

# 2023 SPP RESOURCE ADEQUACY REPORT

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SPP Resource Adequacy

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### 1. EXECUTIVE SUMMARY<sup>1</sup>

Attachment AA<sup>2</sup> of the Southwest Power Pool, Inc. (SPP) Open Access Transmission Tariff (Tariff) requires a Load Responsible Entity (LRE) to maintain adequate capacity to meet its Resource Adequacy Requirement for the upcoming Summer Season. Maintaining appropriate planning reserves ensures that SPP will have sufficient capacity to serve peak demand obligations. The purpose of this report is to provide the status of each LREs compliance with the Resource Adequacy Requirement as well as an SPP Balancing Authority (BA) Area outlook for the 2023–2028 Summer Seasons.

All LREs have complied with the Resource Adequacy Requirement for the 2023 Summer Season.

The Planning Criteria defines the Planning Reserve Margin (PRM) as 15% for each LRE, unless the LREs capacity is comprised of at least 75% hydro-based generation, in which case the PRM for the LRE is 9.89%.<sup>3</sup> For the 2023 Summer Season, there are sixty (60) LREs with a 15% PRM requirement and one (1) LRE with a 9.89% PRM requirement.<sup>4</sup> The SPP BA Area Planning Reserve Margin is 20.1% for the 2023 Summer Season and decreases to 9.7% by planning year 2028. The SPP BA Area Planning Reserve Margin determined from the 2023 Summer Season submissions has decreased 1.9% from the 2022 Summer Season when the Planning Reserve Margin was 22.0%. The slight decrease is mainly due to the increase in the aggregated LREs Peak Demand compared to the previous year's forecast.

The 2024 to 2028 yearly values do not reflect all possible future generation currently being analyzed in the Generation Interconnection (GI) Queue, reoccurring Deliverable Capacity contracts used to meet the Resource Adequacy Requirement, modification to the PRM, and the effects of the Effective Load Carrying Capability (ELCC) and Performance Based Accreditation (PBA) policies.

<sup>&</sup>lt;sup>1</sup> Terms used throughout this report are as defined in the Tariff, SPP Planning Criteria, or Resource Adequacy Workbook Instruction Manual.

<sup>&</sup>lt;sup>2</sup> Link to Attachment AA: <u>https://spp.org/documents/58597/attachment%20aa%20tariff.pdf</u>

<sup>&</sup>lt;sup>3</sup> Link to SPP Planning Criteria: <u>https://www.spp.org/spp-documents-filings/?id=18162</u>

<sup>&</sup>lt;sup>4</sup> Western Area Power Administration – Upper Great Plains (UGP) Region

#### 2. ABOUT SPP

The SPP<sup>5</sup> BA Area covers 552,885 square miles and encompasses all or parts of Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas and Wyoming. The SPP footprint has more than 72,000 miles of transmission lines, 949 generation resources, 5,180 transmission-class substations, and serves a population of 19 million people.



Figure 1: Map of SPP Balancing Authority Area

<sup>&</sup>lt;sup>5</sup> Link to SPP website: <u>https://www.spp.org/about-us/</u>

#### 3. SPP 2023 - 2028 SUMMER SEASON OUTLOOK

The SPP BA Area Planning Reserve Margin is 20.1% for the 2023 Summer Season and decreases to 9.7% by planning year 2028. The SPP BA Area Planning Reserve Margin determined from the 2023 Summer Season submissions has decreased 1.9% from the 2022 Summer Season where the Planning Reserve Margin was 22.0%. The total capacity for the SPP BA has been determined to be 64,822 MW in 2023 and decreases to 63,149 MW in 2028. The accredited amount of purchased Deliverable Capacity utilized by LREs to meet their Resource Adequacy Requirement is 2,311 MW for the 2023 Summer Season and 94 MW for the 2024 Summer Season, in which accredited wind accounts for 667 MW in the 2023 Summer Season and 80 MW in the 2024 Summer Season. For the 2023 Summer Season, the reliance on Deliverable Capacity has increased by 1,283 MW compared to the 2022 Summer Season.

The 2024 to 2028 yearly values do not reflect all possible future generation currently being analyzed in the Generation Interconnection (GI) Queue, reoccurring Deliverable Capacity contracts used to meet the Resource Adequacy Requirement, and the effects of the Effective Load Carrying Capability (ELCC) and Performance Based Accreditation (PBA) policies.



Figure 2: SPP BA Area Planning Reserve Margin Summary

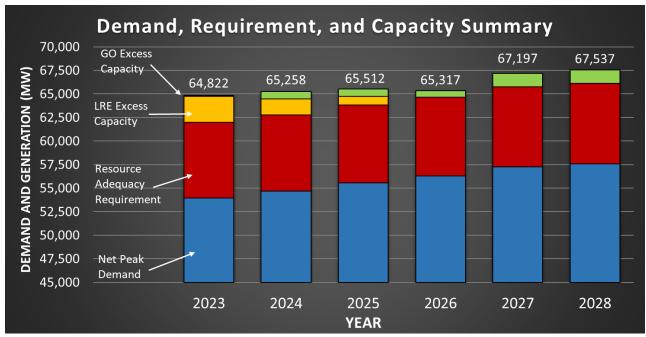


Figure 3: Demand, Requirement, and Capacity Summary

Based on LRE and GO 2023 data submittals, by the 2026 summer season, no excess capacity from LREs will be available and by 2027 summer the SPP system as a whole will not be able to meet the 15% PRM. The sum of LRE and GO excess in 2027 and 2028 are negative values. In 2026, the LRE excess is being shown as -166 MW and the GO excess is 690 MW. In 2027, the LRE excess is -2,964 MW and the GO excess is 1,436 MW. Thus the total Capacity in 2027 is 64,233 MW. In 2028, the LRE excess is -4,389 MW and the GO excess is 1,436 MW. Thus the total Capacity in 2028 is 63,149 MW.

Southwest Power Pool, Inc.

Table 1: SPP 2023 to 2028 Summer Season Outlook

Demand Summary (Units – MW)	2023	2024	2025	2026	2027	2028
Total LRE Forecasted Net Peak Demand	53,954	54,661	55,575	56,270	57,256	57,552
Controllable and Dispatchable Demand Response <sup>6</sup>	829	1,353	1,489	1,772	1,798	1,807
Energy Efficiency and Conservation	249	324	384	435	480	517
Stand-by Load Under Contract	25.4	25.4	25.4	25.4	25.4	25.4
Capacity Summary (Units – MW)	2023	2024	2025	2026	2027	2028
Total Capacity <sup>7</sup>	64,822	63,380	63,357	61,707	59,630	57,430
Capacity Resources <sup>6</sup>	64,076	64,746	64,980	64,765	63,740	62,651
Confirmed Retirements	122	382	382	382	382	382
Unconfirmed Retirements	0	1,878	2,155	3,610	4,603	5,719
Other Capacity Adjustments – Additions	0	0	0	0	0	0
Other Capacity Adjustments – Reductions	128	128	128	128	128	128
External Firm Capacity Purchases	259	304	324	344	344	349
External Firm Capacity Sales	617	592	592	592	592	592
External Firm Power Purchases	1,355	1,355	1,354	1,354	1,295	1,295
External Firm Power Sales	0	0	0	0	0	0
SPP BA Area Planning Reserve <sup>8</sup>	20.1%	19.4%	17.9%	16.1%	12.2%	9.7%
Planning Reserve Margin (As specified in SPP Planning Criteria)	15%	15%	15%	15%	15%	15%
Total LRE Resource Adequacy Requirement	61,970	62,783	63,828	64,627	65,761	66,102
Total LRE Excess Capacity	2,784	1,694	904	-166	-2,964	-4,389
<b>Total Generator Owner Excess Capacity</b> (Excludes Generator Owner uncommitted Deliverable Capacity of wind resources)	67	781	780	856	1,436	1,436

<sup>&</sup>lt;sup>6</sup> Demand Response Accredited MW is up 381 MW from the 2022 submittals. Over the next 5 years the accredited amount is expected to increase by approximately 1,000 MW. <sup>7</sup> The Total Capacity and Capacity Resource values contain the Firm Capacity and Deliverable Capacity from LREs and Generator Owners. The equation for calculating the Total Capacity is as follows: Capacity Resources – Confirmed Retirements – Unconfirmed Retirements + Other Capacity Adjustments (Additions) – Other Capacity Adjustments (Reductions) + External Firm Capacity Purchases – External Firm Capacity Sales + External Firm Power Purchases – External Firm Power Sales

<sup>&</sup>lt;sup>8</sup> The SPP BA Area Planning Reserve is calculated by dividing the difference between the (Total Capacity + Unconfirmed Retirements) and the Total LRE Forecasted Net Peak Demand by the Total LRE Forecasted Net Peak Demand.

For the 2023 Summer Season, each LRE has to meet either a 9.89% or 15% Resource Adequacy Requirement. Figure 4 below breaks out two different Planning Reserve Margin percentage subgroups and reflects the number of LREs within this grouping. The Planning Reserve Margin categories are 'between 15% – 20%' and 'greater than 20%'.

- There are twenty-four (24) LREs that had a Planning Reserve Margin in the 'between 15% – 20%' category.
- There are thirty-five (35) LREs that had a Planning Reserve Margin in the 'greater than 20%' category.

In comparing these values, there were 22 LREs that had less than a 20% PRM in 2022 versus 24 LREs in the 2023 submissions.

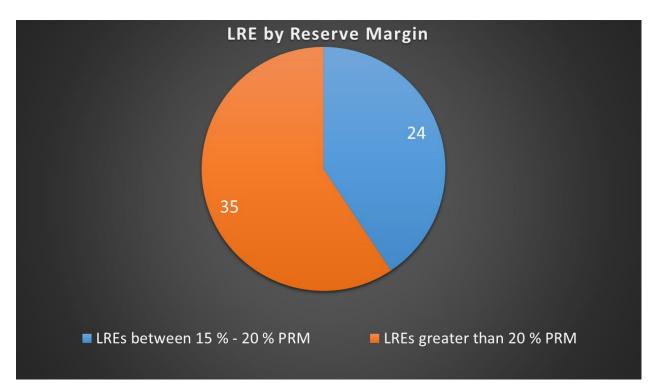


Figure 4: LRE by Reserve Margin

Southwest Power Pool, Inc.

Figure 5 below is a breakdown of the amount of capacity in MW for the Net Peak Demand that makes up each Planning Reserve Margin category. The Planning Reserve Margin categories considered are 'between 15% – 20%' and 'greater than 20%'.

- There are 32,858 MWs of Net Peak Demand from LREs which had a Planning Reserve Margin 'between 15% – 20%'.
- There are 21,096 MWs of Net Peak Demand from LREs which had a Planning Reserve Margin 'greater than 20%'.

For comparison, the amount of load carrying less than 20% PRM has increased from 32,858 MWs of Net Peak Demand in 2023 versus 29,198 MWs in the 2022 submissions. Thus more LREs are planning closer to the PRM in the 2023 submissions.

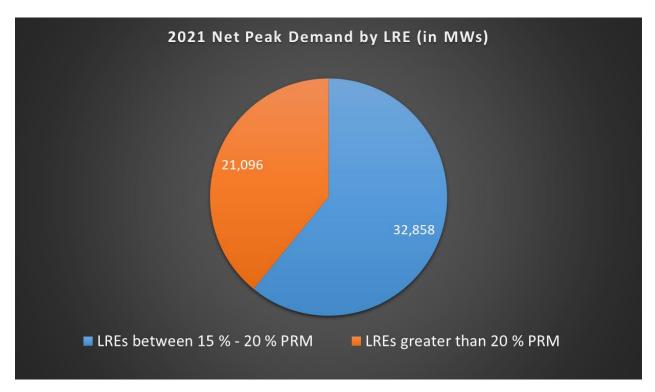


Figure 5: Net Peak Demand by LRE

#### 4. FUEL TYPE SUMMARY

The values shown below are based on the accredited LRE and Generator Owner generation for the 2023-2028 Summer Seasons. All values reflect LRE and Generator Owner accredited capacity, which includes the consideration of generator retirements, Firm Power and Firm Capacity purchases and sales external to the SPP BA. The accredited<sup>9</sup> wind and solar values below reflect capacity used to serve the LREs Resource Adequacy Requirement and are not based on the Effective Load Carrying Capability (ELCC) methodology. SPP LREs and Generator Owners expect to retire 6,101 MWs of accredited capacity by the end of 2028, when considering retirements since October 1, 2022. However, the amount of actual retirements in future years could be greater due to environmental regulation policy or individual LRE needs and decisions. The 2023 Summer Season wind accreditation is 5,073 MW which is an increase of 530 MW from the 4,543 MW claimed for 2022.

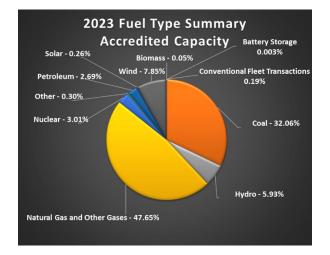


Figure 7: 2023 Summer Season Fuel Type Summary

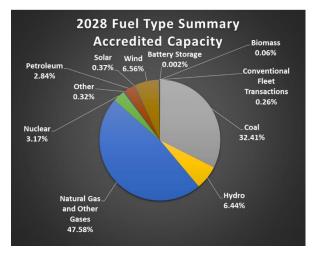


Figure 6: 2028 Summer Season Fuel Type Summary

<sup>&</sup>lt;sup>9</sup> Based on the accreditation methodology in section 7.1 of the SPP Planning Criteria.

#### Table 2: Summer Season Fuel Type Summary

Fuel Type	Unit	2023	2024	2025	2026	2027	2028
Battery Storage	MW	2	1	1	1	1	1
Biomass	MW	35	35	35	35	35	35
Coal	MW	20,705	21,440	21,441	21,440	20,922	19,869
Hydro <sup>10</sup>	MW	3,829	3,947	3,947	3,947	3,946	3,946
Natural Gas	MW	30,776	30,133	30,457	30,225	29,174	29,174
Nuclear	MW	1,944	1,944	1,944	1,944	1,944	1,944
Other	MW	194	194	194	194	194	194
Petroleum	MW	1,738	1,752	1,752	1,753	1,747	1,743
Solar <sup>11</sup>	MW	170	224	224	224	224	224
Wind <sup>11</sup>	MW	5,073	4,229	4,140	4,081	4,051	4,019
Conventional Based Net External	MW						
Transactions		122	167	187	207	157	162
Total Accredited Capacity	MW	64,589	64,068	64,322	64,052	62,396	61,311

Table 3: Summer Season Resource Retirement Summary

Confirmed Retirements	Unit	2023	2024	2025	2026	2027	2028
Coal	MW	0	0	0	0	0	0
Natural Gas	MW	122	382	382	382	382	382
Petroleum	MW	0	0	0	0	0	0
Unconfirmed Retirements	Unit	2023	2024	2025	2026	2027	2028
Coal	MW	0	1,486	1,601	2,366	2,839	3,955
Natural Gas	MW	0	163	325	1,015	1,534	1,534
Petroleum	MW	0	229	229	229	229	229
Total Resource Retirements	MW	122	2,261	2,537	3,993	4,985	6,101

 <sup>&</sup>lt;sup>10</sup> Includes Hydro Based external Firm Capacity and Firm Power transactions
<sup>11</sup> Excludes Generator Owner uncommitted Deliverable Capacity of wind and solar resources. Future values of wind and solar do not consider future SPP ELCC Policy

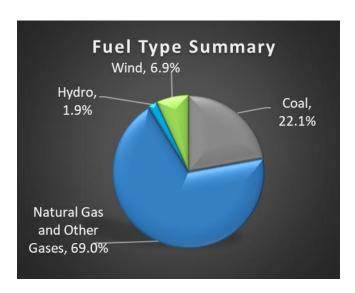
#### 5. LOAD RESPONSIBLE ENTITIES

A list of LREs is provided below, followed by Resource Adequacy Requirement calculation and fuel type summaries for the 2023 Summer Season for each LRE. The fuel type summaries consider resource retirements, Firm Power and Firm Capacity purchases and sales external and internal to the SPP BA where there is a specific fuel type associated with the transaction. Some LREs listed below do not have a fuel type summary because the LREs Net Peak Demand is being met with controllable and dispatchable demand response programs and/or controllable and dispatchable behind-the-meter generation not registered as a Resource, or internal Firm Power purchases which places the load and planning reserve obligation on the selling entity. Capacity Resources are made up of Deliverable Capacity and Firm Capacity Resources in the Resource Adequacy Requirement calculation and fuel type summaries for each LRE.

American Electric Power Arkansas Electric Cooperative Corporation **Basin Electric Power Cooperative Big Rivers Electric Corporation** Carthage Water & Electric Plant, Missouri City of Beatrice, Nebraska City of Chanute, Kansas City of Falls City Utilities, Nebraska City of Fremont, Nebraska City of Grand Island Utilities, Nebraska City of Hastings Utilities, Nebraska City of Malden Board of Public Works, Missouri City of Nebraska City Utilities, Nebraska City of Neligh, Nebraska City of Nixa, Missouri City of Piggott – Municipal Light Water & Sewer, Arkansas City of Poplar Bluff Municipal Utilities, Missouri City of Pratt, Kansas City of Scribner, Nebraska City of South Sioux City, Nebraska City of Superior, Nebraska City of West Plains Board of Public Works, Missouri City Utilities of Springfield, Missouri East and North Texas Electric Cooperatives Empire District Electric Company (Liberty Utilities) **Golden Spread Electric Cooperative** Grand River Dam Authority

Harlan Municipal Utilities Heartland Consumers Power District **Independence Power & Light** Kansas City Board of Public Utilities Kansas City Power & Light (includes Greater Missouri Operations Company) Kansas Electric Power Cooperative Kansas Municipal Energy Agency – EMP1 Kansas Municipal Energy Agency – EMP2 Kansas Municipal Energy Agency – EMP3 Kansas Municipal Energy Agency – Eudora **Kansas Power Pool** Kennett, Missouri Board of Public Works Lincoln Electric System MidAmerican Energy Company Midwest Energy, Inc. Missouri Joint Municipal Electric Utility Commission **Missouri River Energy Services** Municipal Energy Agency of Nebraska Nebraska Public Power District Northwestern Energy - NWMT Northwestern Energy - NWPS NSP Energy Marketing **Oklahoma Gas & Electric Company Oklahoma Municipal Power Authority Omaha Public Power District Otter Tail Power Company** Paragould, Arkansas Light & Water Commission **People's Electric Cooperative** Southwestern Public Service Company Sunflower Electric Power Corporation Westar Energy Western Area Power Administration - UGP Western Farmers Energy Services West Texas Municipal

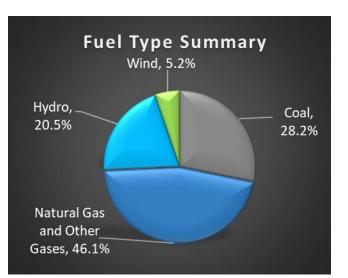
# AMERICAN ELECTRIC POWER



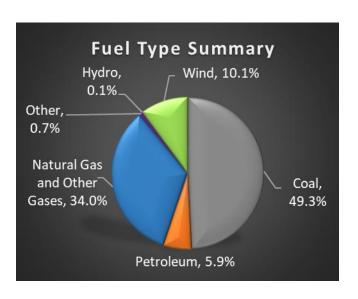
Capacity Summary	Unit	2023
Capacity Resources	MW	7,942
Firm Capacity Purchases	MW	1,563
Deliverable Capacity Purchases	MW	588
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	126
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	10,219
Demand Summary		
Forecasted Peak Demand	MW	8,847
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	102
Controllable and Dispatchable DR	MW	104
Net Peak Demand	MW	8,641
Requirements Summary		
Resource Adequacy Requirement	MW	9,937
Excess Capacity	MW	282
Deficient Capacity	MW	0
LRE planning reserve margin	%	18.26
Planning Reserve Margin	%	15.00

#### ARKANSAS ELECTRIC COOPERATIVE CORPORATION

Capacity Summary	Unit	2023
Capacity Resources	MW	738
Firm Capacity Purchases	MW	209
Deliverable Capacity Purchases	MW	23.5
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	217
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	1,188
Demand Summary		
Forecasted Peak Demand	MW	1,017
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	13
Net Peak Demand	MW	1,004
Requirements Summary		
Resource Adequacy Requirement	MW	1,155
Excess Capacity	MW	32.6
Deficient Capacity	MW	0
LRE planning reserve margin	%	18.25
Planning Reserve Margin	%	15.00



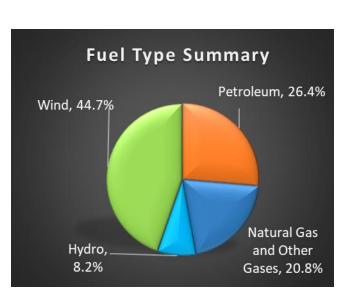
#### BASIN ELECTRIC POWER COOPERATIVE



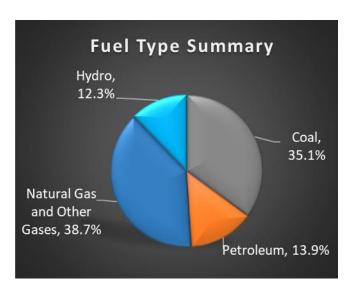
Capacity Summary	Unit	2023
Capacity Resources	MW	3,574
Firm Capacity Purchases	MW	948
Deliverable Capacity Purchases	MW	54
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	4,576
Demand Summary		
Forecasted Peak Demand	MW	3,636
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	4
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	3,632
Requirements Summary		
Resource Adequacy Requirement	MW	4,177
Excess Capacity	MW	399
Deficient Capacity	MW	0
LRE planning reserve margin	%	26.00
Planning Reserve Margin	%	15.00

#### **BIG RIVERS ELECTRIC CORPORATION**

Capacity Summary	Unit	2023
Capacity Resources	MW	25
Firm Capacity Purchases	MW	72
Deliverable Capacity Purchases	MW	10
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	107
Demand Summary		
Forecasted Peak Demand	MW	100
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	7
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	92
Requirements Summary		
Resource Adequacy Requirement	MW	106
Excess Capacity	MW	1
Deficient Capacity	MW	0
LRE planning reserve margin	%	16.18
Planning Reserve Margin	%	15.00



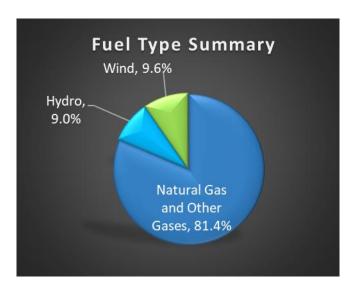
# CARTHAGE WATER & ELECTRIC PLANT, MISSOURI



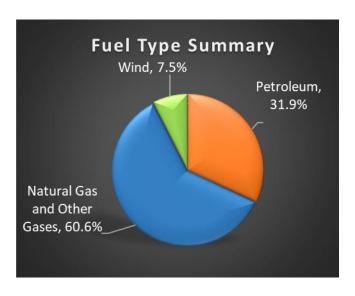
Capacity Summary	Unit	2023
Capacity Resources	MW	32
Firm Capacity Purchases	MW	33
Deliverable Capacity Purchases	MW	2
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	8
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	76
Demand Summary		
Forecasted Peak Demand	MW	63
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	63
Requirements Summary		
Resource Adequacy Requirement	MW	72
Excess Capacity	MW	3
Deficient Capacity	MW	0
LRE planning reserve margin	%	20.48
Planning Reserve Margin	%	15.00

# CITY OF BEATRICE, NEBRASKA

Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	46
Deliverable Capacity Purchases	MW	2
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	48
Demand Summary		
Forecasted Peak Demand	MW	40
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	5
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	35
Requirements Summary		
Resource Adequacy Requirement	MW	41
Excess Capacity	MW	8
Deficient Capacity	MW	0
LRE planning reserve margin	%	36.40
Planning Reserve Margin	%	15.00



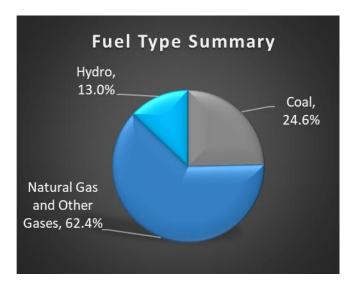
#### CITY OF CHANUTE, KANSAS



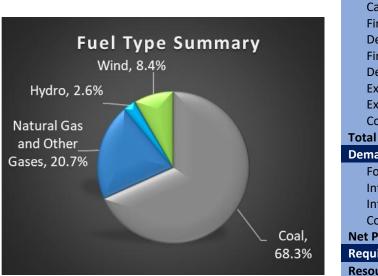
Capacity Summary	Unit	2023
Capacity Resources	MW	124
Firm Capacity Purchases	MW	10
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	15
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	119
Demand Summary		
Forecasted Peak Demand	MW	98
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	2
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	96
Requirements Summary		
Resource Adequacy Requirement	MW	110
Excess Capacity	MW	9
Deficient Capacity	MW	0
LRE planning reserve margin	%	24.41
Planning Reserve Margin	%	15.00

# CITY OF FALLS CITY UTILITES, NEBRASKA

Capacity Summary	Unit	2023
Capacity Resources	MW	14
Firm Capacity Purchases	MW	6
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	20
Demand Summary		
Forecasted Peak Demand	MW	14
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	3
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	11
Requirements Summary		
Resource Adequacy Requirement	MW	13
Excess Capacity	MW	7
Deficient Capacity	MW	0
LRE planning reserve margin	%	76.67
Planning Reserve Margin	%	15.00



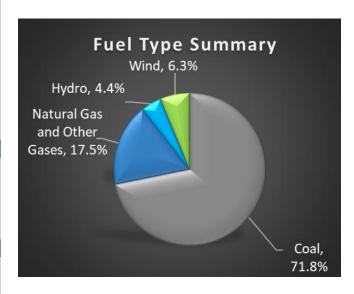
# CITY OF FREMONT, NEBRASKA



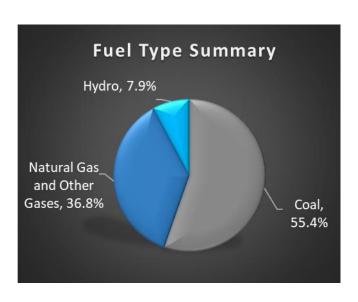
Capacity Summary	Unit	2023
Capacity Resources	MW	162
Firm Capacity Purchases	MW	15
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	177
Demand Summary		
Forecasted Peak Demand	MW	114
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	5
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	109
Requirements Summary		
Resource Adequacy Requirement	MW	126
Excess Capacity	MW	51
Deficient Capacity	MW	0
LRE planning reserve margin	%	61.63
Planning Reserve Margin	%	15.00

# CITY OF GRAND ISLAND UTILITIES, NEBRASKA

Capacity Summary	Unit	2023
Capacity Resources	MW	198
Firm Capacity Purchases	MW	33
Deliverable Capacity Purchases	MW	13
Firm Capacity Sales	MW	47
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	197
Demand Summary		
Forecasted Peak Demand	MW	162
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	9
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	153
Requirements Summary		
Resource Adequacy Requirement	MW	176
Excess Capacity	MW	21
Deficient Capacity	MW	0
LRE planning reserve margin	%	28.57
Planning Reserve Margin	%	15.00



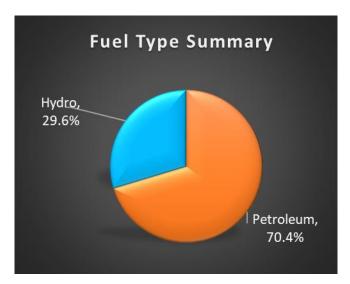
#### CITY OF HASTINGS UTILITIES, NEBRASKA



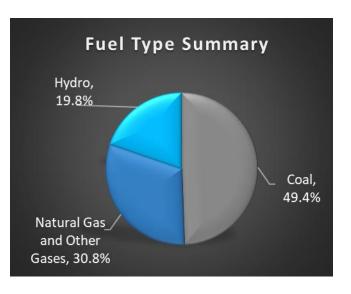
Capacity Summary	Unit	2023
Capacity Resources	MW	162
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	55
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	107
Demand Summary		
Forecasted Peak Demand	MW	91
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	12
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	79
Requirements Summary		
Resource Adequacy Requirement	MW	91
Excess Capacity	MW	16
Deficient Capacity	MW	0
LRE planning reserve margin	%	35.01
Planning Reserve Margin	%	15.00

# CITY OF MALDEN BOARD OF PUBLIC WORKS, MISSOURI

Capacity Summary	Unit	2023
Capacity Resources	MW	14
Firm Capacity Purchases	MW	4
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	6
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	23
Demand Summary		
Forecasted Peak Demand	MW	11
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	11
Requirements Summary		
Resource Adequacy Requirement	MW	13
Excess Capacity	MW	11
Deficient Capacity	MW	0
LRE planning reserve margin	%	112.73
Planning Reserve Margin	%	15.00



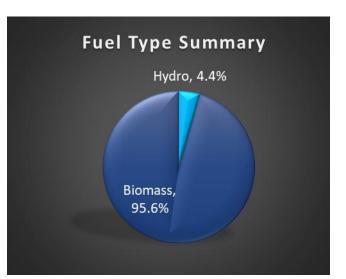
# CITY OF NEBRASKA CITY UTILITIES, NEBRASKA



Capacity Summary	Unit	2023
Capacity Resources	MW	37
Firm Capacity Purchases	MW	10
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	15
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	32
Demand Summary		
Forecasted Peak Demand	MW	34
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	8
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	26
Requirements Summary		
Resource Adequacy Requirement	MW	30
Excess Capacity	MW	2
Deficient Capacity	MW	0
LRE planning reserve margin	%	22.93
Planning Reserve Margin	%	15.00

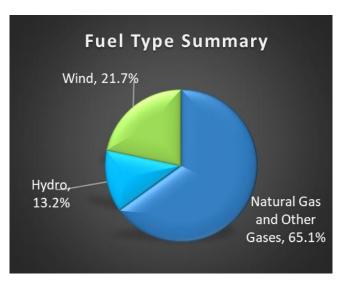
# CITY OF NELIGH, NEBRASKA

Capacity Summary	Unit	2023
Capacity Resources	MW	6
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	6
Demand Summary		
Forecasted Peak Demand	MW	5
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	5
Requirements Summary		
Resource Adequacy Requirement	MW	6
Excess Capacity	MW	1
Deficient Capacity	MW	0
LRE planning reserve margin	%	27.85
Planning Reserve Margin	%	15.00

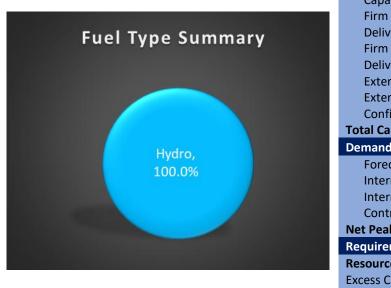


# CITY OF NIXA, MISSOURI

Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	55
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	6
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	61
Demand Summary		
Forecasted Peak Demand	MW	52
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	52
Requirements Summary		
Resource Adequacy Requirement	MW	60
Excess Capacity	MW	1
Deficient Capacity	MW	0
LRE planning reserve margin	%	16.82
Planning Reserve Margin	%	15.00



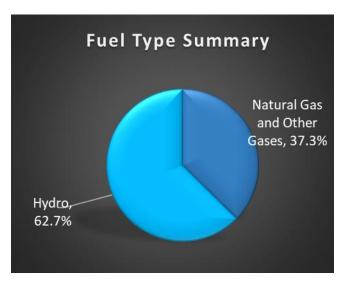
# CITY OF PIGGOTT – MUNICIPAL LIGHT WATER & SEWER, ARKANSAS



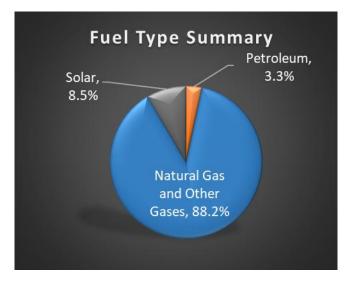
Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	6
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	6
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	12
Demand Summary		
Forecasted Peak Demand	MW	10
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	10
Requirements Summary		
Resource Adequacy Requirement	MW	12
Excess Capacity	MW	0.1
Deficient Capacity	MW	0
LRE planning reserve margin	%	16.35
Planning Reserve Margin	%	15.00

# CITY OF POPLAR BLUFF MUNICIPAL UTILITIES, MISSOURI

Capacity Summary	Unit	2023
Capacity Resources	MW	27
Firm Capacity Purchases	MW	20
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	40
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	45
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	52
Demand Summary		
Forecasted Peak Demand	MW	73
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	40
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	33
Requirements Summary		
Resource Adequacy Requirement	MW	38
Excess Capacity	MW	15
Deficient Capacity	MW	0
LRE planning reserve margin	%	59.06
Planning Reserve Margin	%	15.00



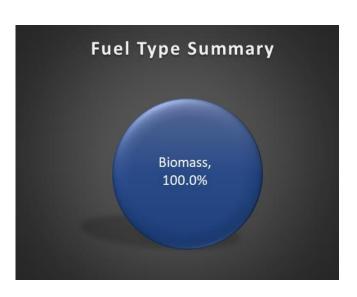
# CITY OF PRATT, KANSAS



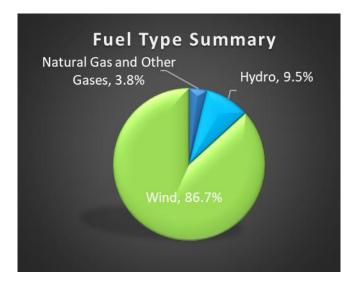
Capacity Summary	Unit	2023
Capacity Resources	MW	30
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	9
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	21
Demand Summary		
Forecasted Peak Demand	MW	24
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	6
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	18
Requirements Summary		
Resource Adequacy Requirement	MW	20
Excess Capacity	MW	0.3
Deficient Capacity	MW	0
LRE planning reserve margin	%	16.95
Planning Reserve Margin	%	15.00

# CITY OF SCRIBNER, NEBRASKA

Capacity Summary	Unit	2023
	MW	3
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	3
Demand Summary		
Forecasted Peak Demand	MW	2
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	2
Requirements Summary		
Resource Adequacy Requirement	MW	3
Excess Capacity	MW	0.5
Deficient Capacity	MW	0
LRE planning reserve margin	%	36.36
Planning Reserve Margin	%	15.00



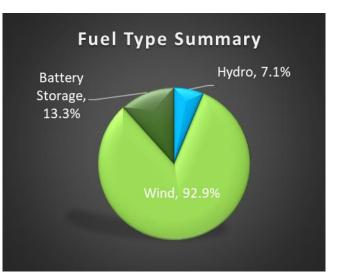
### CITY OF SOUTH SIOUX CITY, NEBRASKA



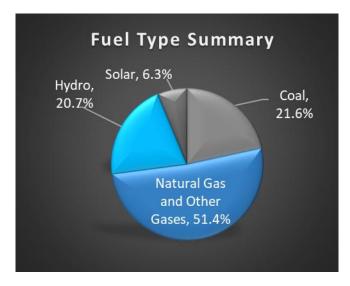
Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	41
Deliverable Capacity Purchases	MW	6
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	47
Demand Summary		
Forecasted Peak Demand	MW	41
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	5
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	36
Requirements Summary		
Resource Adequacy Requirement	MW	42
Excess Capacity	MW	6
Deficient Capacity	MW	0
LRE planning reserve margin	%	30.76
Planning Reserve Margin	%	15.00

# CITY OF SUPERIOR, NEBRASKA

Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	7
Deliverable Capacity Purchases	MW	1
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	8
Demand Summary		
Forecasted Peak Demand	MW	9
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	1
Controllable and Dispatchable DR	MW	2
Net Peak Demand	MW	6
Requirements Summary		
Resource Adequacy Requirement	MW	7
Excess Capacity	MW	1
Deficient Capacity	MW	0
LRE planning reserve margin	%	34.18
Planning Reserve Margin	%	15.00



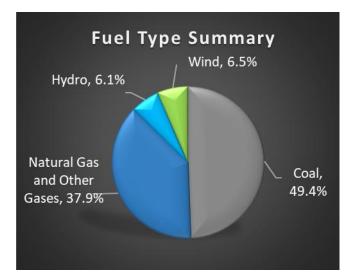
#### CITY OF WEST PLAINS BOARD OF PUBLIC WORKS, MISSOURI



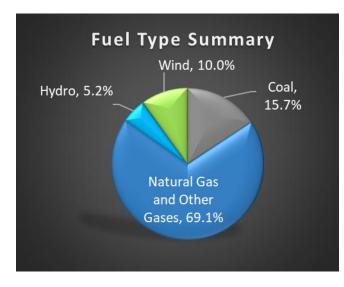
Capacity Summary	Unit	2023
Capacity Resources	MW	48
Firm Capacity Purchases	MW	18
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	17
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	83
Demand Summary		
Forecasted Peak Demand	MW	42
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	42
Requirements Summary		
Resource Adequacy Requirement	MW	48
Excess Capacity	MW	35
Deficient Capacity	MW	0
LRE planning reserve margin	%	98.38
Planning Reserve Margin	%	15.00

#### CITY UTILITIES OF SPRINGFIELD, MISSOURI

Capacity Summary	Unit	2023
Capacity Resources	MW	818
Firm Capacity Purchases	MW	51
Deliverable Capacity Purchases	MW	10
Firm Capacity Sales	MW	70
Deliverable Capacity Sales	MW	20
External Firm Power Purchases	MW	58
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	846
Demand Summary		
Forecasted Peak Demand	MW	716
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	716
Requirements Summary		
Resource Adequacy Requirement	MW	823
Excess Capacity	MW	23
Deficient Capacity	MW	0
LRE planning reserve margin	%	18.21
Planning Reserve Margin	%	15.00



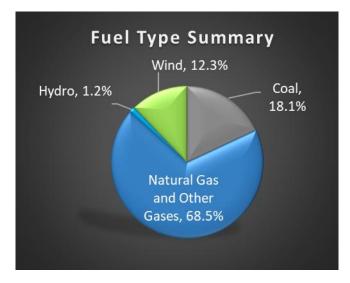
# EAST AND NORTH TEXAS ELECTRIC COOPERATIVES



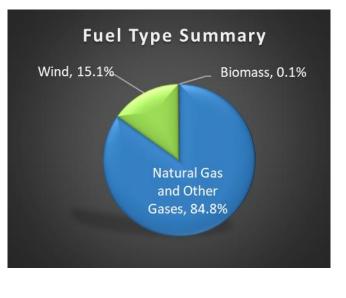
Capacity Summary	Unit	2023
Capacity Resources	MW	592
Firm Capacity Purchases	MW	60
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	380
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	120
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	392
Demand Summary		
Forecasted Peak Demand	MW	232
Internal Firm Power Sales	MW	102
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	334
Requirements Summary		
Resource Adequacy Requirement	MW	384
Excess Capacity	MW	8
Deficient Capacity	MW	0
LRE planning reserve margin	%	17.40
Planning Reserve Margin	%	15.00

#### EMPIRE DISTRICT ELECTRIC COMPANY (LIBERTY UTILITIES)

Capacity Summary	Unit	2023
Capacity Resources	MW	1,309
Firm Capacity Purchases	MW	67
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	78
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	1,298
Demand Summary		
Forecasted Peak Demand	MW	1,102
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	1,102
Requirements Summary		
Resource Adequacy Requirement	MW	1,267
Excess Capacity	MW	30
Deficient Capacity	MW	0
LRE planning reserve margin	%	17.76
Planning Reserve Margin	%	15.00



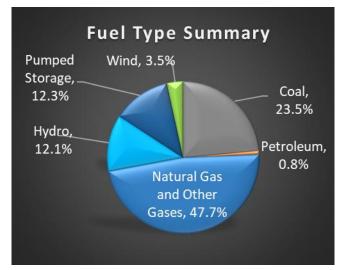
#### **GOLDEN SPREAD ELECTRIC COOPERATIVE**



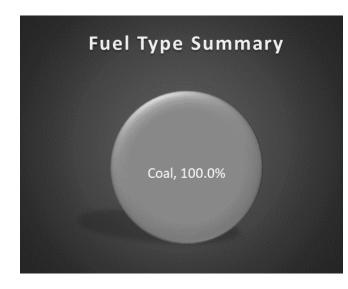
Capacity Summary	Unit	2023
Capacity Resources	MW	1,492
Firm Capacity Purchases	MW	68
Deliverable Capacity Purchases	MW	180
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	1,741
Demand Summary		
Forecasted Peak Demand	MW	1,491
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	1,491
Requirements Summary		
Resource Adequacy Requirement	MW	1,714
Excess Capacity	MW	26
Deficient Capacity	MW	0
LRE planning reserve margin	%	16.76
Planning Reserve Margin	%	15.00

# GRAND RIVER DAM AUTHORITY

Capacity Summary	Unit	2023
Capacity Resources	MW	2,006
Firm Capacity Purchases	MW	73
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	15
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	2,094
Demand Summary		
Forecasted Peak Demand	MW	1,209
Internal Firm Power Sales	MW	465
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	1,674
Requirements Summary		
Resource Adequacy Requirement	MW	1,925
Excess Capacity	MW	169
Deficient Capacity	MW	0
LRE planning reserve margin	%	25.09
Planning Reserve Margin	%	15.00



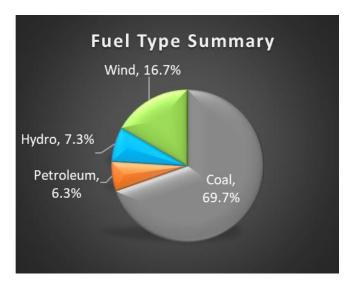
#### HARLAN MUNICIPAL UTILITIES



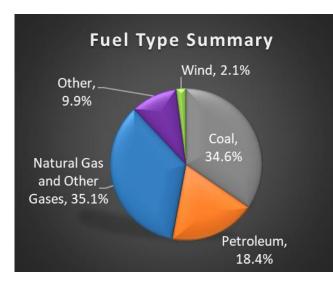
Capacity Summary	Unit	2023
Capacity Resources	MW	6
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	6
Demand Summary		
Forecasted Peak Demand	MW	5
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	5
Requirements Summary		
Resource Adequacy Requirement	MW	6
Excess Capacity	MW	0.03
Deficient Capacity	MW	0
LRE planning reserve margin	%	15.58
Planning Reserve Margin	%	15.00

#### HEARTLAND CONSUMERS POWER DISTRICT

Capacity Summary	Unit	2023
Capacity Resources	MW	84
Firm Capacity Purchases	MW	15
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	41
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	57
Demand Summary		
Forecasted Peak Demand	MW	45
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	45
Requirements Summary		
Resource Adequacy Requirement	MW	52
Excess Capacity	MW	6
Deficient Capacity	MW	0
LRE planning reserve margin	%	28.14
Planning Reserve Margin	%	15.00



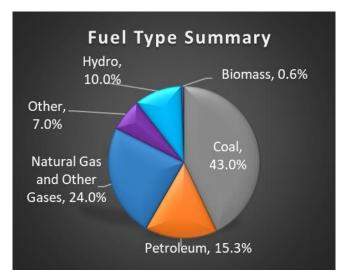
#### **INDEPENDENCE POWER & LIGHT**



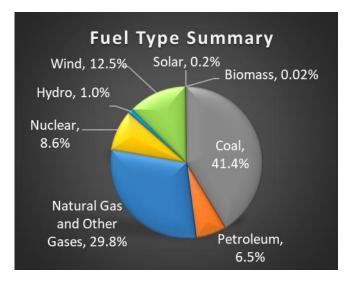
Capacity Summary	Unit	2023
Capacity Resources	MW	157
Firm Capacity Purchases	MW	162
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
	MW	Ŭ
Total Capacity	IVIVV	319
Demand Summary		
Forecasted Peak Demand	MW	275
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	275
Requirements Summary		
Resource Adequacy Requirement	MW	316
Excess Capacity	MW	3
Deficient Capacity	MW	0
LRE planning reserve margin	%	15.95
Planning Reserve Margin	%	15.00

# KANSAS CITY BOARD OF PUBLIC UTILITIES

Capacity Summary	Unit	2023
Capacity Resources	MW	514
Firm Capacity Purchases	MW	7
Deliverable Capacity Purchases	MW	37
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	41
External Firm Power Purchases	MW	50
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	567
Demand Summary		
Forecasted Peak Demand	MW	480
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	480
Requirements Summary		
Resource Adequacy Requirement	MW	552
Excess Capacity	MW	15
Deficient Capacity	MW	0
LRE planning reserve margin	%	18.16
Planning Reserve Margin	%	15.00



# **KANSAS CITY POWER & LIGHT**



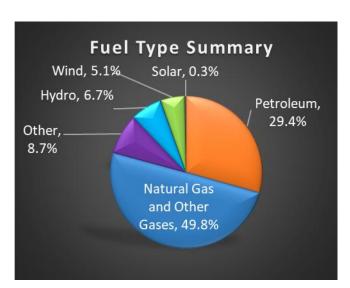
Capacity Summary	Unit	2023
Capacity Resources	MW	5,604
Firm Capacity Purchases	MW	807
Deliverable Capacity Purchases	MW	511
Firm Capacity Sales	MW	55
	MW	428
Deliverable Capacity Sales		
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	6,440
Demand Summary		
Forecasted Peak Demand	MW	5,417
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	129
Net Peak Demand	MW	5,288
Requirements Summary		
Resource Adequacy Requirement	MW	6,081
Excess Capacity	MW	359
Deficient Capacity	MW	0
LRE planning reserve margin	%	21.78
Planning Reserve Margin	%	15.00

# KANSAS ELECTRIC POWER COOPERATIVE

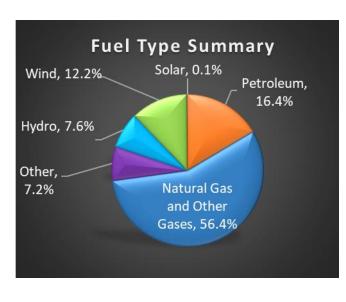
Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	42
Deliverable Capacity Purchases	MW	5
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	47
Demand Summary		
Forecasted Peak Demand	MW	39
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	39
Requirements Summary		
Resource Adequacy Requirement	MW	45
Excess Capacity	MW	2
Deficient Capacity	MW	0
LRE planning reserve margin	%	20.8
Planning Reserve Margin	%	15.00

#### KANSAS MUNICIPAL ENERGY AGENCY – EMP1

Capacity Summary	Unit	2023
Capacity Resources	MW	106
Firm Capacity Purchases	MW	6
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	7
External Firm Power Purchases	MW	2
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	108
Demand Summary		
Forecasted Peak Demand	MW	108
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	36
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	72
Requirements Summary		
Resource Adequacy Requirement	MW	83
Excess Capacity	MW	25
Deficient Capacity	MW	0
LRE planning reserve margin	%	49.60
Planning Reserve Margin	%	15.00



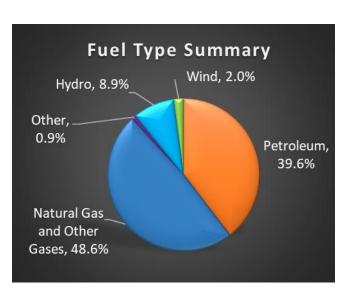
# KANSAS MUNICIPAL ENERGY AGENCY – EMP2



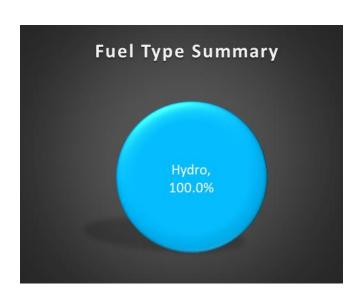
Capacity Summary	Unit	2023
Capacity Resources	MW	151
Firm Capacity Purchases	MW	23
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	3
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	1
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	172
Demand Summary		
Forecasted Peak Demand	MW	163
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	25
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	138
Requirements Summary		
Resource Adequacy Requirement	MW	158
Excess Capacity	MW	13
Deficient Capacity	MW	0
LRE planning reserve margin	%	24.63
Planning Reserve Margin	%	15.00

#### KANSAS MUNICIPAL ENERGY AGENCY – EMP3

Capacity Summary	Unit	2023
Capacity Resources	MW	80
Firm Capacity Purchases	MW	20
Deliverable Capacity Purchases	MW	7
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	2
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	109
Demand Summary		
Forecasted Peak Demand	MW	117
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	24
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	93
Requirements Summary		
Resource Adequacy Requirement	MW	107
Excess Capacity	MW	2
Deficient Capacity	MW	0
LRE planning reserve margin	%	17.13
Planning Reserve Margin	%	15.00



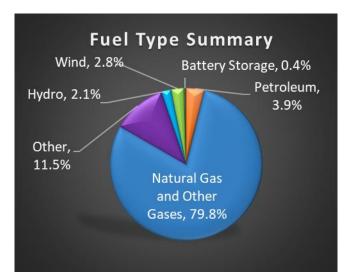
# KANSAS MUNICIPAL ENERGY AGENCY – EUDORA



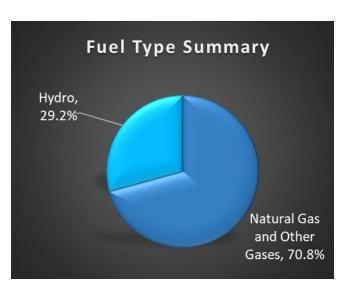
Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	15
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	15
Demand Summary		
Forecasted Peak Demand	MW	13
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	1
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	12
Requirements Summary		
Resource Adequacy Requirement	MW	14
Excess Capacity	MW	1
Deficient Capacity	MW	0
LRE planning reserve margin	%	24.02
Planning Reserve Margin	%	15.00

# KANSAS POWER POOL

Capacity Summary	Unit	2023
Capacity Resources	MW	220
Firm Capacity Purchases	MW	6
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	5
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	232
Demand Summary		
Forecasted Peak Demand	MW	208
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	18
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	189
Requirements Summary		
Resource Adequacy Requirement	MW	218
Excess Capacity	MW	14
Deficient Capacity	MW	0
LRE planning reserve margin	%	22.33
Planning Reserve Margin	%	15.00



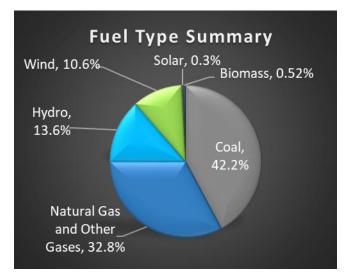
#### KENNETT, MISSOURI BOARD OF PUBLIC WORKS



Capacity Summary	Unit	2023
Capacity Resources	MW	31
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	13
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	43
Demand Summary		
Forecasted Peak Demand	MW	29
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	29
Requirements Summary		
Resource Adequacy Requirement	MW	33
Excess Capacity	MW	10
Deficient Capacity	MW	0
LRE planning reserve margin	%	49.14
Planning Reserve Margin	%	15.00

# LINCOLN ELECTRIC SYSTEM

Capacity Summary	Unit	2023
Capacity Resources	MW	737
Firm Capacity Purchases	MW	257
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	195
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	800
Demand Summary		
Forecasted Peak Demand	MW	778
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	126
Controllable and Dispatchable DR	MW	5
Net Peak Demand	MW	648
Requirements Summary		
Resource Adequacy Requirement	MW	745
Excess Capacity	MW	55
Deficient Capacity	MW	0
LRE planning reserve margin	%	23.50
Planning Reserve Margin	%	15.00



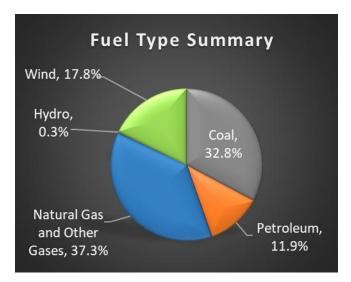
### MIDAMERICAN ENERGY COMPANY

Fuel Type Summary	
Coal, 100.0%	

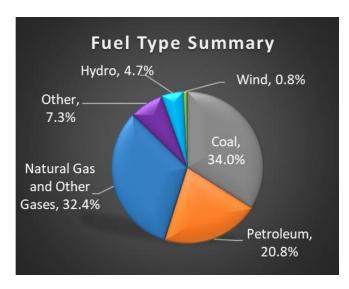
Capacity Summary	Unit	2023
Capacity Resources	MW	55
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	55
Demand Summary		
Forecasted Peak Demand	MW	48
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	48
Requirements Summary		
Resource Adequacy Requirement	MW	55
Excess Capacity	MW	0.1
Deficient Capacity	MW	0
LRE planning reserve margin	%	15.21
Planning Reserve Margin	%	15.00

### MIDWEST ENERGY, INC.

Capacity Summary	Unit	2023
Capacity Resources	MW	150
Firm Capacity Purchases	MW	274
Deliverable Capacity Purchases	MW	35
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	1
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	460
Demand Summary		
Forecasted Peak Demand	MW	382
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	7
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	375
Requirements Summary		
Resource Adequacy Requirement	MW	432
Excess Capacity	MW	29
Deficient Capacity	MW	0
LRE planning reserve margin	%	22.63
Planning Reserve Margin	%	15.00



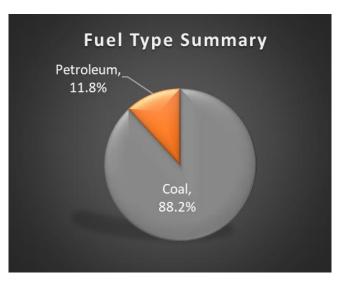
### MISSOURI JOINT MUNICIPAL ELECTRIC UTILITY COMMISSION



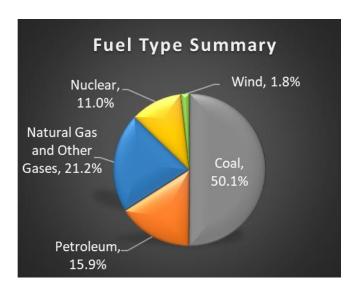
Capacity Summary	Unit	2023
Capacity Resources	MW	592
Firm Capacity Purchases	MW	190
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	99
Deliverable Capacity Sales	MW	2
External Firm Power Purchases	MW	27
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	708
Demand Summary		
Forecasted Peak Demand	MW	575
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	575
Requirements Summary		
Resource Adequacy Requirement	MW	661
Excess Capacity	MW	47
Deficient Capacity	MW	0
LRE planning reserve margin	%	23.14
Planning Reserve Margin	%	15.00

#### MISSOURI RIVER ENERGY SERVICES

Capacity Summary	Unit	2023
Capacity Resources	MW	500
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	185
Deliverable Capacity Sales	MW	20
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	295
Demand Summary		
Forecasted Peak Demand	MW	251
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	251
Requirements Summary		
Resource Adequacy Requirement	MW	289
Excess Capacity	MW	6
Deficient Capacity	MW	0
LRE planning reserve margin	%	17.54
Planning Reserve Margin	%	15.00



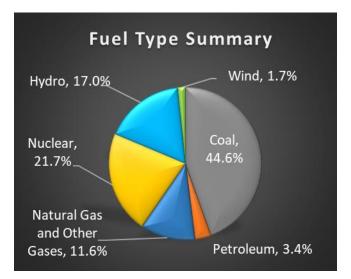
# MUNICIPAL ENERGY AGENCY OF NEBRASKA



Capacity Summary	Unit	2023
Capacity Resources	MW	182
Firm Capacity Purchases	MW	54
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	230
Demand Summary		
Forecasted Peak Demand	MW	157
Internal Firm Power Sales	MW	56
Internal Firm Power Purchases	MW	20
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	193
Requirements Summary		
Resource Adequacy Requirement	MW	222
Excess Capacity	MW	8
Deficient Capacity	MW	0
LRE planning reserve margin	%	19.13
Planning Reserve Margin	%	15.00

#### NEBRASKA PUBLIC POWER DISTRICT

Capacity Summary	Unit	2023
Capacity Resources	MW	3,007
Firm Capacity Purchases	MW	280
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	457
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	6
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	2,835
Demand Summary		
Forecasted Peak Demand	MW	2,987
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	462
Controllable and Dispatchable DR	MW	71
Net Peak Demand	MW	2,455
Requirements Summary		
Resource Adequacy Requirement	MW	2,823
Excess Capacity	MW	13
Deficient Capacity	MW	0
LRE planning reserve margin	%	15.52
Planning Reserve Margin	%	15.00

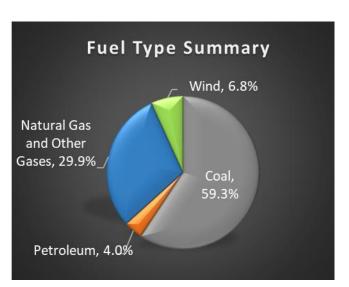


#### NORTHWESTERN ENERGY – NWMT

Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	0
Demand Summary		
Forecasted Peak Demand	MW	0
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	0
Requirements Summary		
Resource Adequacy Requirement	MW	0
Excess Capacity	MW	0
Deficient Capacity	MW	0
LRE planning reserve margin	%	N/A
Planning Reserve Margin	%	15.00

#### NORTHWESTERN ENERGY – NWPS

Capacity Summary	Unit	2023
Capacity Resources	MW	358
Firm Capacity Purchases	MW	9
Deliverable Capacity Purchases	MW	40
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	407
Demand Summary		
Forecasted Peak Demand	MW	350
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	350
Requirements Summary		
Resource Adequacy Requirement	MW	403
Excess Capacity	MW	4
Deficient Capacity	MW	0
LRE planning reserve margin	%	16.12
Planning Reserve Margin	%	15.00

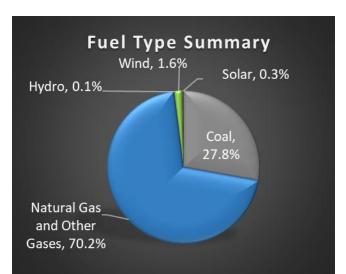


#### NSP ENERGY MARKETING

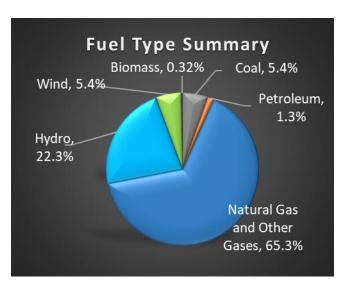
Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	2
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	2
Demand Summary		
Forecasted Peak Demand	MW	1
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	1
Requirements Summary		
Resource Adequacy Requirement	MW	1
Excess Capacity	MW	1
Deficient Capacity	MW	0
LRE planning reserve margin	%	53.85
Planning Reserve Margin	%	15.00

#### OKLAHOMA GAS & ELECTRIC COMPANY

Capacity Summary	Unit	2023
Capacity Resources	MW	6,592
Firm Capacity Purchases	MW	26
Deliverable Capacity Purchases	MW	493
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	7
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	7,118
Demand Summary		
Forecasted Peak Demand	MW	6,519
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	330
Net Peak Demand	MW	6,189
Requirements Summary		
Resource Adequacy Requirement	MW	7,117
Excess Capacity	MW	1
Deficient Capacity	MW	0
LRE planning reserve margin	%	15.01
Planning Reserve Margin	%	15.00



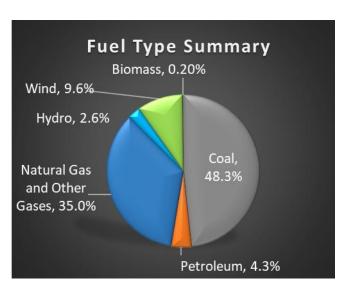
#### OKLAHOMA MUNICIPAL POWER AUTHORITY



Capacity Summary	Unit	2023
Capacity Resources	MW	563
Firm Capacity Purchases	MW	75
Deliverable Capacity Purchases	MW	20
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	140
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	799
Demand Summary		
Forecasted Peak Demand	MW	729
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	60
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	669
Requirements Summary		
Resource Adequacy Requirement	MW	770
Excess Capacity	MW	29
Deficient Capacity	MW	0
LRE planning reserve margin	%	19.30
Planning Reserve Margin	%	15.00

#### OMAHA PUBLIC POWER DISTRICT

Capacity Summary	Unit	2023
Capacity Resources	MW	2,720
Firm Capacity Purchases	MW	481
Deliverable Capacity Purchases	MW	105
Firm Capacity Sales	MW	341
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	2,964
Demand Summary		
Forecasted Peak Demand	MW	2,709
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	80
Controllable and Dispatchable DR	MW	91
Net Peak Demand	MW	2,538
Requirements Summary		
Resource Adequacy Requirement	MW	2,919
Excess Capacity	MW	45
Deficient Capacity	MW	0
LRE planning reserve margin	%	16.77
Planning Reserve Margin	%	15.00

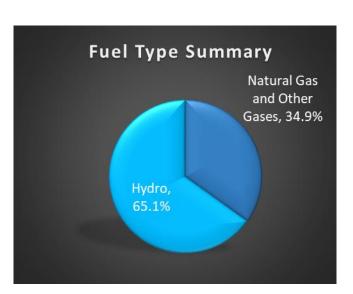


# OTTER TAIL POWER COMPANY

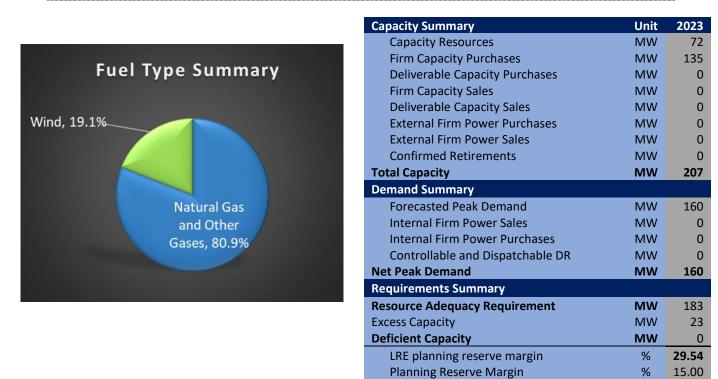
Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	0
Demand Summary		
Forecasted Peak Demand	MW	0
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	0
Requirements Summary		
Resource Adequacy Requirement	MW	0
Excess Capacity	MW	0
Deficient Capacity	MW	0
LRE planning reserve margin	%	N/A
Planning Reserve Margin	%	15.00

### PARAGOULD, ARKANSAS LIGHT & WATER COMMISSION

Capacity Summary	Unit	2023
Capacity Resources	MW	31
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	16
External Firm Power Purchases	MW	58
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	73
Demand Summary		
Forecasted Peak Demand	MW	111
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	80
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	31
Requirements Summary		
Resource Adequacy Requirement	MW	36
Excess Capacity	MW	38
Deficient Capacity	MW	0
LRE planning reserve margin	%	136.02
Planning Reserve Margin	%	15.00

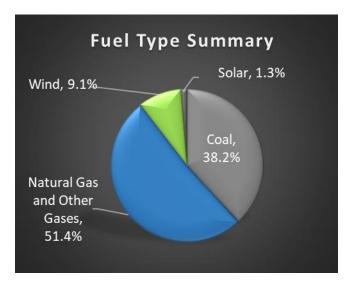


# PEOPLE'S ELECTRIC COOPERATIVE

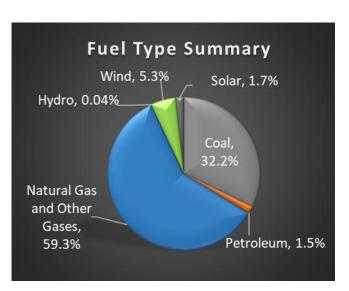


#### SOUTHWESTERN PUBLIC SERVICE COMPANY

Capacity Summary	Unit	2023
Capacity Resources	MW	4,370
Firm Capacity Purchases	MW	1,100
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	346
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	5,124
Demand Summary		
Forecasted Peak Demand	MW	4,059
Internal Firm Power Sales	MW	125
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	4,184
Requirements Summary		
Resource Adequacy Requirement	MW	4,812
Excess Capacity	MW	312
Deficient Capacity	MW	0
LRE planning reserve margin	%	22.46
Planning Reserve Margin	%	15.00



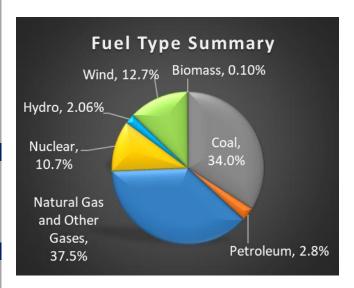
#### SUNFLOWER ELECTRIC POWER COOPERATION



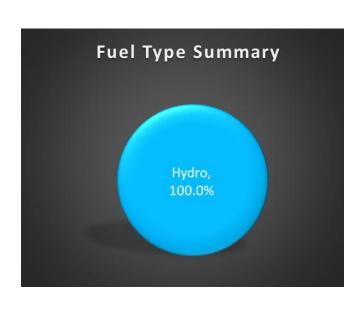
Capacity Summary	Unit	2023
Capacity Resources	MW	1,105
Firm Capacity Purchases	MW	52
Deliverable Capacity Purchases	MW	16
Firm Capacity Sales	MW	50
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	1,124
Demand Summary		
Forecasted Peak Demand	MW	948
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	7
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	941
Requirements Summary		
Resource Adequacy Requirement	MW	1,082
Excess Capacity	MW	42
Deficient Capacity	MW	0
LRE planning reserve margin	%	19.43
Planning Reserve Margin	%	15.00

#### WESTAR ENERGY

Capacity Summary	Unit	2023
Capacity Resources	MW	5,317
Firm Capacity Purchases	MW	720
Deliverable Capacity Purchases	MW	576
Firm Capacity Sales	MW	565
Deliverable Capacity Sales	MW	378
External Firm Power Purchases	MW	120
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	5,789
Demand Summary		
Forecasted Peak Demand	MW	5,010
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	15
Controllable and Dispatchable DR	MW	85
Net Peak Demand	MW	4,910
Requirements Summary		
Resource Adequacy Requirement	MW	5,646
Excess Capacity	MW	143
Deficient Capacity	MW	0
LRE planning reserve margin	%	17.91
Planning Reserve Margin	%	15.00



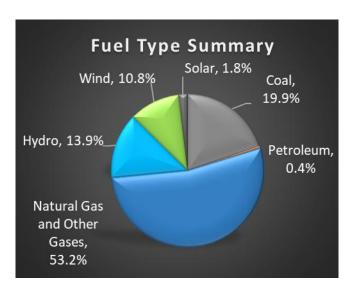
#### WESTERN AREA POWER ADMINISTRATION – UGP



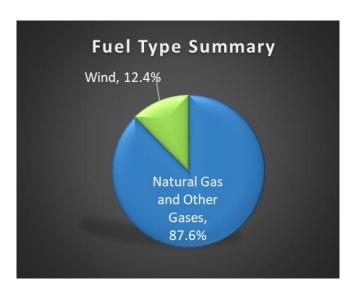
Capacity Summary	Unit	2023
Capacity Resources	MW	2,353
Firm Capacity Purchases	MW	0
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	441
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	1,910
Demand Summary		
Forecasted Peak Demand	MW	759
Internal Firm Power Sales	MW	746
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	1,505
Requirements Summary		
Resource Adequacy Requirement	MW	1,654
Excess Capacity	MW	256
Deficient Capacity	MW	0
LRE planning reserve margin	%	26.90
Planning Reserve Margin	%	9.89

#### WESTERN FARMERS ENERGY SERVICES

Capacity Summary	Unit	2023
Capacity Resources	MW	1,296
Firm Capacity Purchases	MW	546
Deliverable Capacity Purchases	MW	4
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	299
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	2,144
Demand Summary		
Forecasted Peak Demand	MW	2,083
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	325
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	1,758
Requirements Summary		
Resource Adequacy Requirement	MW	2,021
Excess Capacity	MW	123
Deficient Capacity	MW	0
LRE planning reserve margin	%	22.00
Planning Reserve Margin	%	15.00



# WEST TEXAS MUNICIPAL



Capacity Summary	Unit	2023
Capacity Resources	MW	0
Firm Capacity Purchases	MW	42
Deliverable Capacity Purchases	MW	0
Firm Capacity Sales	MW	0
Deliverable Capacity Sales	MW	0
External Firm Power Purchases	MW	0
External Firm Power Sales	MW	0
Confirmed Retirements	MW	0
Total Capacity	MW	42
Demand Summary		
Forecasted Peak Demand	MW	34
Internal Firm Power Sales	MW	0
Internal Firm Power Purchases	MW	0
Controllable and Dispatchable DR	MW	0
Net Peak Demand	MW	34
Requirements Summary		
Resource Adequacy Requirement	MW	39
Excess Capacity	MW	3
Deficient Capacity	MW	0
LRE planning reserve margin	%	25.03
Planning Reserve Margin	%	15.00