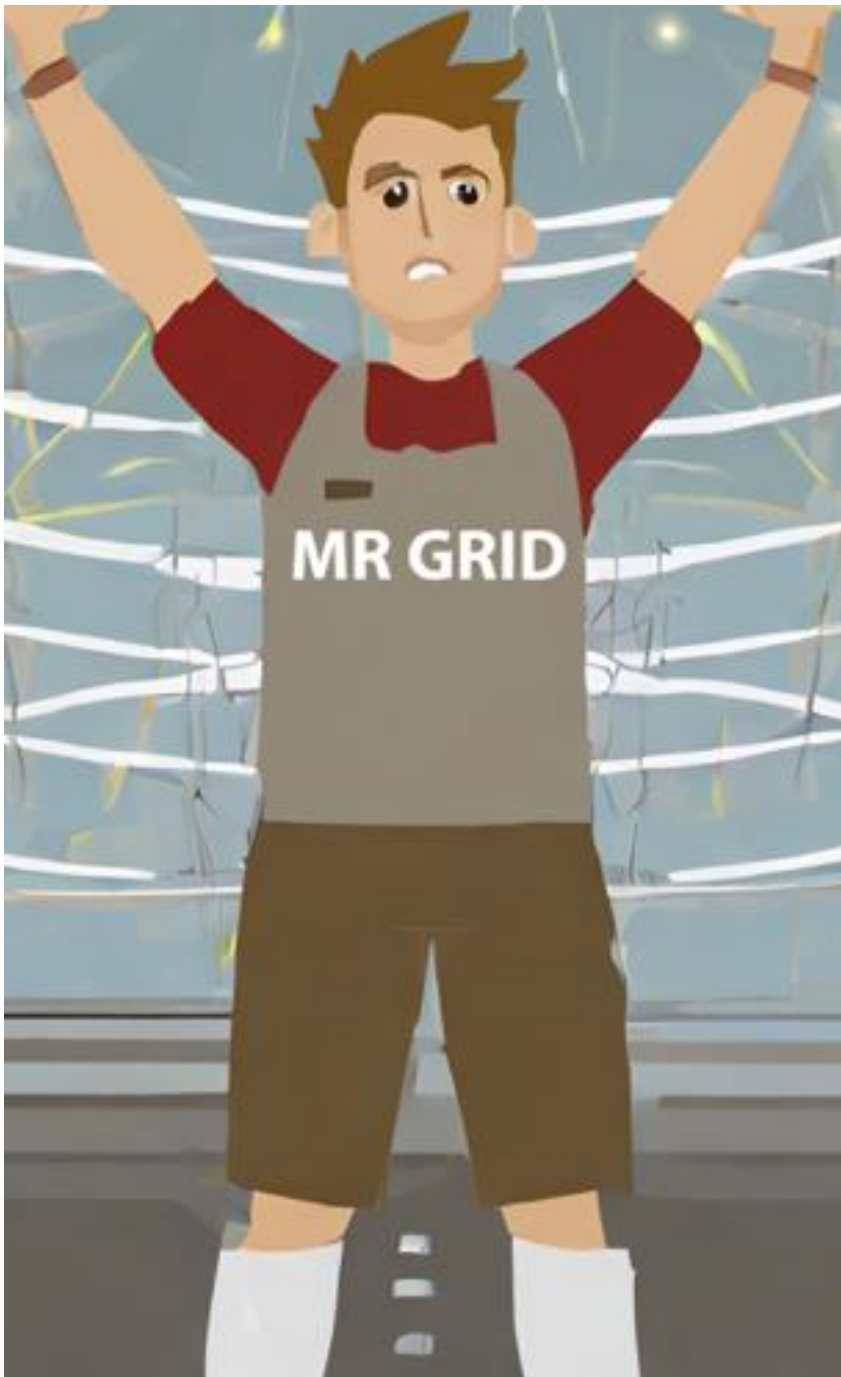
What is Demand?

What is Demand Side Management?

What is Demand?

Meet Mr. Grid





The Grid = The Muscle

Power Generation Plants,
= Transmission Lines, Substations,
Distribution Lines, Transformers

.... The Muscle

Demand = The Weight



System Electric Load



... The Weight

What adds Weight?

Electric loads add weight to the lift



Air Conditioner, Water Heating, Space Heating, Electric Motors, Electric Vehicles, Industrial Processes



Peak Demand

A *Heavy* lift for Mr. Grid



Very **HOT** Weather

Lots of **A/C** Load

Very **COLD** Weather

Lots of **Heat** Load

The **heavier** the lift (Demand), The **harder** the muscles (The Grid) work
the more \$\$\$\$ it costs to meet the lift (Demand)



To meet the demand and lift the weight we can:

Add More Muscle - \$\$\$\$\$\$\$\$\$\$\$\$\$\$

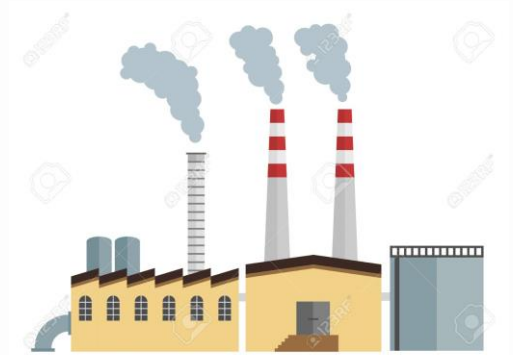
(Larger Lines, Substations, Generation Plants etc...)

Or

Manage the Demand

(Referred to as Demand Side Management)

Demand Side Management Programs — “LCP Money Saving Programs”



Commercial & Industrial Interruptible Programs

Off-peak
Electric Thermal
Storage



Off-Peak Heating



Dual Fuel
Heating Program

Dual Fuel Heating



100 gallon
Off-peak
Water Heater

**Water Heating
Off Peak and Interruptible**

Central/Ducted
Air Source
Heat Pump



Cycled Air Conditioning

Off Peak - Lift the weight later

(11 PM- 7 AM)



Off-peak
Electric Thermal
Storage



Off-Peak Heating



Off-Peak Charging



**Off-Peak
Water Heating**



Dual Fuel, Cycled A/C and Interruptible Water Heating

Lift the weight, then take a break



Dual Fuel
Heating Program

Dual Fuel Heating



**Cycled
Air Conditioning**



**Interruptible
Water Heating**

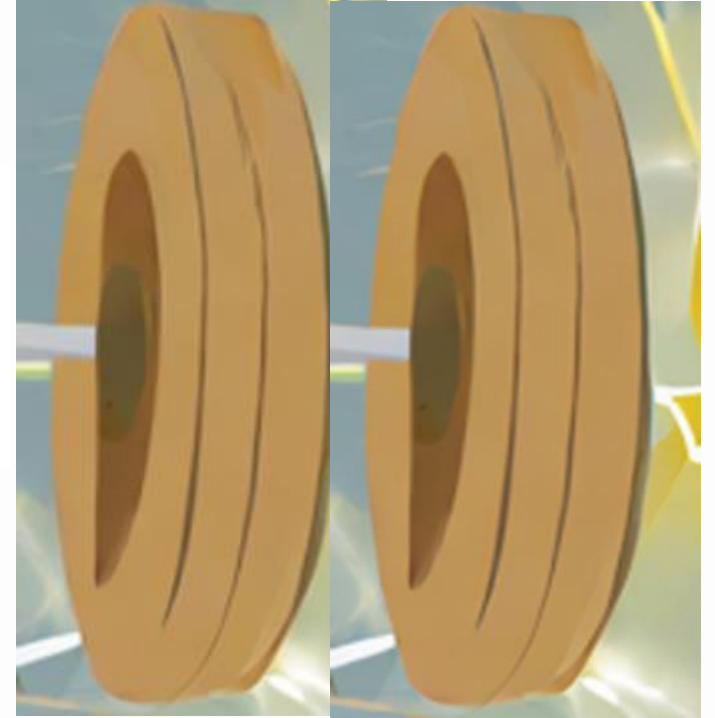


Commercial & Industrial Interruptible

Take the afternoon off lifting- maybe just stretch a little



Can switch to generator or reduce processes to partially or fully interrupt electric usage



How this affects LCP Members



- Members directly participating in the programs benefit from a discounted electric rate and rebate incentives
- “I don’t participate- how does this affect me?” These programs allow LCP to minimize wholesale power costs by avoiding high-cost peak pricing which allows for downward pressure on the entire memberships rates.
- Demand side Management also reduces the need for expensive grid upgrades. Without demand side management, the grid would need to be build significantly more robust leading to higher energy costs.



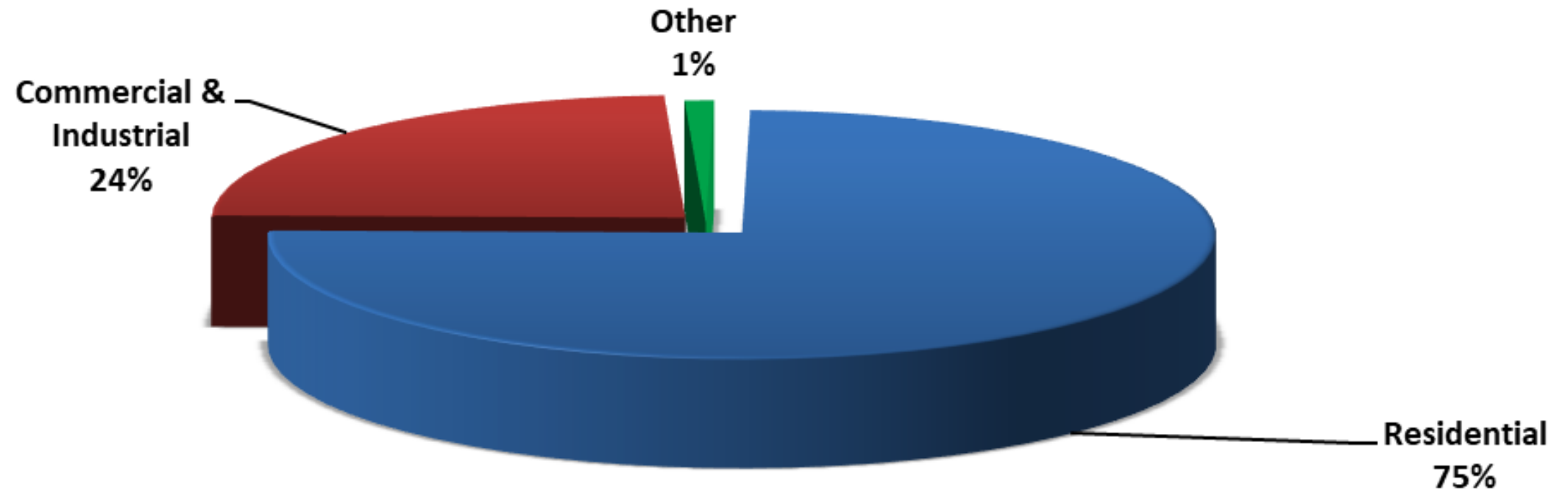
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Development Manager
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2024 District Meetings

**Tracy Peterson Wirtanen
Chief Financial Officer**

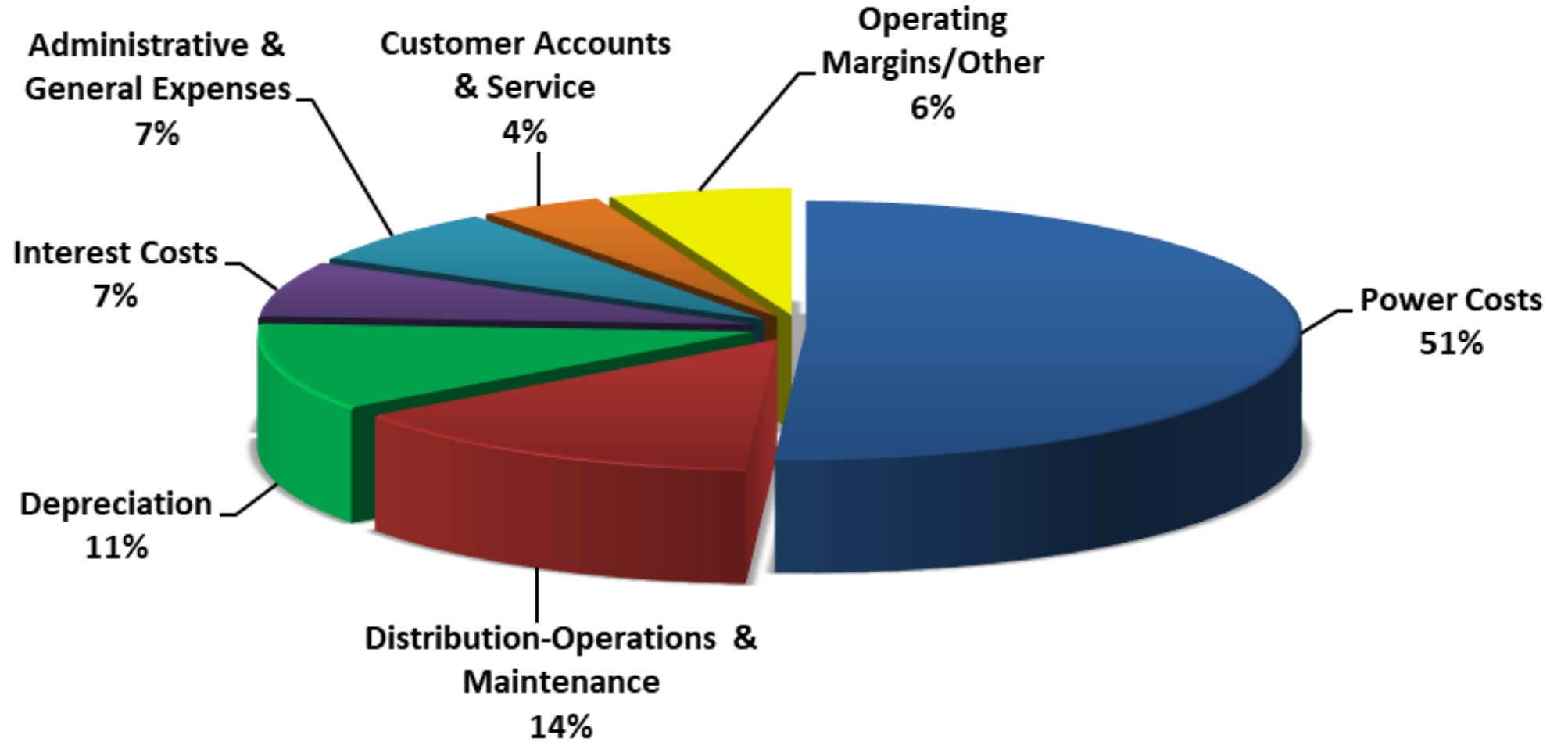
2023 Sources of Revenue



\$106 Million

Preliminary financial results

2023 Uses of Revenue



Cost of Electric Service - \$99 Million

Operating Margins - \$7 Million

Preliminary financial results

2024

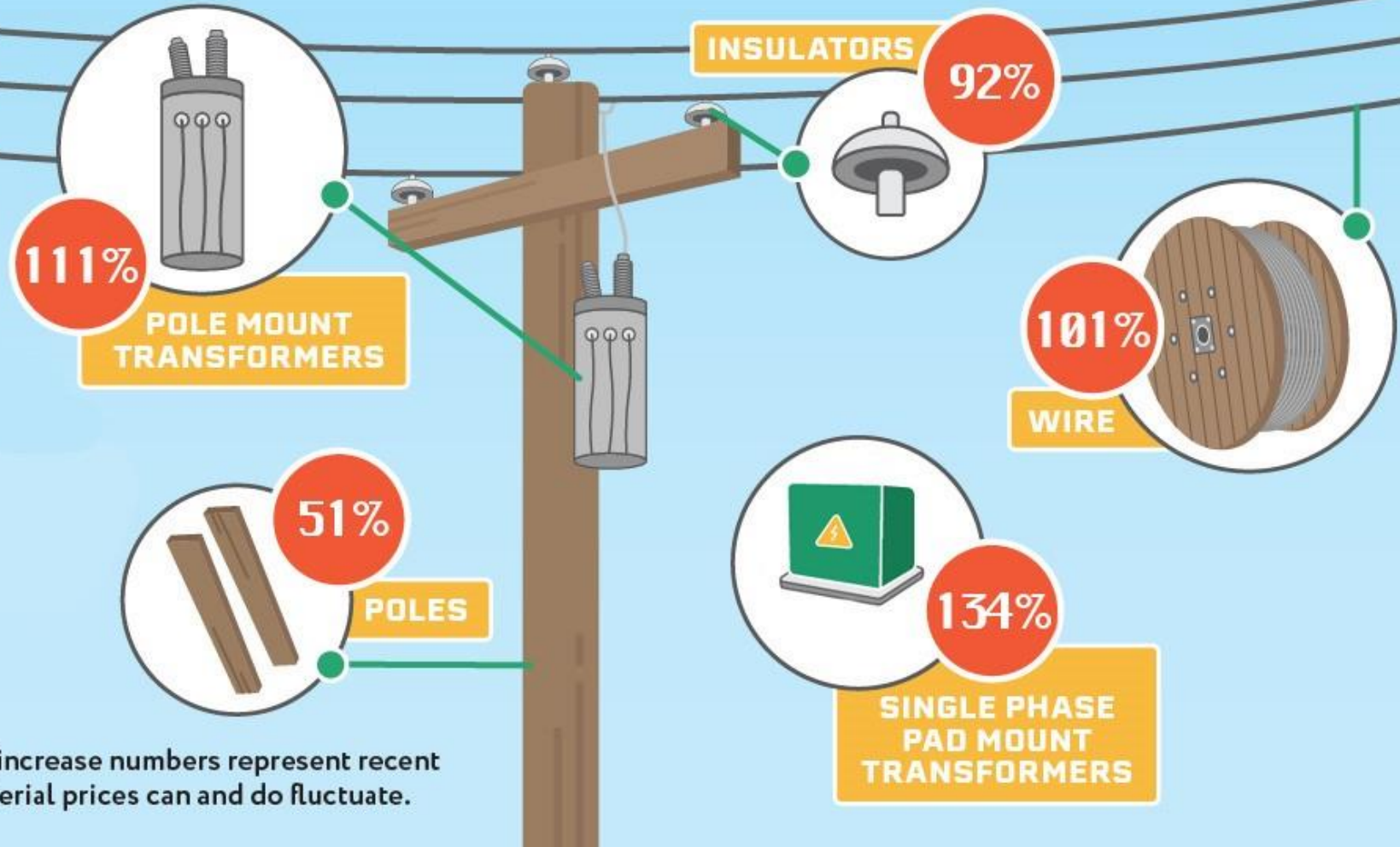
Looking at the year ahead...

- ❖ **No anticipated rate changes for residential or commercial members in 2024**

- Includes load management programs
- Utilizes \$5M revenue deferral from 2023
- Continue to experience increasing costs in many areas
 - Wholesale power cost increase in 2024
 - Rising interest rates on CWP borrowing
 - Material & equipment costs – some stability but higher costs anticipated in 2024



THE RISING COST OF ELECTRIC UTILITY MATERIALS



Disclaimer: Material price increase numbers represent recent averages in our region. Material prices can and do fluctuate.

A little change makes a BIG difference



- For less than \$1/month, you can make a difference
 - “Round Up” your monthly electric bill
- Over \$210,000 donated in 2023
 - Grants awarded to 125 different organizations
- Over \$3.2 Million donated since inception of LCP program - October 2004



www.lakecountrypower.coop/operation-round-upr

LakeCountry Power

A Touchstone Energy® Cooperative



Cybersecurity



NRECA
America's Electric Cooperatives



2024 District Meetings

**Mark Bakk
General Manager**

Legislative and Regulatory



Opening Remarks

- Some of what I will say is **CRITICAL** of legislators and regulators, please do not confuse it with being **POLITICAL**
- Reliability and affordability are not partisan issues
- It may seem a bit **NEGATIVE** or **PESSIMISTIC** at times, it is **REALISTIC** and fact-based
- These conversations need to be had and my goal is to inform and educate our membership
- We are at a point where policy needs to meet reality if we are going to be successful

2024 Legislative Session – What to Expect

- Election year:
 - President
 - U.S. House
 - Senator Klobuchar
 - Entire State House
- Governor and Leadership main focus is a bonding bill
- While we don't expect anything like last session, we will likely have to play defense on a number of issues (additional renewable and energy storage mandates, diversity mandates, carbon tax, etc.)
- Advocate for Permitting Reform
- Advocate to lift the Nuclear Moratorium

Carbon-Free by 2040



Carbon-Free by 2040


- Energy in Minnesota must be:
 - 80% carbon-free by 2030 (60% for cooperatives and municipals)
 - 90% carbon-free by 2035
 - **100% carbon-free by 2040**
- Increase in existing Renewable Energy Standard (RES)
 - 55% of energy in MN must be from renewable sources by 2035
 - Currently ~30% renewable – Ahead of current “25% by 2025” RES

Carbon-Free by 2040

- Concerns
 - Reliability
 - Affordability
 - Local Control



Reliability

- Increased reliance on variable resources (wind and solar)
 - Technology to fully transition is not yet developed, much less deployed
 - MISO (Midcontinent Independent System Operator) and NERC (North American Electric Reliability Corporation) issued warnings prior to and since this legislation regarding potential energy shortfalls
 - MISO studies have shown that when the grid exceeds 40% renewables, it becomes exponentially unreliable
- 

Reliability in Extreme Cold

- MISO Generation Mix
- January 18, 2024 @ 5:20am
 - 44% - Coal
 - 38% - Natural Gas
 - 10% - Nuclear
 - 5% - Wind
 - 3% - Other (mostly hydro)
 - 0% - Solar

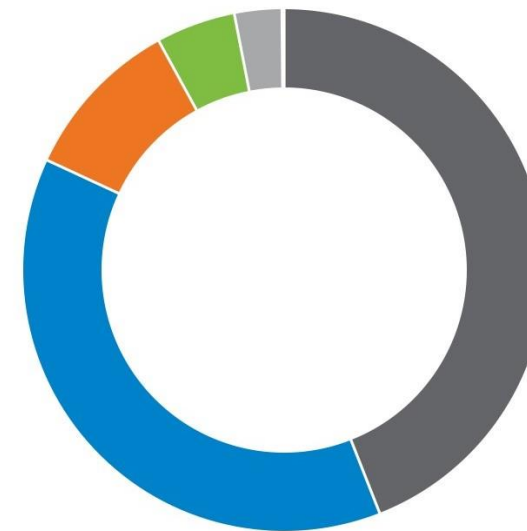
Fuel Mix

18-Jan-2024 - Interval 06:20 EST

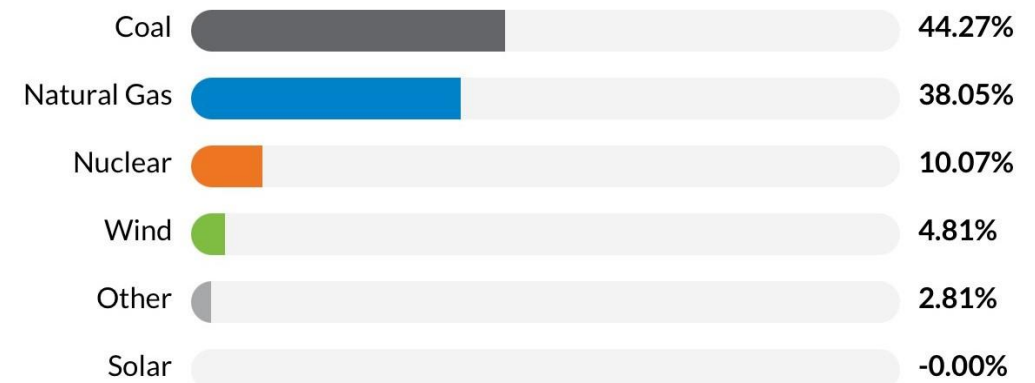


Total Megawatts

85,480 MW



- Coal - 37,850 MW
- Natural Gas - 32,528 MW
- Nuclear - 8,608 MW
- Wind - 4,111 MW
- Other - 2,400 MW
- Solar - -1 MW



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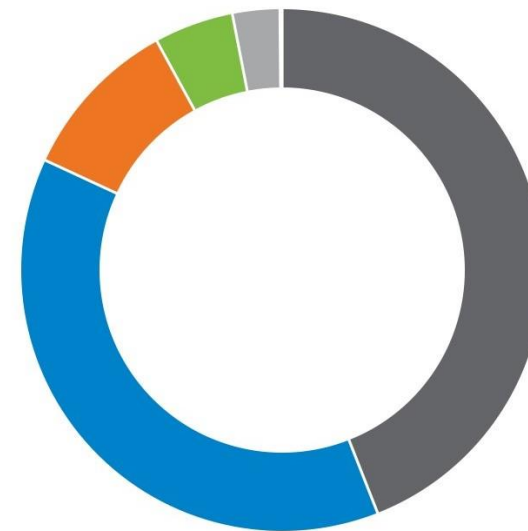
Fuel Mix

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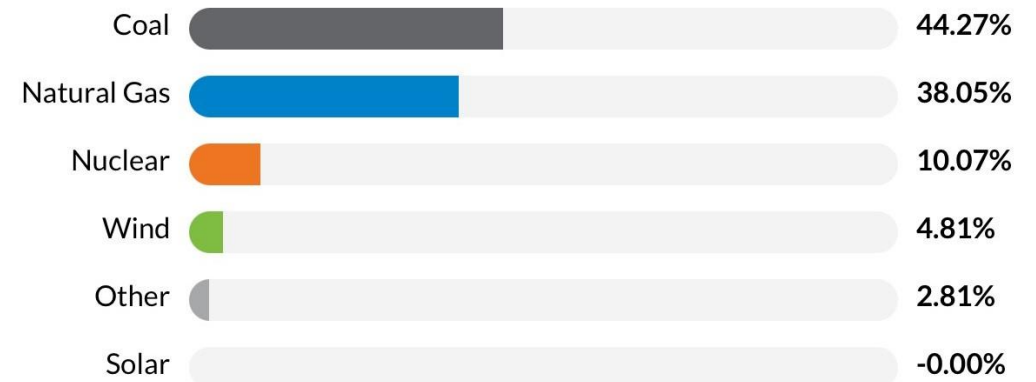


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Intermittent

- MISO Generation Mix
- January 24, 2024 @ 10:55am
 - 43% - Coal
 - 40% - Natural Gas
 - 13% - Nuclear
 - <1% - Wind
 - 3% - Other (mostly hydro)
 - 1% - Solar

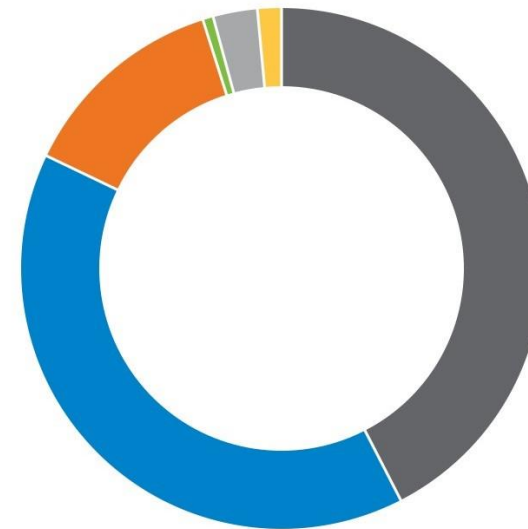
Fuel Mix

25-Jan-2024 - Interval 11:55 EST

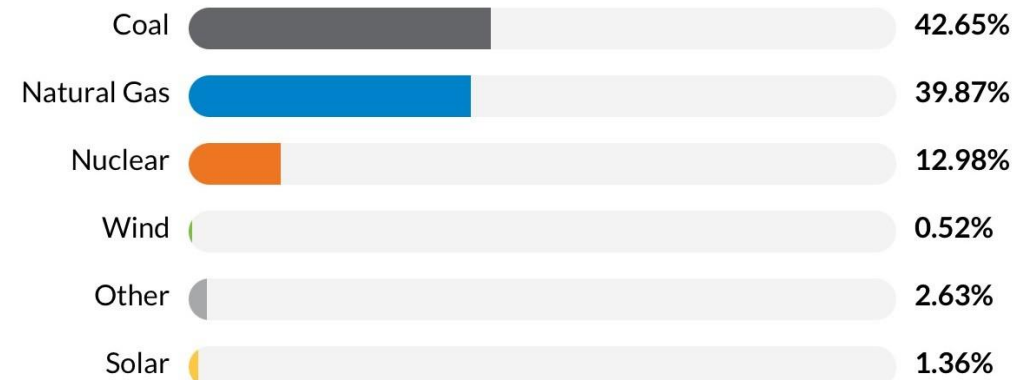


Total Megawatts


69,617 MW




- Coal - 29,700 MW
- Natural Gas - 27,760 MW
- Nuclear - 9,036 MW
- Wind - 359 MW
- Other - 1,830 MW
- Solar - 944 MW



Affordability

- Will require massive buildout of new infrastructure
 - Wind turbines
 - Solar arrays
 - Transmission lines to get the energy to the load
 - Due to unpredictability, this must be over-built and geographically dispersed over a wide area
 - Existing facilities will be retired early – when they are still providing value and are still being paid for by ratepayers
- 


Affordability (continued)

- Economic forces are already driving up electric rates
 - Interest Rates
 - Supply Chain Issues
 - Geo-political Events
 - Supply vs. Demand – Basic Economics
 - Electrification of economic sectors could exponentially increase the **DEMAND** for energy (Transportation (EVs), Home Heating, Appliances, Lawn and Garden Equipment, etc.)
 - This legislation places significant hurdles on the **SUPPLY** of energy
 - Result is an increase in **PRICE**.
- 

Local Control

- Cooperative Governance
 - Local, Democratically-elected Board of Directors
 - Accountable to the Membership
- This legislation requires cooperatives to seek approval from the MN Public Utilities Commission (PUC) for any potential “off-ramps” related to affordability and reliability
 - 5-person commission, appointed by the Governor, in St. Paul will decide what is affordable and what is acceptable reliability for Minnesotans

Other Comments

- Blackouts in MN are a major public safety concern. If this happens in the winter; property damage will occur, and people may die
 - Battery technology doesn't yet exist at a scale necessary and would still need to be charged by some reliable source to be viable
 - Minnesota's utilities have reduced carbon dioxide emissions more successfully than any other state
 - 5% renewable in 2005, 30% renewable today, projected to be 50% by 2035
 - 65% coal generation in 2005, 26% coal today, projected to be 5% by 2035
 - Complete elimination of MN utility carbon emissions does not create a measurable impact on global temperatures
- 

2023 Long-Term Reliability Assessment

December 2023

[Infographic](#) | [Video](#)



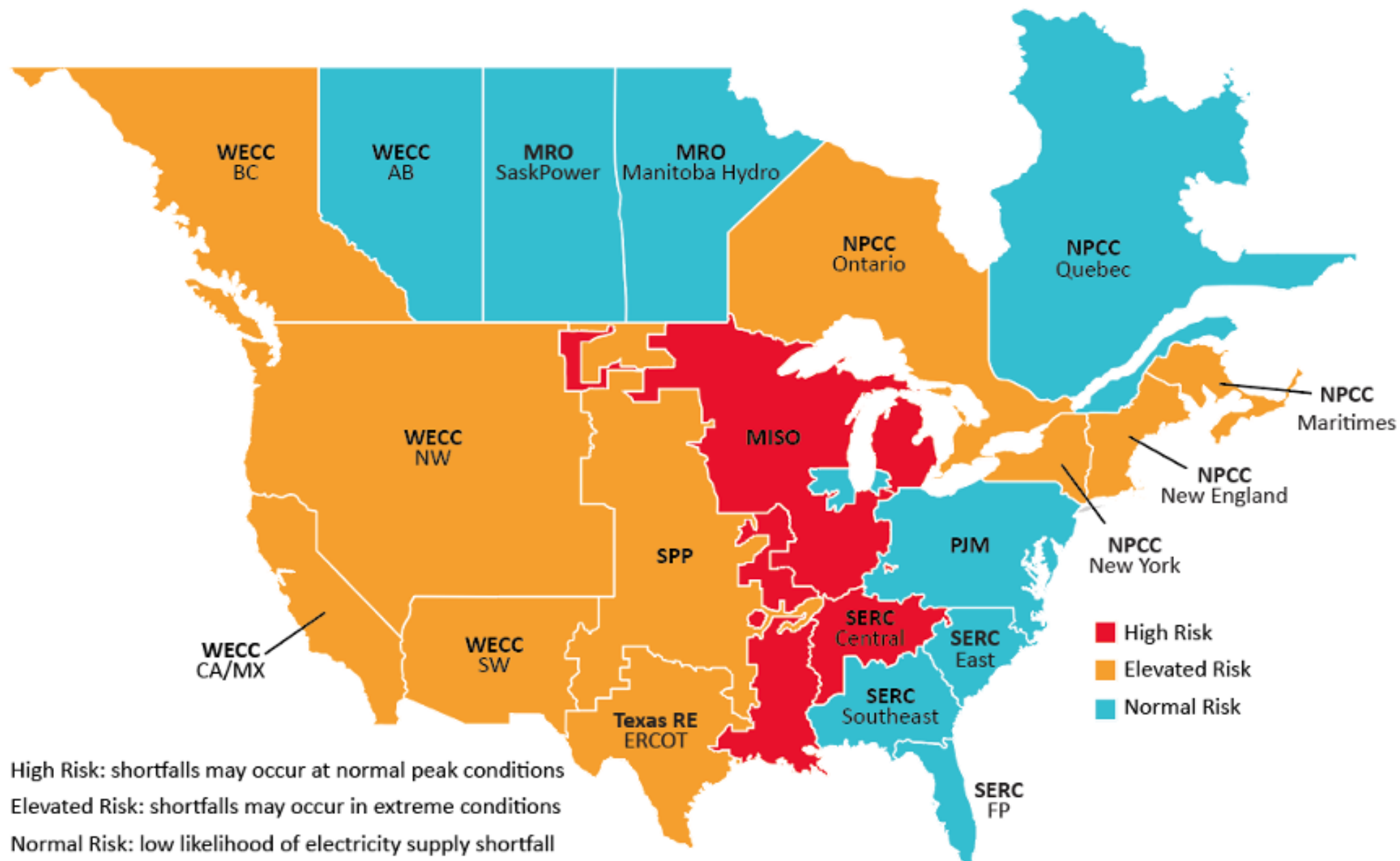
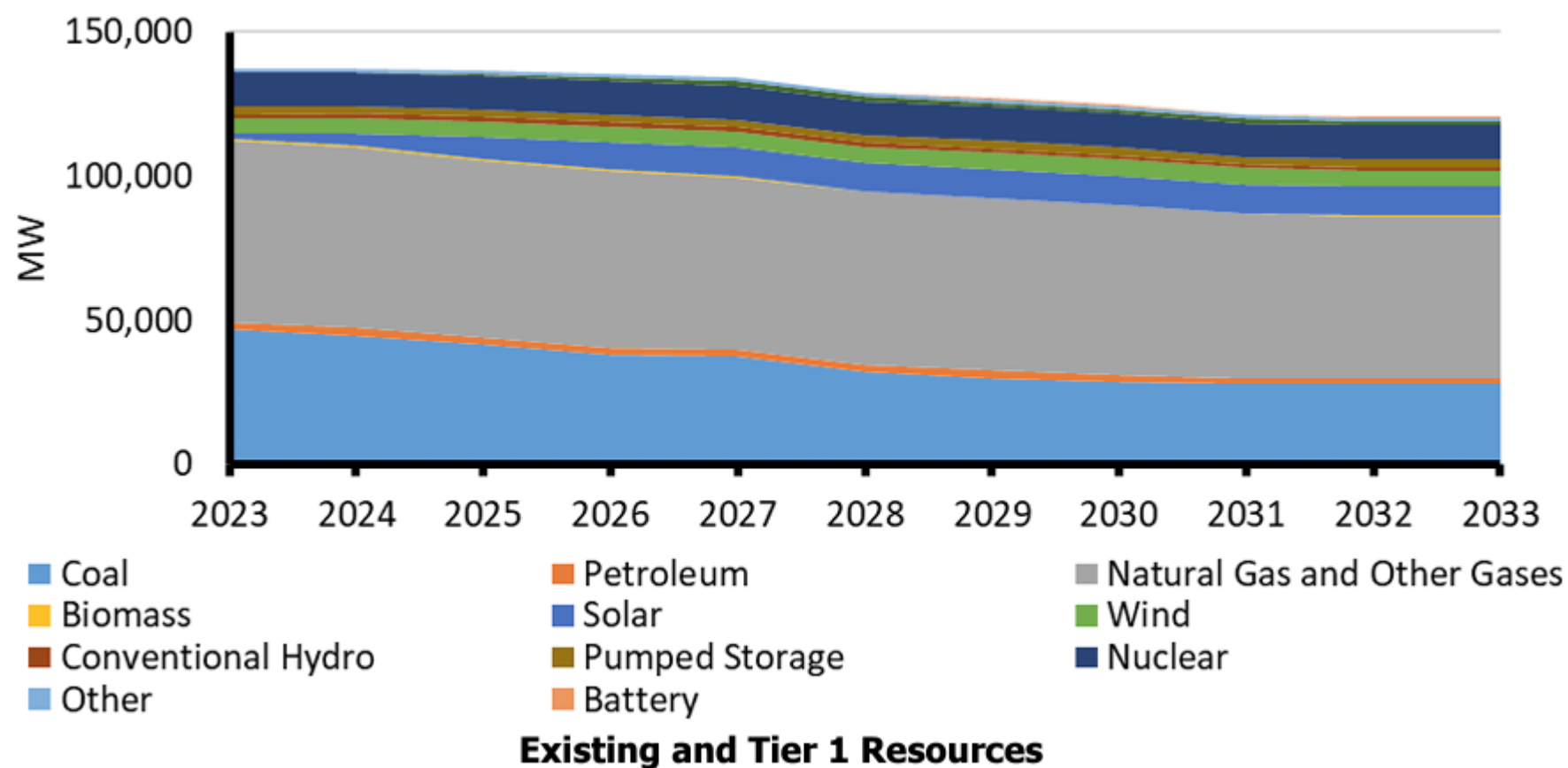


Figure 1: Risk Area Summary 2024–2028⁸

NERC Assessment - MISO

- “...beginning in 2028, MISO is projected to have a 4.7 GW shortfall if expected generator retirements occur despite the addition of new resources that total over 12 GW.”



EPA's proposed Power Plant Rule



EPA Power Plant Rule

- On May 23, 2023, the EPA released long-anticipated draft rules aimed at both new and existing coal and natural gas power plants.
- NRECA (or nationwide trade organization) has filed comments in opposition and is urging the agency to withdraw the proposal in its entirety.
- Final rule is expected in spring of 2024.

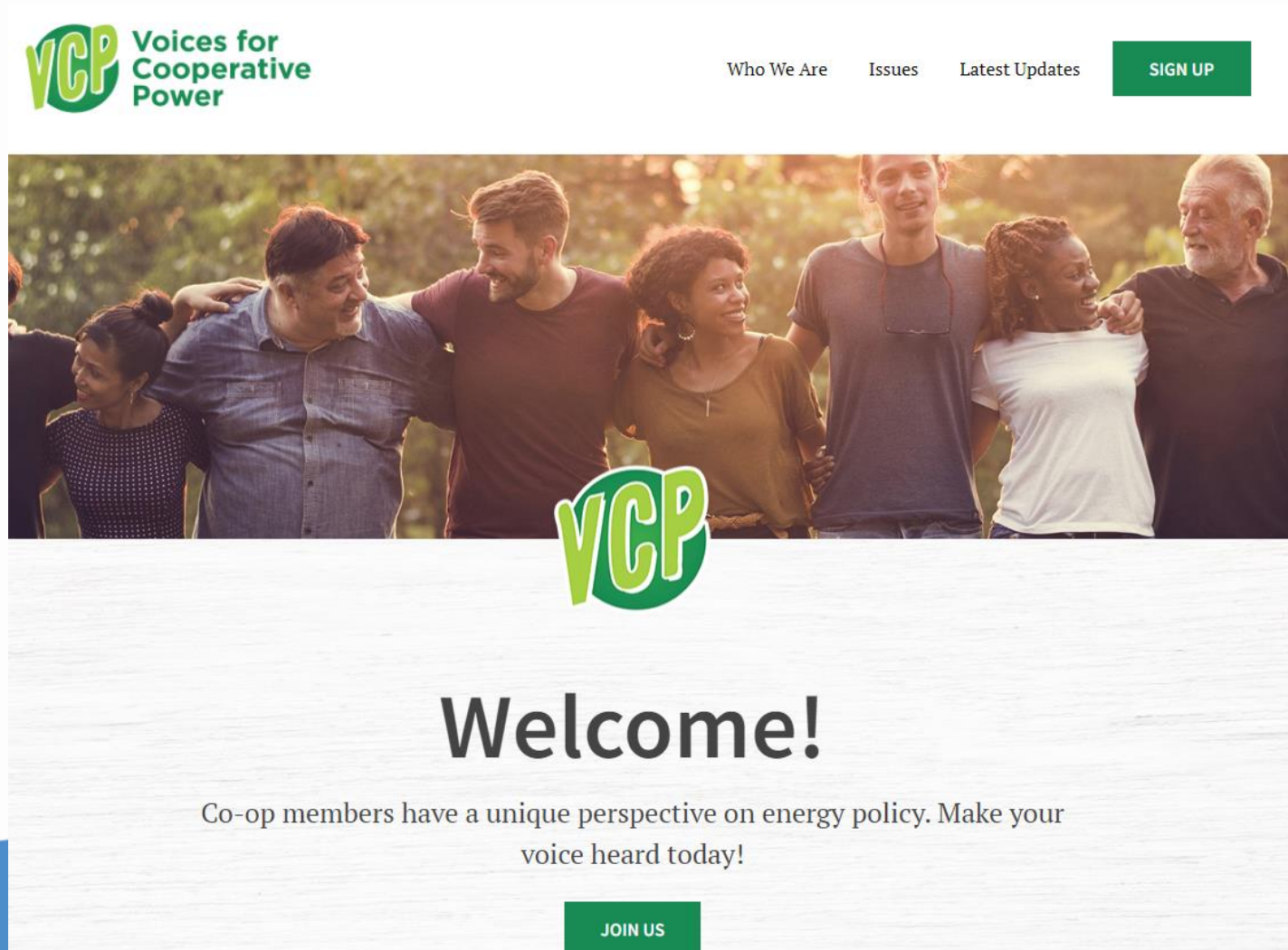
EPA Power Plant Rule (cont.)

- NRECA Comments:

- The proposal hinges on the adoption of nascent technologies: clean hydrogen and carbon capture and storage. While both technologies are promising, they are not widespread or commercially available and have not been “adequately demonstrated” as required by the Clean Air Act.
- The proposal violates the Clean Air Act because EPA asserts vast new authority without a clear statement from Congress.
- The proposal rules contain timelines that are unrealistic and unachievable. The deadlines endanger new and existing natural gas plants and all but ensure coal units will opt to shut down by 2035. The requisite infrastructure cannot be expected to be in place due to cost, supply chain challenges, permitting, public opposition, land ownership/access and more.
- The proposed rules threaten reliability and affordability.

What can we do about it?

- www.voicesforcooperativepower.com



A Word of Caution



- Solar developers are knocking on members' doors
- Asking to sign contracts with very short opt-out periods in the fine print (3-5 days in some cases)
- Unrealistic expectations are being provided to our members as well as inaccurate statements about our electric rates
- PLEASE CALL US before you sign (or click) anything so that we can help you better understand what to expect

Power Supply Tour

- **Bus tour** to Great River Energy in Maple Grove
- **August 27 – 29, 2024**
- See part of the Great River Energy headquarters
- See the ACES Northern Trading Center where electricity is sold 24-hours a day in a live market
- See the Elk River Peaking Station
- Group outing at Target Field for a Twins baseball game on August 27
- **Registration deadline is July 24** with Tami Zaun
- 2 Nights at Staybridge Suites, Maple Grove
- \$155 per person





Saturday, May 18, 2024

- McCarthy Beach State Park, Side Lake
- 10 a.m. – 2 p.m.
- Lunch provided for volunteers
- Contact Tami Zaun by May 14 with RSVP: 800-421-9959, ext. 7152

Volunteers are needed to help spruce up the state park for the summer tourism season. Pick up litter, rake leaves & pine needles, clean camp sites, gather downed limbs, clean the shoreline, etc.

Volunteers do not need a state park pass on May 18.
Come, enjoy the day... and get your “GreenTouch” on!



2024 Annual Membership Meeting

April 25, 2024

Merritt Elementary
School
Mountain Iron



Questions/Comments



2024 Lake Country Power District Meetings

Lake Country Power - Minnesota Power
Total Bill Comparison
February 2024

	LCP		MP		
General Service					
1,077.75 kWh					
Fixed Charge		\$ 48.00		\$ 9.00	
Energy Charge	\$ 0.13590	\$ 146.47	\$ 0.09403	\$ 101.34	} \$ 0.15903
Fuel and Purchased Energy			\$ 0.03671	\$ 39.56	
Interim Rate Adjustment				\$ 20.44	
Low-Income Affordability Program Surcharge				\$ 2.41	
Minnesota Policy Adjustment			\$ 0.00709	\$ 7.64	
MN Sales Tax 6.875%	6.875%	\$ 13.37	6.875%	\$ 12.40	
St. Louis Cty Sales Tax 0.5%	0.500%	\$ 0.97	0.500%	\$ 0.90	
Total General Service		\$ 208.81		\$ 193.69	\$ 15.11
Dual Fuel					
2,312.45 kWh					
Fixed Charge		\$ -		\$ 6.00	
Energy Charge	\$ 0.07080	\$ 163.72	\$ 0.06916	\$ 159.93	} \$ 0.12769
Fuel and Purchased Energy			\$ 0.03671	\$ 84.89	
Interim Rate Adjustment				\$ 34.07	
Minnesota Policy Adjustment			\$ 0.00709	\$ 16.39	
MN Sales Tax 6.875%	0.000%	\$ -	0.000%	\$ -	
St. Louis Cty Sales Tax 0.5%	0.000%	\$ -	0.000%	\$ -	
Total Dual Fuel		\$ 163.72		\$ 301.28	\$ (137.56)
Total Monthly Bill		\$ 372.53		\$ 494.97	\$ (122.44)