

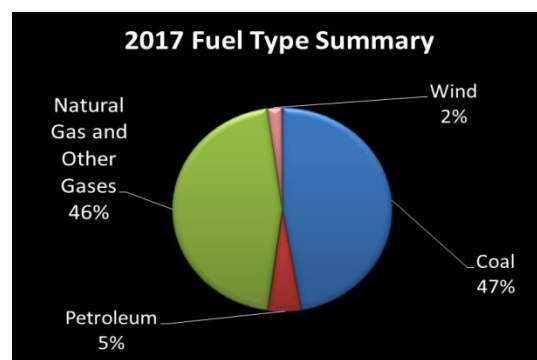
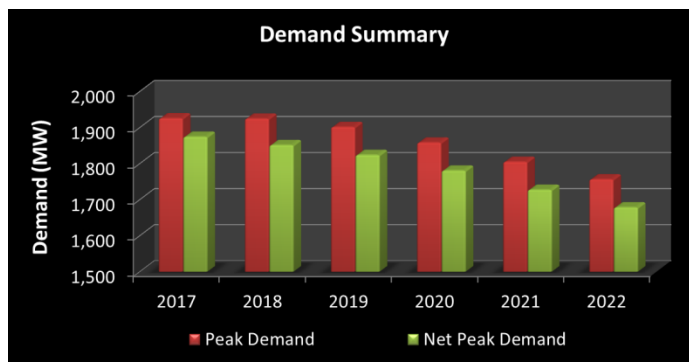
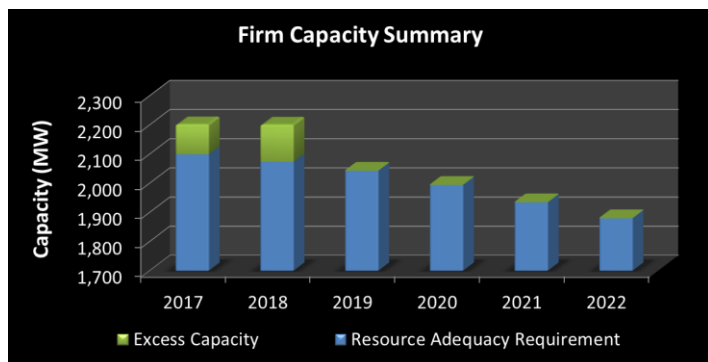


SPP 2017 RESOURCE ADEQUACY REPORT

Published on June 19th, 2017

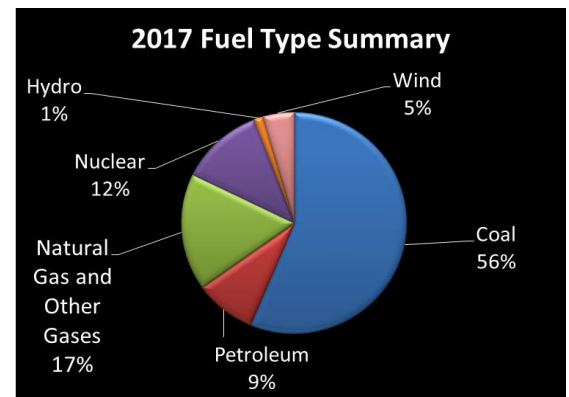
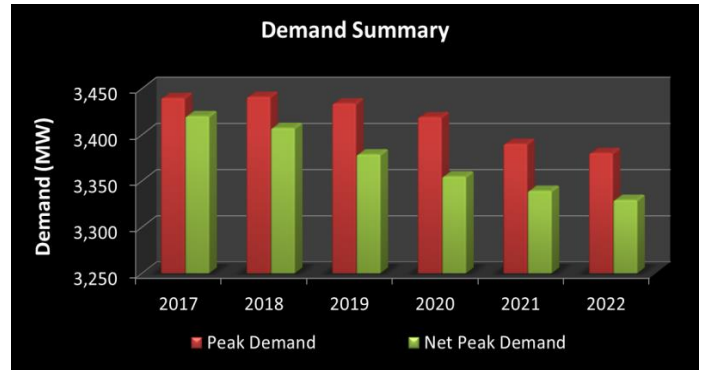
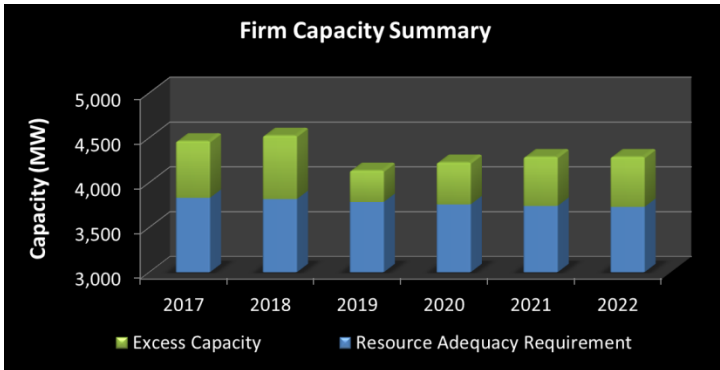
By Resource Adequacy Coordination

GREATER MISSOURI OPERATIONS COMPANY (KCP&L)



Firm Capacity Summary		Unit	2017	2018	2019	2020	2021	2022
Firm Capacity Resources	MW	2,076	2,076	1,628	1,531	1,531	1,565	
Firm Capacity Resources (Other)	MW	0	0	0	0	0	0	
Firm Capacity Purchases	MW	131	130	195	105	70	70	
Firm Capacity Sales	MW	0	0	0	0	0	0	
Confirmed Retirements	MW	0	0	448	546	546	546	
Scheduled Outages	MW	0	0	0	0	0	0	
Transmission Limitations	MW	0	0	0	0	0	0	
Other Capacity Adjustments - Additions	MW	0	0	0	0	0	0	
Other Capacity Adjustments - Reductions	MW	5	5	5	5	5	5	
Firm Capacity		MW	2,202	2,201	1,818	1,631	1,596	1,630
Demand Summary								
Peak Demand (Forecasted)	MW	1,926	1,925	1,902	1,858	1,805	1,756	
Firm Power Purchases	MW	0	0	0	0	0	0	
Firm Power Sales	MW	0	0	0	0	0	0	
Controllable and Dispatchable DR - Available	MW	51	73	78	78	78	78	
Other Controllable and Dispatchable DEG - Available	MW	0	0	0	0	0	0	
Net Peak Demand (Forecasted)		MW	1,875	1,851	1,824	1,781	1,727	1,679
Energy Efficiency and Conservation (Included in Peak Demand)	MW	16	27	56	106	162	220	
Standby Load Under Contract (Included in Peak Demand)	MW	0	0	0	0	0	0	
Requirements Summary								
Resource Adequacy Requirement	MW	2,099	2,074	2,043	1,994	1,935	1,880	
Excess Capacity	MW	103	128	0	0	0	0	
Deficient Capacity	MW	0	0	225	364	339	250	
Planning Reserve Margin								
SPP Target Planning Reserve Margin	%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	
	%	17.5%	18.9%	-0.3%	-8.4%	-7.6%	-2.9%	

KANSAS CITY POWER & LIGHT



Firm Capacity Summary		Unit	2017	2018	2019	2020	2021	2022
Firm Capacity Resources	MW	4,344	4,344	4,010	4,010	4,010	4,010	
Firm Capacity Resources (Other)	MW	0	0	0	0	0	0	
Firm Capacity Purchases	MW	256	292	292	292	292	292	
Firm Capacity Sales	MW	137	112	167	77	15	15	
Confirmed Retirements	MW	0	0	334	334	334	334	
Scheduled Outages	MW	0	0	0	0	0	0	
Transmission Limitations	MW	0	0	0	0	0	0	
Other Capacity Adjustments - Additions	MW	0	0	0	0	0	0	
Other Capacity Adjustments - Reductions	MW	0	0	0	0	0	0	
Firm Capacity	MW	4,463	4,524	4,135	4,225	4,287	4,287	
Demand Summary								
Peak Demand (Forecasted)	MW	3,440	3,441	3,434	3,419	3,390	3,380	
Firm Power Purchases	MW	0	0	0	0	0	0	
Firm Power Sales	MW	0	0	0	0	0	0	
Controllable and Dispatchable DR - Available	MW	20	34	55	64	51	51	
Other Controllable and Dispatchable DEG - Available	MW	0	0	0	0	0	0	
Net Peak Demand (Forecasted)	MW	3,420	3,407	3,379	3,355	3,339	3,329	
Energy Efficiency and Conservation (Included in Peak Demand)	MW	18	35	54	75	112	141	
Standby Load Under Contract (Included in Peak Demand)	MW	0	0	0	0	0	0	
Requirements Summary								
Resource Adequacy Requirement	MW	3,831	3,816	3,784	3,757	3,740	3,729	
Excess Capacity	MW	633	708	351	467	547	558	
Deficient Capacity	MW	0	0	0	0	0	0	
Planning Reserve Margin								
SPP Target Planning Reserve Margin	%	30.5%	32.8%	22.4%	25.9%	28.4%	28.8%	
SPP Target Planning Reserve Margin	%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	

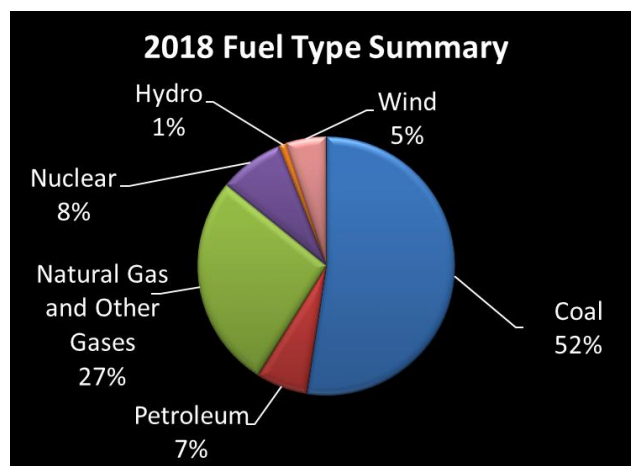


SPP 2018 RESOURCE ADEQUACY REPORT

Published on June 29th, 2018

By SPP Resource Adequacy

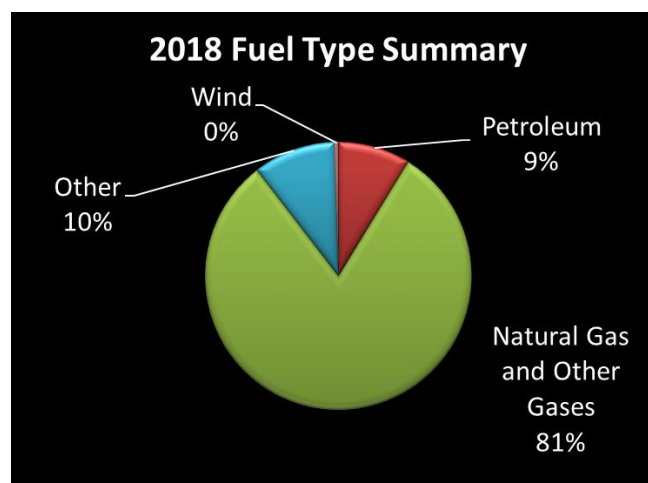
KANSAS CITY POWER & LIGHT



Firm Capacity Summary		Unit	2018
Firm Capacity Resources	MW		6,381
Firm Capacity Purchases	MW		391
Firm Capacity Sales	MW		52
Confirmed Retirements	MW		0
Scheduled Outages	MW		0
Transmission Limitations	MW		0
Other Capacity Adjustments - Additions	MW		0
Other Capacity Adjustments - Reductions	MW		0
Firm Capacity	MW		6,720
Demand Summary			
Peak Demand (Forecasted)	MW		5,483
Firm Power Purchases	MW		0
Firm Power Sales	MW		0
Controllable and Dispatchable DR	MW		239
Other Controllable and Dispatchable DEG	MW		0
Net Peak Demand (Forecasted)	MW		5,244
Requirements Summary			
Resource Adequacy Requirement	MW		5,874
Excess Capacity	MW		846
Deficient Capacity	MW		0
Planning Reserve Margin			
SPP Target Planning Reserve Margin	%		28.1%
	%		12.0%

KANSAS MUNICIPAL ENERGY AGENCY – EMP1

Firm Capacity Summary		Unit	2018
Firm Capacity Resources	MW		82
Firm Capacity Purchases	MW		21
Firm Capacity Sales	MW		0
Confirmed Retirements	MW		0
Scheduled Outages	MW		0
Transmission Limitations	MW		0
Other Capacity Adjustments - Addition	MW		0
Other Capacity Adjustments - Reductions	MW		0
Firm Capacity	MW		103
Demand Summary			
Peak Demand (Forecasted)	MW		106
Firm Power Purchases	MW		38
Firm Power Sales	MW		0
Controllable and Dispatchable DR	MW		0
Other Controllable and Dispatchable DEG	MW		29
Net Peak Demand (Forecasted)	MW		39
Requirements Summary			
Resource Adequacy Requirement	MW		43
Excess Capacity	MW		59
Deficient Capacity	MW		0
Planning Reserve Margin			
SPP Target Planning Reserve Margin	%		164.8%
	%		12.0%





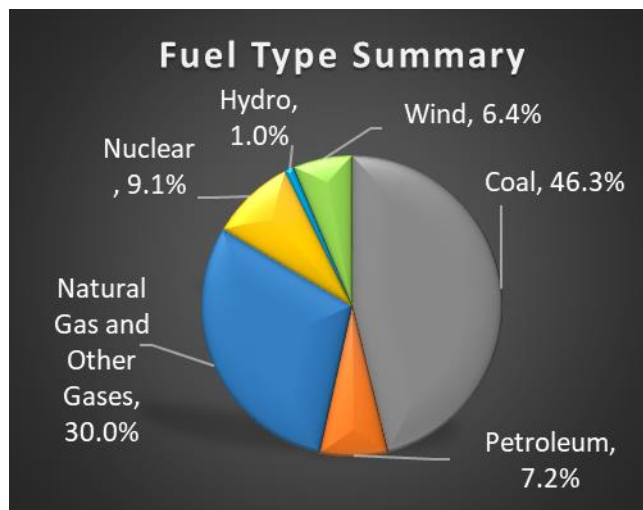
2019 SPP RESOURCE ADEQUACY REPORT

Published on June 14, 2019

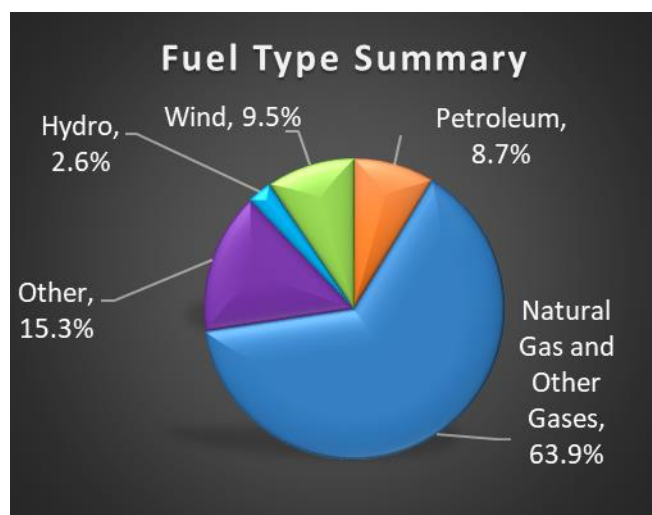
SPP Resource Adequacy

KANSAS CITY POWER AND LIGHT

Capacity Summary		Unit	2019
Capacity Resources	MW		5,641
Firm Capacity Purchases	MW		423
Firm Capacity Sales	MW		67
External Firm Power Purchases	MW		0
External Firm Power Sales	MW		0
Confirmed Retirements	MW		0
Total Capacity		MW	5,997
Demand Summary			
Forecasted Peak Demand	MW		5,408
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		0
Controllable and Dispatchable DR	MW		235
Controllable and Dispatchable BTM Gen	MW		2
Net Peak Demand		MW	5,171
Requirements Summary			
Resource Adequacy Requirement	MW		5,792
Excess Capacity	MW		205
Deficient Capacity		MW	0
LRE planning reserve margin	%		15.97
Planning Reserve Margin	%		12.00



KANSAS MUNICIPAL ENERGY AGENCY – EMP1



Capacity Summary		Unit	2019
Capacity Resources	MW		79
Firm Capacity Purchases	MW		6
Firm Capacity Sales	MW		19
External Firm Power Purchases	MW		2
External Firm Power Sales	MW		0
Confirmed Retirements	MW		0
Total Capacity		MW	68
Demand Summary			
Forecasted Peak Demand	MW		105
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		36
Controllable and Dispatchable DR	MW		0
Controllable and Dispatchable BTM Gen	MW		27
Net Peak Demand		MW	42
Requirements Summary			
Resource Adequacy Requirement	MW		47
Excess Capacity	MW		21
Deficient Capacity		MW	0
LRE planning reserve margin	%		62.61
Planning Reserve Margin	%		12.00

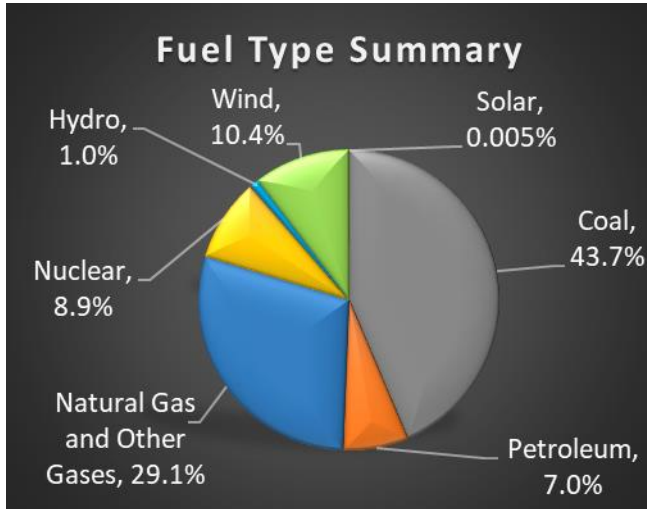


2020 SPP RESOURCE ADEQUACY REPORT

Published on June 15, 2020

SPP Resource Adequacy

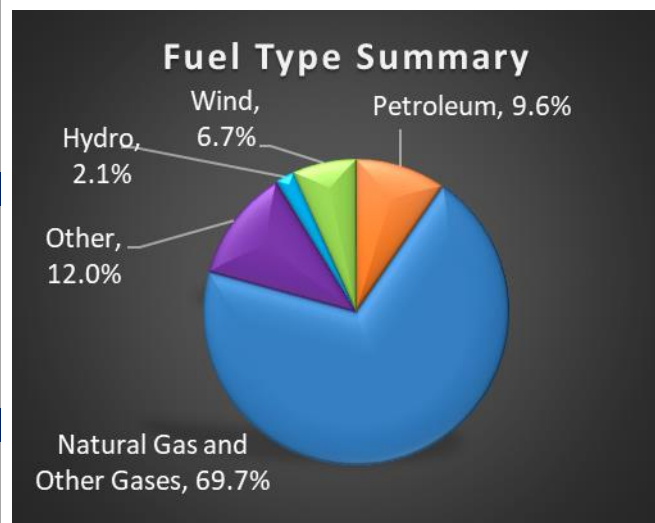
KANSAS CITY POWER AND LIGHT



Capacity Summary		Unit	2020
Capacity Resources	MW		5,634
Firm Capacity Purchases	MW		686
Firm Capacity Sales	MW		67
External Firm Power Purchases	MW		0
External Firm Power Sales	MW		0
Confirmed Retirements	MW		97
Total Capacity	MW		6,155
Demand Summary			
Forecasted Peak Demand	MW		5,450
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		0
Controllable and Dispatchable DR	MW		159
Controllable and Dispatchable BTM Gen	MW		0
Net Peak Demand	MW		5,291
Requirements Summary			
Resource Adequacy Requirement	MW		5,925
Excess Capacity	MW		230
Deficient Capacity	MW		0
LRE planning reserve margin	%		16.35
Planning Reserve Margin	%		12.00

KANSAS MUNICIPAL ENERGY AGENCY – EMP1

Capacity Summary		Unit	2020
Capacity Resources	MW		79
Firm Capacity Purchases	MW		6
Firm Capacity Sales	MW		0
External Firm Power Purchases	MW		2
External Firm Power Sales	MW		0
Confirmed Retirements	MW		0
Total Capacity	MW		87
Demand Summary			
Forecasted Peak Demand	MW		106
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		36
Controllable and Dispatchable DR	MW		0
Controllable and Dispatchable BTM Gen	MW		28
Net Peak Demand	MW		41
Requirements Summary			
Resource Adequacy Requirement	MW		46
Excess Capacity	MW		40
Deficient Capacity	MW		0
LRE planning reserve margin	%		109.81
Planning Reserve Margin	%		12.00





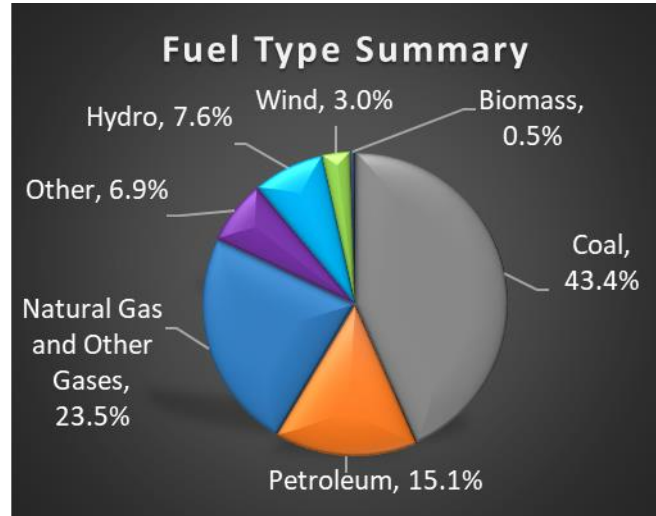
2021 SPP RESOURCE ADEQUACY REPORT

Published on June 15, 2021

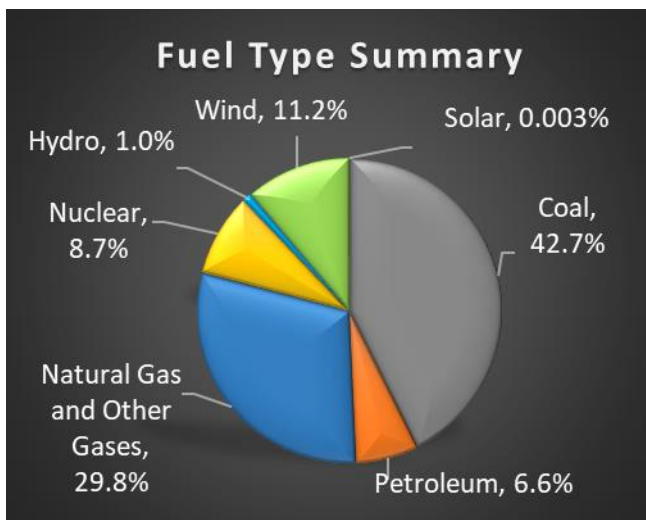
SPP Resource Adequacy

KANSAS CITY BOARD OF PUBLIC UTILITIES

Capacity Summary		Unit	2021
Capacity Resources	MW		518
Firm Capacity Purchases	MW		20
Firm Capacity Sales	MW		0
External Firm Power Purchases	MW		43
External Firm Power Sales	MW		5
Confirmed Retirements	MW		0
Total Capacity	MW		576
Demand Summary			
Forecasted Peak Demand	MW		456
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		0
Controllable and Dispatchable DR	MW		0
Net Peak Demand	MW		456
Requirements Summary			
Resource Adequacy Requirement	MW		511
Excess Capacity	MW		65
Deficient Capacity	MW		0
LRE planning reserve margin	%		26.28
Planning Reserve Margin	%		12.00



KANSAS CITY POWER AND LIGHT



Capacity Summary		Unit	2021
Capacity Resources	MW		5,615
Firm Capacity Purchases	MW		748
Firm Capacity Sales	MW		193
External Firm Power Purchases	MW		0
External Firm Power Sales	MW		0
Confirmed Retirements	MW		0
Total Capacity	MW		6,169
Demand Summary			
Forecasted Peak Demand	MW		5,444
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		0
Controllable and Dispatchable DR	MW		181
Net Peak Demand	MW		5,263
Requirements Summary			
Resource Adequacy Requirement	MW		5,895
Excess Capacity	MW		274
Deficient Capacity	MW		0
LRE planning reserve margin	%		17.22
Planning Reserve Margin	%		12.00



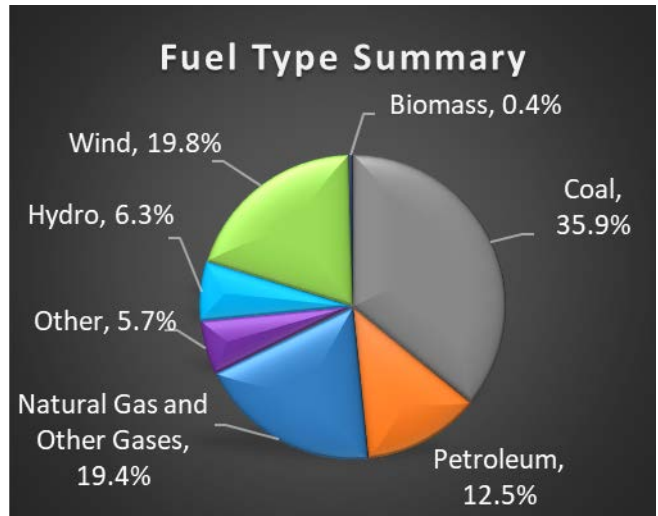
2022 SPP RESOURCE ADEQUACY REPORT

Published on June 15, 2022

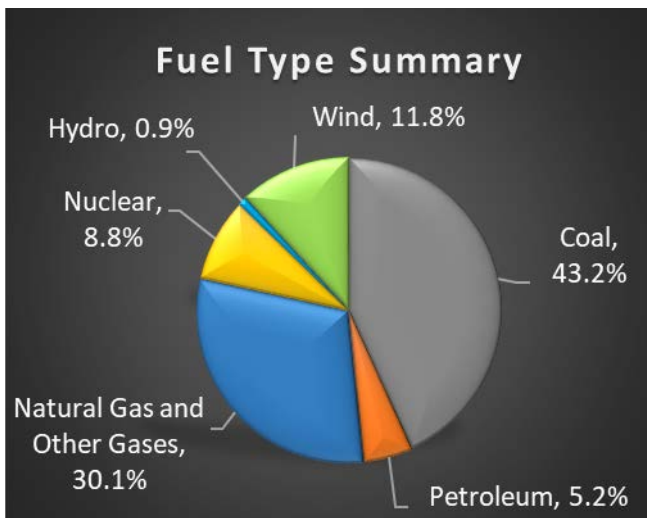
SPP Resource Adequacy

KANSAS CITY BOARD OF PUBLIC UTILITIES

Capacity Summary		Unit	2022
Capacity Resources	MW		518
Firm Capacity Purchases	MW		141
Firm Capacity Sales	MW		0
External Firm Power Purchases	MW		43
External Firm Power Sales	MW		5
Confirmed Retirements	MW		0
Total Capacity	MW		697
Demand Summary			
Forecasted Peak Demand	MW		459
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		0
Controllable and Dispatchable DR	MW		0
Net Peak Demand	MW		459
Requirements Summary			
Resource Adequacy Requirement	MW		514
Excess Capacity	MW		183
Deficient Capacity	MW		0
LRE planning reserve margin	%		51.82
Planning Reserve Margin	%		12.00



KANSAS CITY POWER & LIGHT



Capacity Summary		Unit	2022
Capacity Resources	MW		5,522
Firm Capacity Purchases	MW		767
Firm Capacity Sales	MW		55
External Firm Power Purchases	MW		0
External Firm Power Sales	MW		0
Confirmed Retirements	MW		0
Total Capacity	MW		6,234
Demand Summary			
Forecasted Peak Demand	MW		5,389
Internal Firm Power Sales	MW		0
Internal Firm Power Purchases	MW		0
Controllable and Dispatchable DR	MW		0
Net Peak Demand	MW		5,389
Requirements Summary			
Resource Adequacy Requirement	MW		6,036
Excess Capacity	MW		198
Deficient Capacity	MW		0
LRE planning reserve margin	%		15.68
Planning Reserve Margin	%		12.00