



HURRICANE CITY UTAH

Mayor
Nanette Billings

City Manager
Kaden C. DeMille

Power Board
Mac J. Hall, Chair
Jerry Brisk
Pam Humphries
Dave Imlay
Joseph Prete
Charles Reeve

Power Board Meeting Agenda

5/3/2023

3:00 PM

Power Department Meeting Room – 526 W 600 N

Notice is hereby given that the Power Board will hold a Regular Meeting in the Power Department Meeting room located at 526 W 600 N, Hurricane, UT. A silent roll call will be taken, along with the Pledge of Allegiance and prayer by invitation.

AGENDA

1. Pledge of Allegiance
2. Prayer
3. Approval of minutes from April 2023

STAFF REPORTS

Scott Hughes/Power Director
Brian Anderson/Transmission & Distribution Superintendent
Mike Ramirez/Service Superintendent
Jared Ross/Substation & Generation Superintendent

BUDGET

OLD BUSINESS

1. 1150 West Easements Update

NEW BUSINESS

1. Southwest Utah Technical Task Force (SWUTTF) Update
2. UAMPS Updates
3. **Closed meeting** held pursuant to Utah Code section 52-4-205 to conduct a strategy session to discuss market conditions relevant to a business decision regarding the value of a project entity asset

ADJOURNMENT

The above notice was posted to the Hurricane City website, the Utah State Public Notice Website, and at the following locations:

1. Hurricane City Office – 147 North 870 West, Hurricane, UT
2. US Post Office – 1075 West 100 North, Hurricane, UT
3. Washington County Library (Hurricane Branch) – 36 South 300 West, Hurricane, UT





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1 The Hurricane City Power Board met on April 5, 2023, at 3:00 p.m. at the Clifton Wilson Substation on 526 W
2 600 N.

3
4 In attendance were Mac Hall, Pam Humphries, Charles Reeve, Jerry Brisk, Joseph Prete, Dave Imlay (by phone),
5 Scott Hughes, Michael Ramirez, Brian Anderson, Jared Ross, Dayton Hall, Fred Resch, and Crystal Wright.

6
7 Mac Hall welcomed everyone to the meeting; Fred Resch led the Pledge of Allegiance and Scott Hughes
8 offered the prayer. Pam Humphries motioned to approve minutes from the March 2023 meeting. Charles
9 Reeve seconded the motion. Motion passed unanimously.

10
11 **Scott Hughes:** Scott Hughes reported an update on two new employees that were hired. He introduced Riley
12 Steglich and Brent George who were both hired as Groundmen. We have also picked an employee to hire on a
13 temporary basis that has verbally accepted the position and will be starting soon.

14
15 **Brian Anderson:** Brian Anderson reported that the line crew has been doing nothing except working on 600
16 North Phase 3A. The crew just finished setting the last pole. We had to shut down 600 North to allow a crane
17 to come set the top of Pole 60. We had hoped to have the poles all set by the end of March and we ran into
18 some delays that were weather related. We need to pull in transmission wire and get it ready to be re-
19 energized before the outage we had scheduled for the end of April is over. Pam Humphries asked about an
20 outage on 180 West. Scott Hughes reported on the outage. There was a line the crew thought was dead. One
21 safety step was missed during the check, and a live line was grounded causing an outage for a few minutes.
22 There was a safety meeting after-action discussion about the incident.

23
24 **Mike Ramirez:** Mike Ramirez reported that we're still working with the DER Subcommittee. Currently working
25 on EV chargers. Scott Hughes stated the grant we had investigated didn't work out. He would still like to
26 pursue looking into some chargers as a potential revenue source. Residential building has slowed down, but
27 commercial construction has picked up. We are behind a little on construction projects due to our lack of
28 employees, but it hasn't become too big of an issue yet.

29
30 **Jared Ross:** Jared Ross reported on the progress of Three Falls Substation. The two large transformer pads are
31 complete. We are working on installing conduit. The wet weather has delayed the contractors a little, but
32 they've been great to keep working to complete what they can. Dave Imlay mentioned taking a lot of pictures
33 for historical reasons and to help remember exactly what was buried underground.

34
35 **Budget:** Scott Hughes reported on the budget numbers. Pam asked if the increase in kw can be explained by an
36 increase in residents or just more electronic usage. Scott replied that a colder spring and people that use
37 electric heat that could be one explanation for some of the increased kw. Joseph asked if there's an
38 explanation for why January was so high. Scott said natural gas prices being high and the extended cold period



39 contributed largely to that problem in January. He has been meeting with Kaden & Paige regarding a game
40 plan for rates. The plan right now is to watch how increases we have implemented change the financials to see
41 if we can weather the summer without any additional increase. It's a risky move, but we feel like we want to
42 see if we can stay where we are. If it doesn't help enough, we may have to implement another rate increase
43 before the fall. Dave Imlay stated at a trade show he attended he spoke with multiple other cities that have
44 stated they're in similar financial positions due to the cost of power. Scott Hughes explained how various cities
45 within our Southern Utah area are structuring rates in the wake of these soaring power costs. Joseph asked if
46 we could get data to help the City Council field questions from residents regarding rates. He would like to see
47 rate comparisons between Hurricane City rates and costs compared to those from neighboring cities. Scott
48 Hughes stated that rate information is available on many websites, but with the administration of Power Cost
49 Adjustments (PCA's) by various cities, it will be difficult to compare effectively not knowing what that
50 additional amount is.

51
52 **Sky Ranch Update:** Scott Hughes stated we have submitted a counteroffer to Rocky Mountain Power for the
53 Sky Ranch area. They asked about cancelling the contracts we just signed if they approved the deal. We are still
54 discussing internally what our next steps will be to move forward with this discussion.

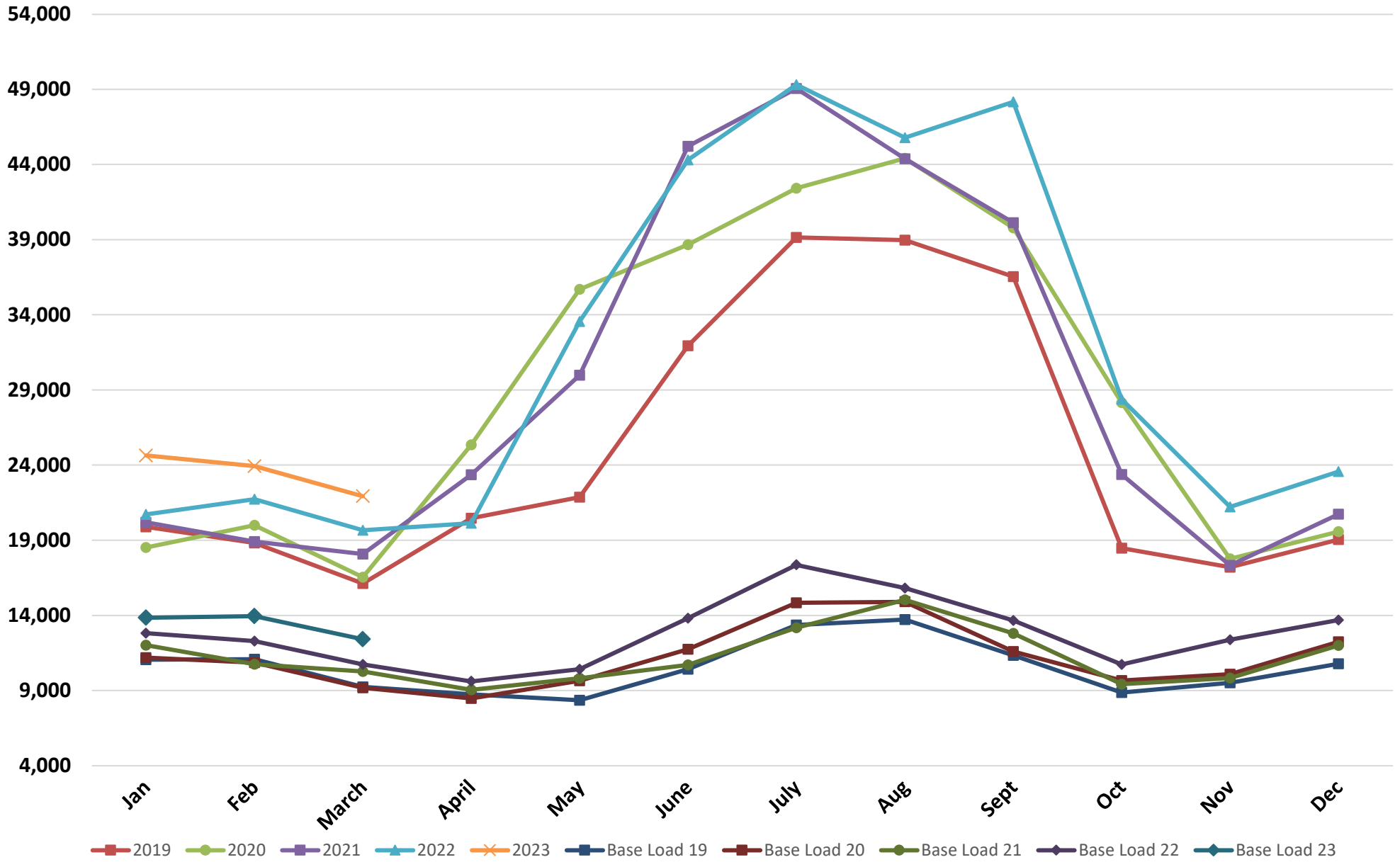
55
56 **DER Subcommittee Update:** Scott Hughes reported that Mike Ramirez covered that update during his
57 presentation earlier.

58
59 **UAMPS Updates:** Scott Hughes stated there was information contained in the packet, but he will update on
60 just a few things with projects. The Hunter project is dealing with regional haze and ozone transport issues.
61 The debate is whether they must install Selective Catalytic Reduction (SCR) in their plant. Steel Solar is still
62 having trouble with the panels. It was originally supposed to go live in September, but it got moved to
63 December. The new commercial operation date will likely be Q1 of 2024. CFPP is still moving forward. They are
64 being aggressive with keeping that project moving forward. Joseph asked for an update regarding new
65 subscriptions. Scott replied no new subscription yet, but they are trying some things with incentives to try to
66 get people to sign on to the project. Nebo has been run in the past as a peaking plant. It is now being run as a
67 full plant and a gas contract was secured to provide more consistent pricing for their power.

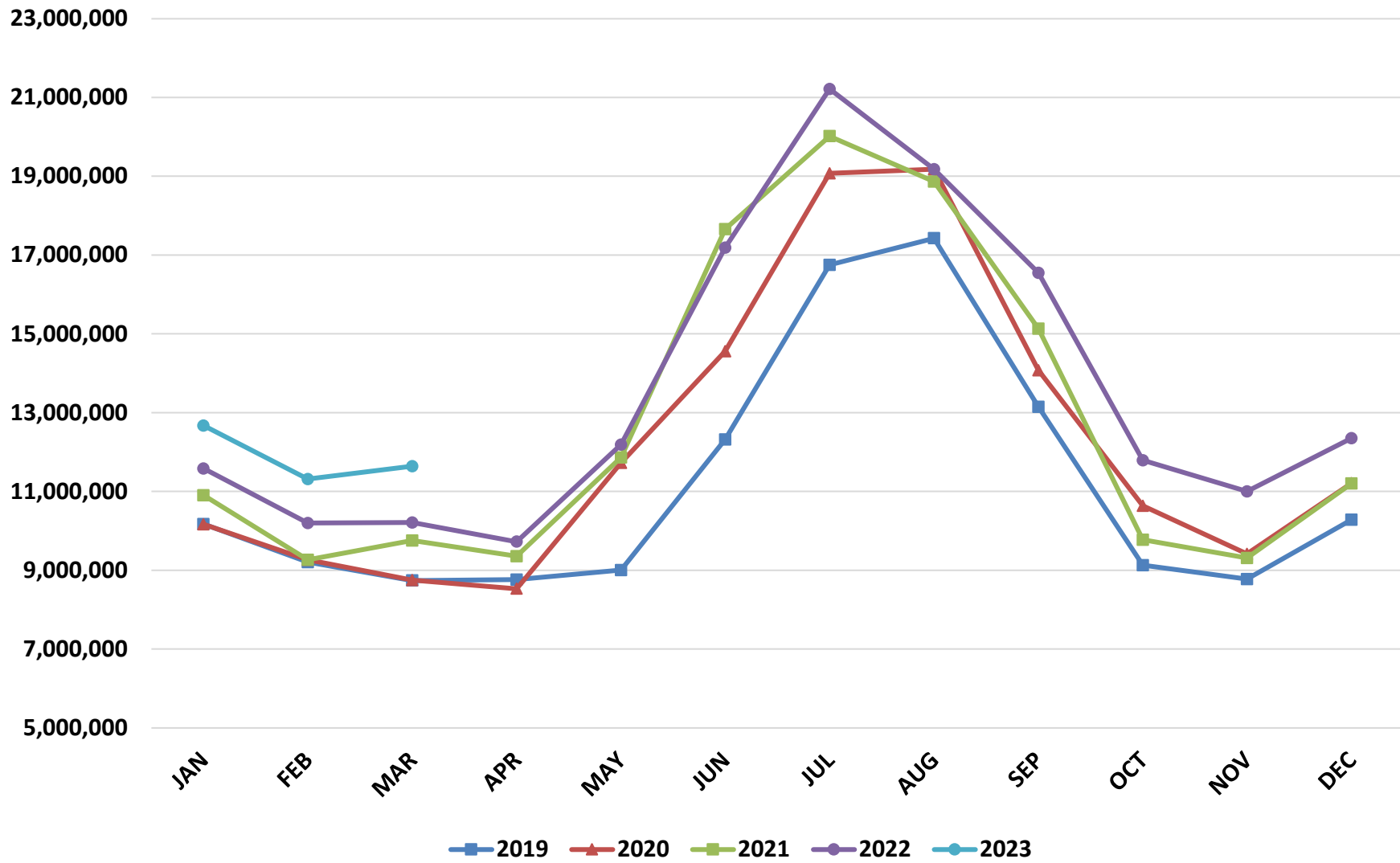
68
69 The Power Board adjourned at 4:00 p.m. The next Power Board Meeting is scheduled for May 3, 2023, at 3:00
70 p.m.

BUDGET

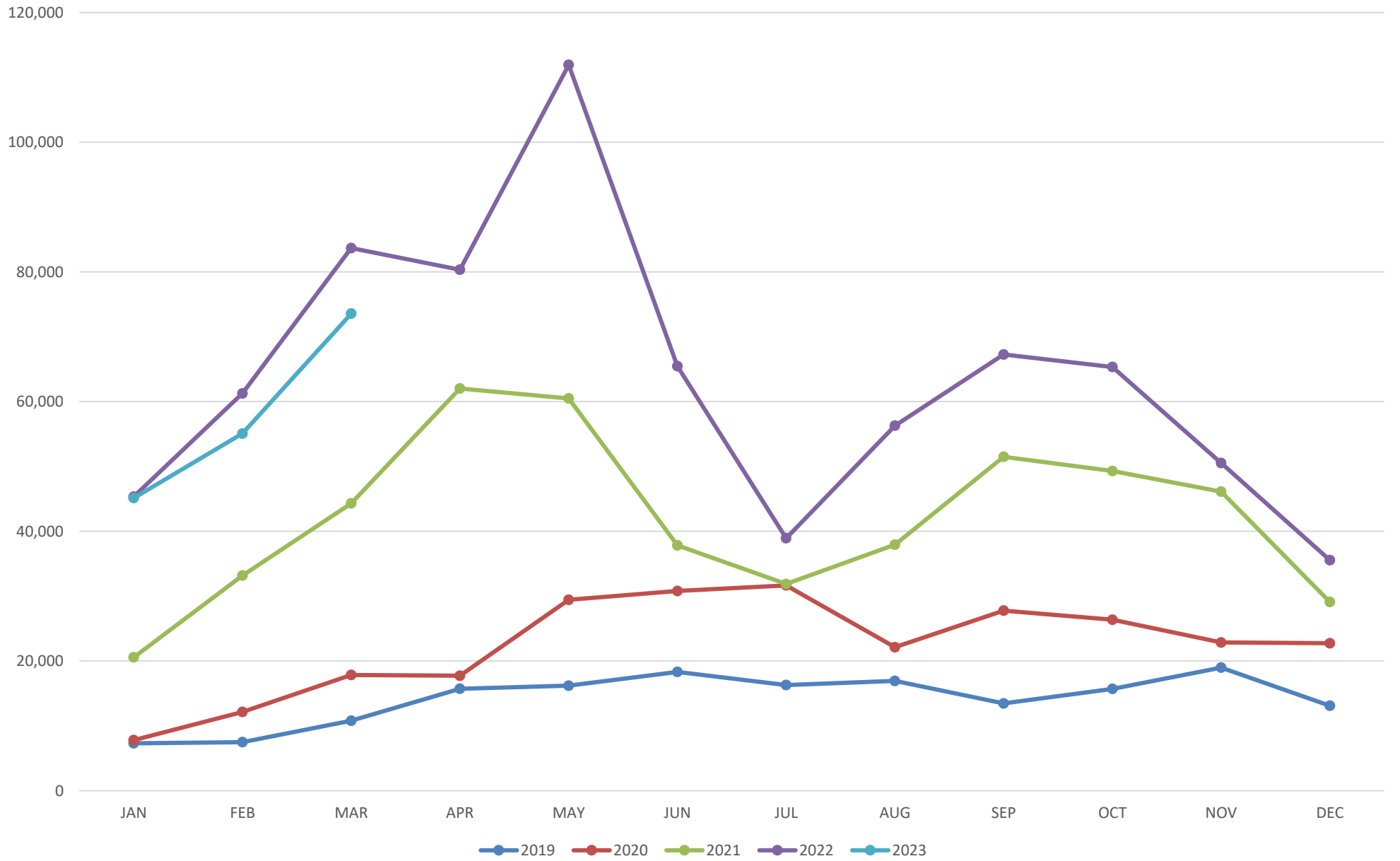
2019 - 2023 KW LOAD



2019 - 2023 KWH LOAD



Solar Kwh



AVERAGE YEARLY POWER PRICES

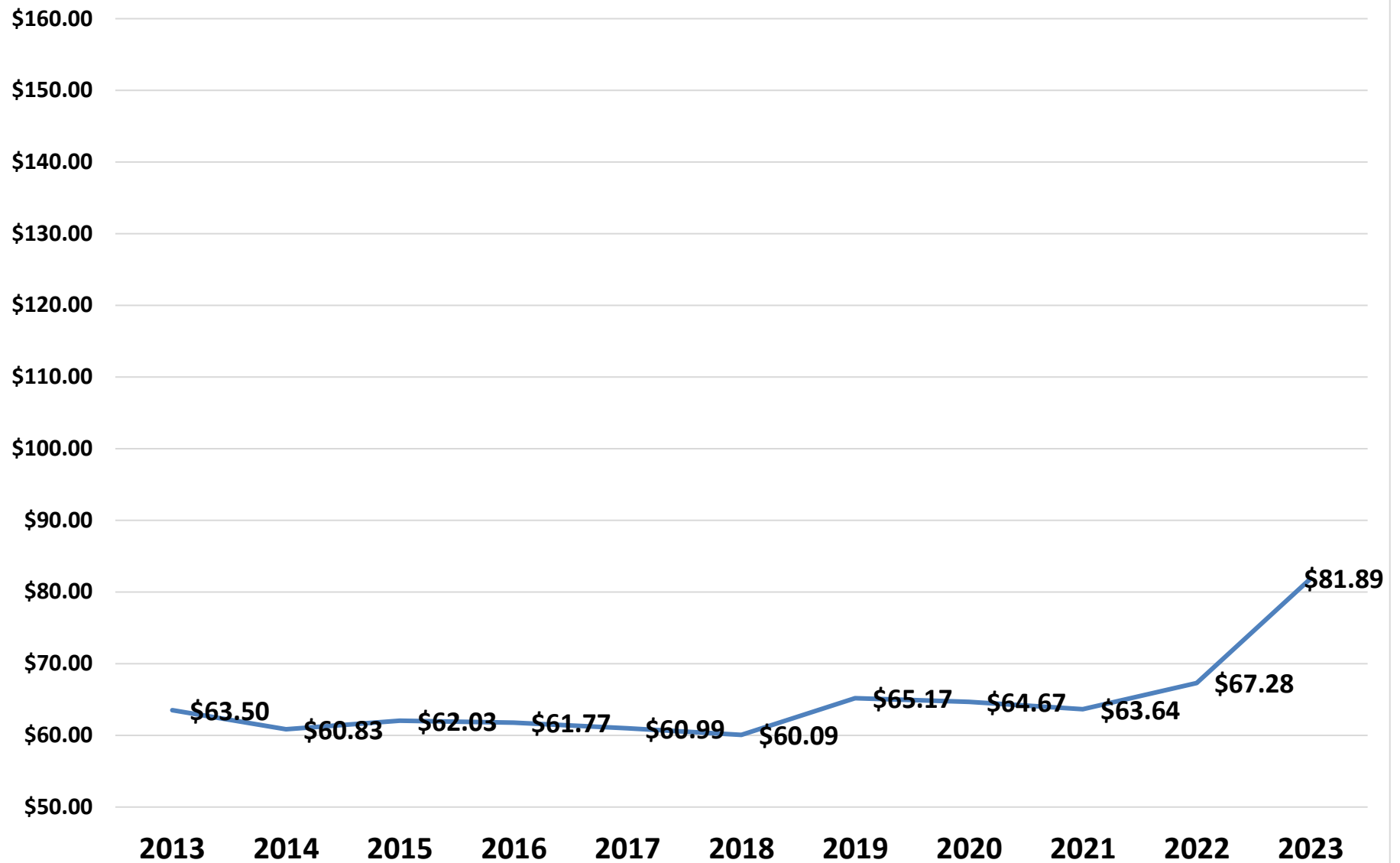
22-23 bdgt amount (as of February) **\$94.87**
 BDGT Year to Date **\$104.87**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<i>Jan</i>	\$56.66	\$60.76	\$58.36	\$59.86	\$57.87	\$59.07	\$60.62	\$59.75	\$57.76	\$60.14	\$68.25	\$132.00
<i>Feb</i>	\$59.78	\$58.15	\$64.45	\$65.94	\$62.38	\$63.04	\$60.96	\$67.00	\$60.67	\$63.19	\$70.88	\$85.08
<i>Mar</i>	\$57.28	\$63.50	\$60.83	\$62.03	\$61.77	\$60.99	\$60.09	\$65.17	\$64.67	\$63.64	\$67.28	\$81.89
<i>Apr</i>	\$55.43	\$63.77	\$63.75	\$61.88	\$59.71	\$59.49	\$55.02	\$55.44	\$55.92	\$61.86	\$82.63	
<i>May</i>	\$53.31	\$60.28	\$61.64	\$64.71	\$65.51	\$60.32	\$58.86	\$58.55	\$58.55	\$59.69	\$72.66	
<i>June</i>	\$50.09	\$56.05	\$59.15	\$58.30	\$65.51	\$58.54	\$52.17	\$55.30	\$53.44	\$86.91	\$77.60	
<i>Jul</i>	\$51.16	\$55.62	\$56.85	\$56.91	\$56.95	\$58.29	\$67.87	\$54.29	\$55.98	\$81.04	\$85.31	
<i>Aug</i>	\$51.57	\$55.49	\$56.84	\$55.27	\$57.67	\$59.00	\$66.55	\$54.58	\$78.40	\$72.03	\$96.60	
<i>Sep</i>	\$54.79	\$58.80	\$59.46	\$56.06	\$56.97	\$62.36	\$55.00	\$54.34	\$64.93	\$82.38	\$127.29	
<i>Oct</i>	\$62.68	\$60.35	\$61.42	\$56.97	\$59.23	\$59.79	\$59.36	\$59.70	\$62.82	\$75.92	\$83.45	
<i>Nov</i>	\$63.37	\$61.65	\$63.03	\$59.68	\$64.18	\$62.14	\$64.60	\$63.80	\$63.60	\$70.47	\$96.34	
<i>Dec</i>	\$56.02	\$58.37	\$60.91	\$57.90	\$61.51	\$58.80	\$61.61	\$58.55	\$60.33	\$70.07	\$161.27	
<i>Yr Avg</i>	\$56.01	\$59.40	\$60.56	\$59.63	\$60.64	\$60.15	\$60.23	\$58.87	\$61.42	\$70.61	\$90.80	\$99.65
<i>Weighted Avg</i>	\$55.22	\$58.80	\$60.34	\$58.99	\$59.55	\$59.90	\$60.56	\$58.11	\$61.98	\$72.46	\$92.09	\$100.69

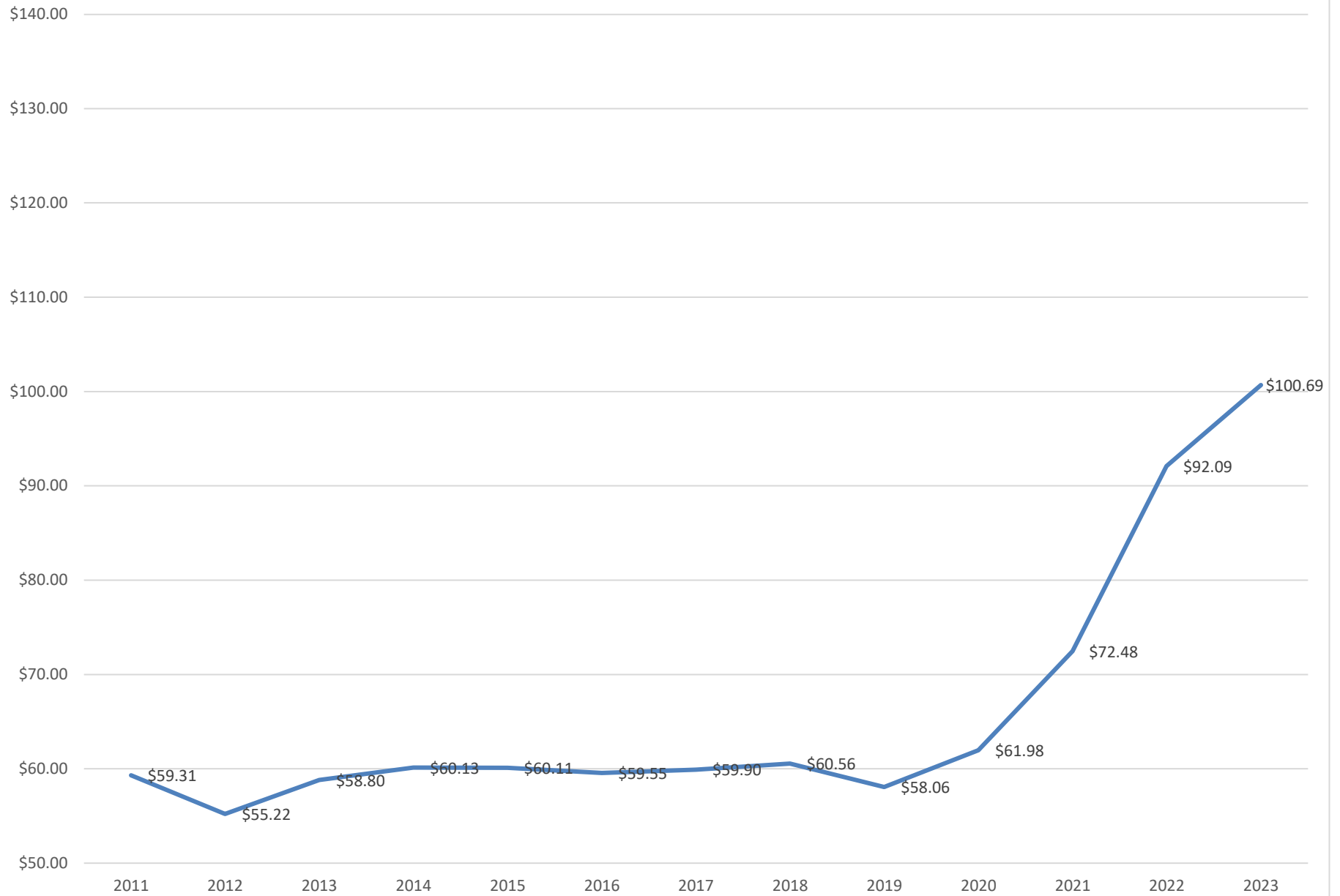
**Cy to
Date**

These figures capture the total cost of power to the power department. The power department uses costs only associated with the purchasing and generation of power and includes debt payments and interest associated with power resources.

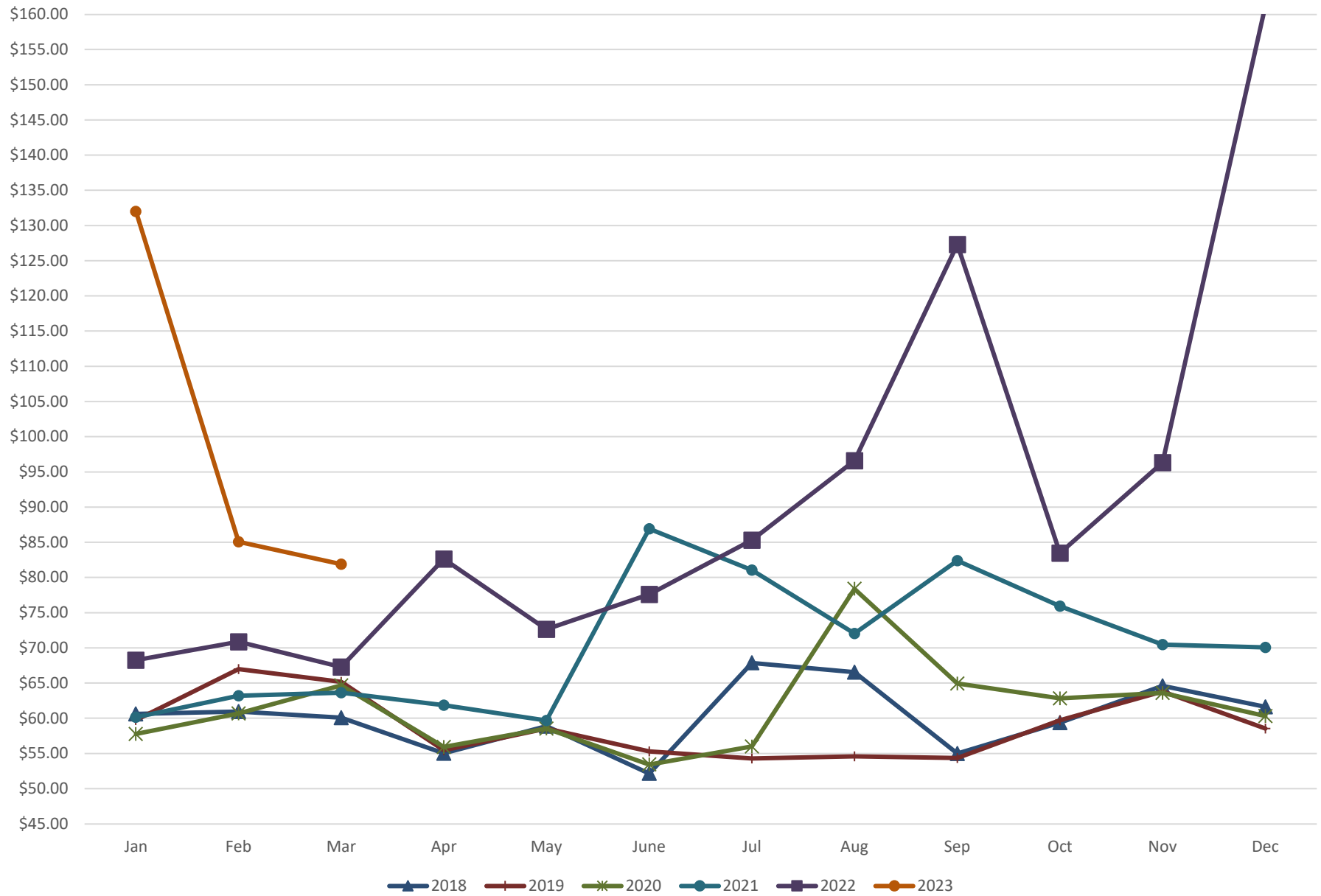
Mar



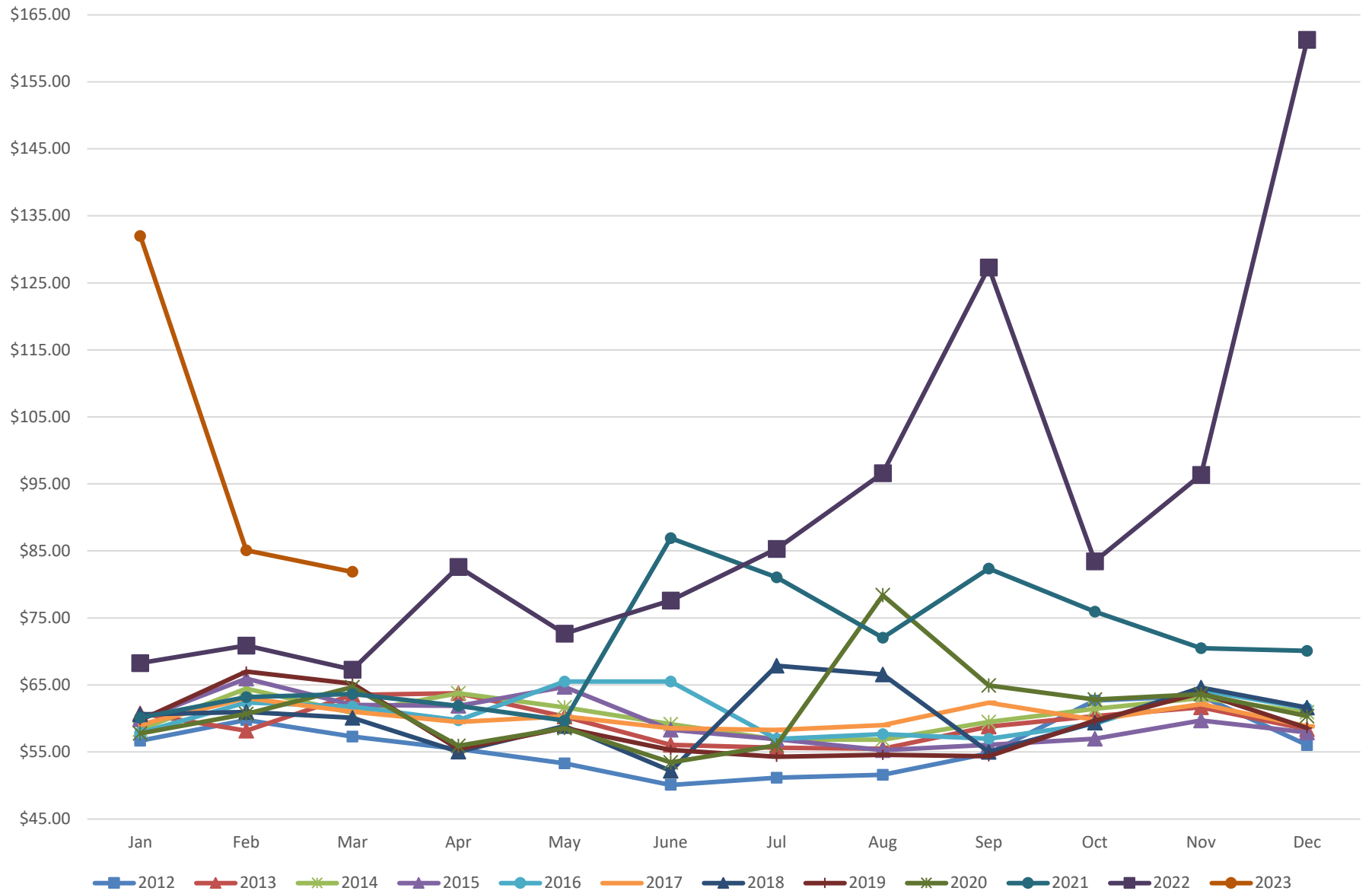
Weighted Average



Avg Monthly Price (5 Yrs)



Avg Monthly Price



GPA PROJECT

PROJECT UPDATE



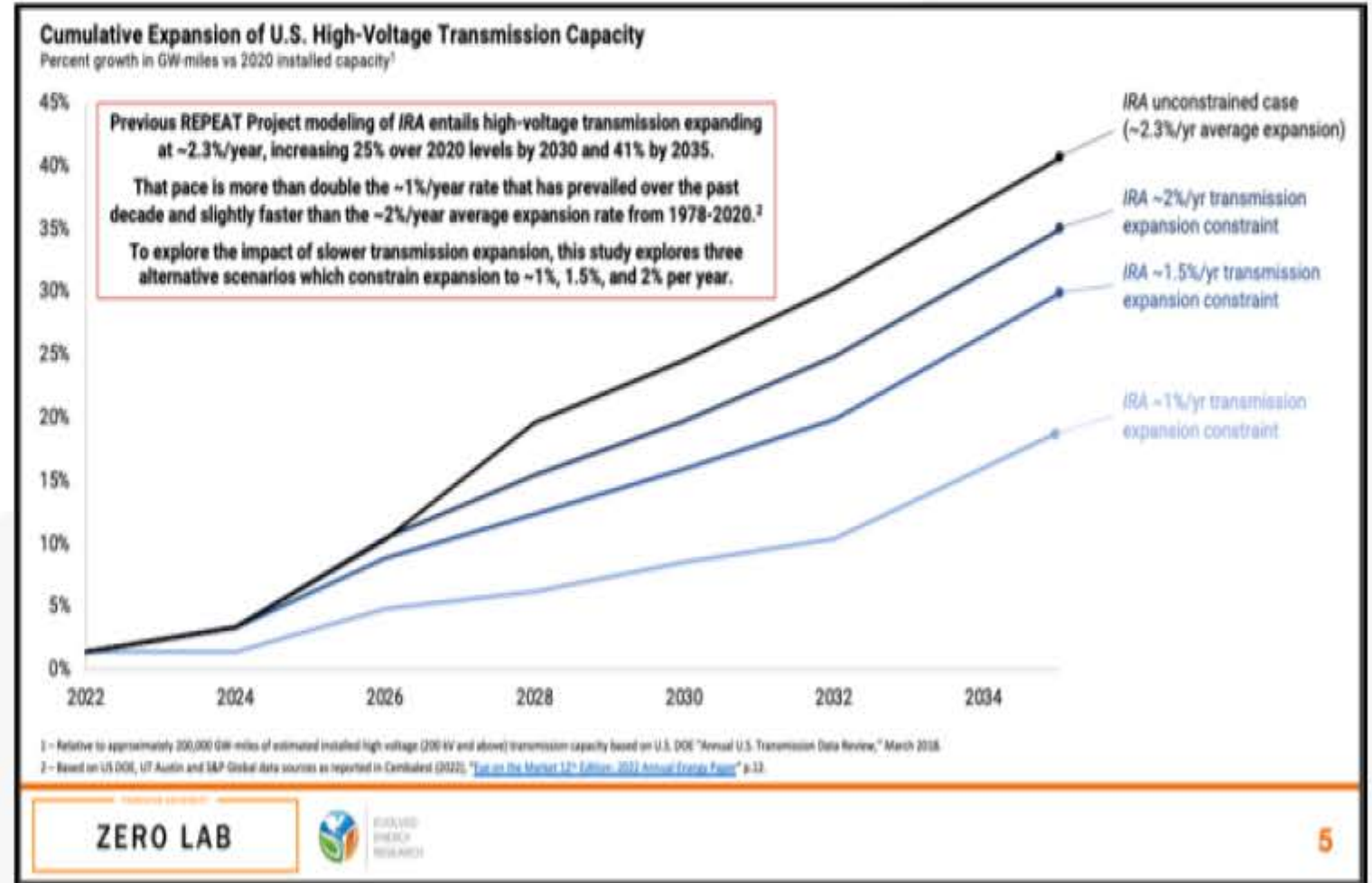
◦ STATE OF UTAH ◦

UAMPS



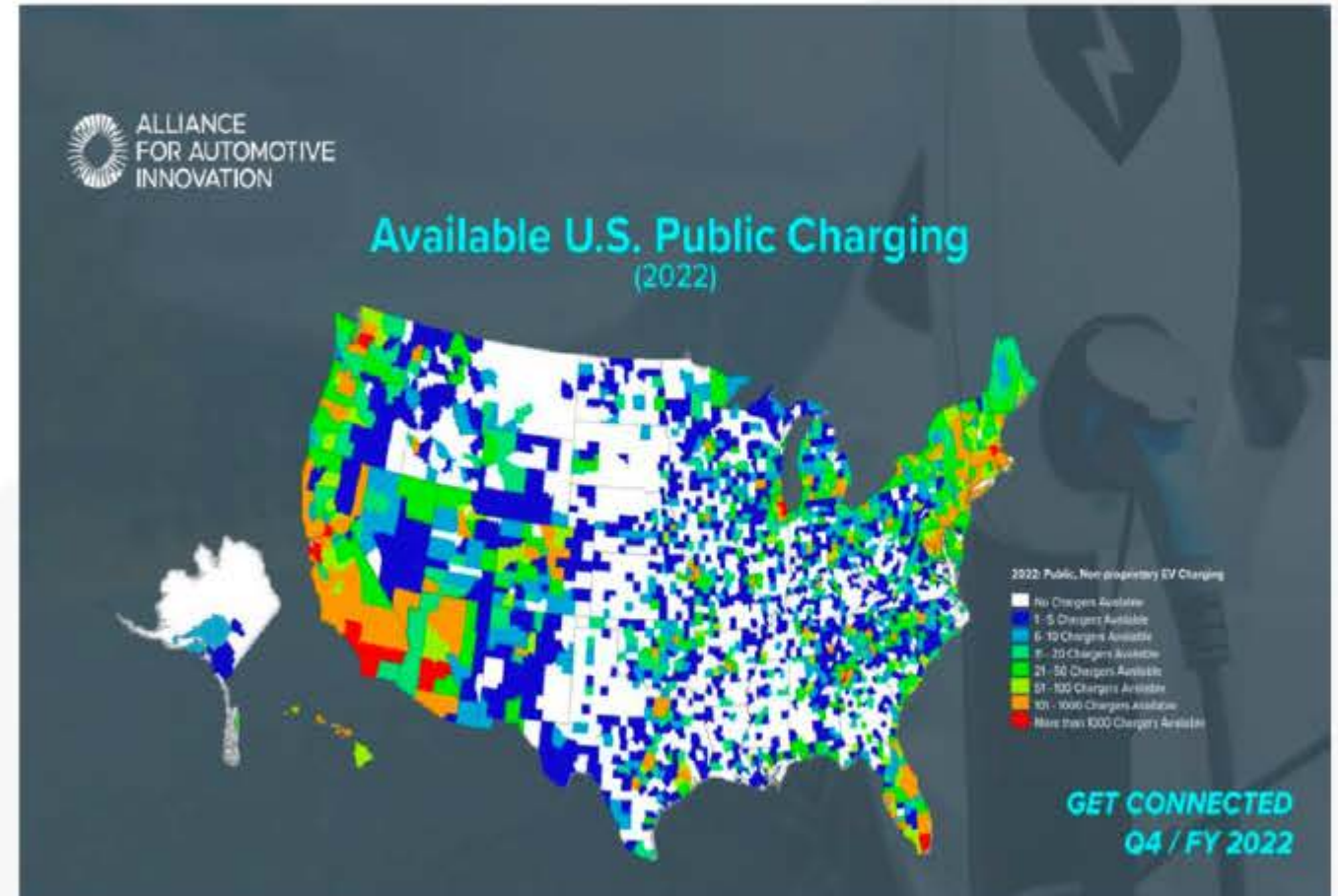
IRA and Transmission

- To unlock the full emissions reduction potential of the Inflation Reduction Act, the pace of transmission expansion must more than double the rate over the last decade to reach an average of ~2.3%/year.



IRA and EVs

- 91 EV models
- 14 qualify for new EV tax credit
- EV market share of new vehicles in 2022: 7%
- 25,000 new chargers added nationwide in 2022 – 934,958 new EVs added
- 53% of counties in U.S. added no new chargers
- 25% of new charger infrastructure was in CA



Transformer Conservation Standard Update

- **June 6, 2022:** President Biden [invokes](#) the DPA to expedite the production of transformers.
- **June 2022:** DOE Secretary Granholm directs Electricity Subsector Coordinating Council to establish a “Tiger Team” to examine the supply chain crisis. It concluded that current transformer production is not meeting demand—demand that is expected to increase for the foreseeable future.
- **January 1, 2023:** DOE promulgates proposed rule: Energy Conservation Program: Energy Conservation Standards for Distribution Transformers ([88 Fed. Reg. 1722](#)), and on later the comment period was extended to March 27, 2023.
- **April 3, 2023:** Congress sends letter opposed to rule.



PAYSON PROJECT

PROJECT UPDATE

UAMPS



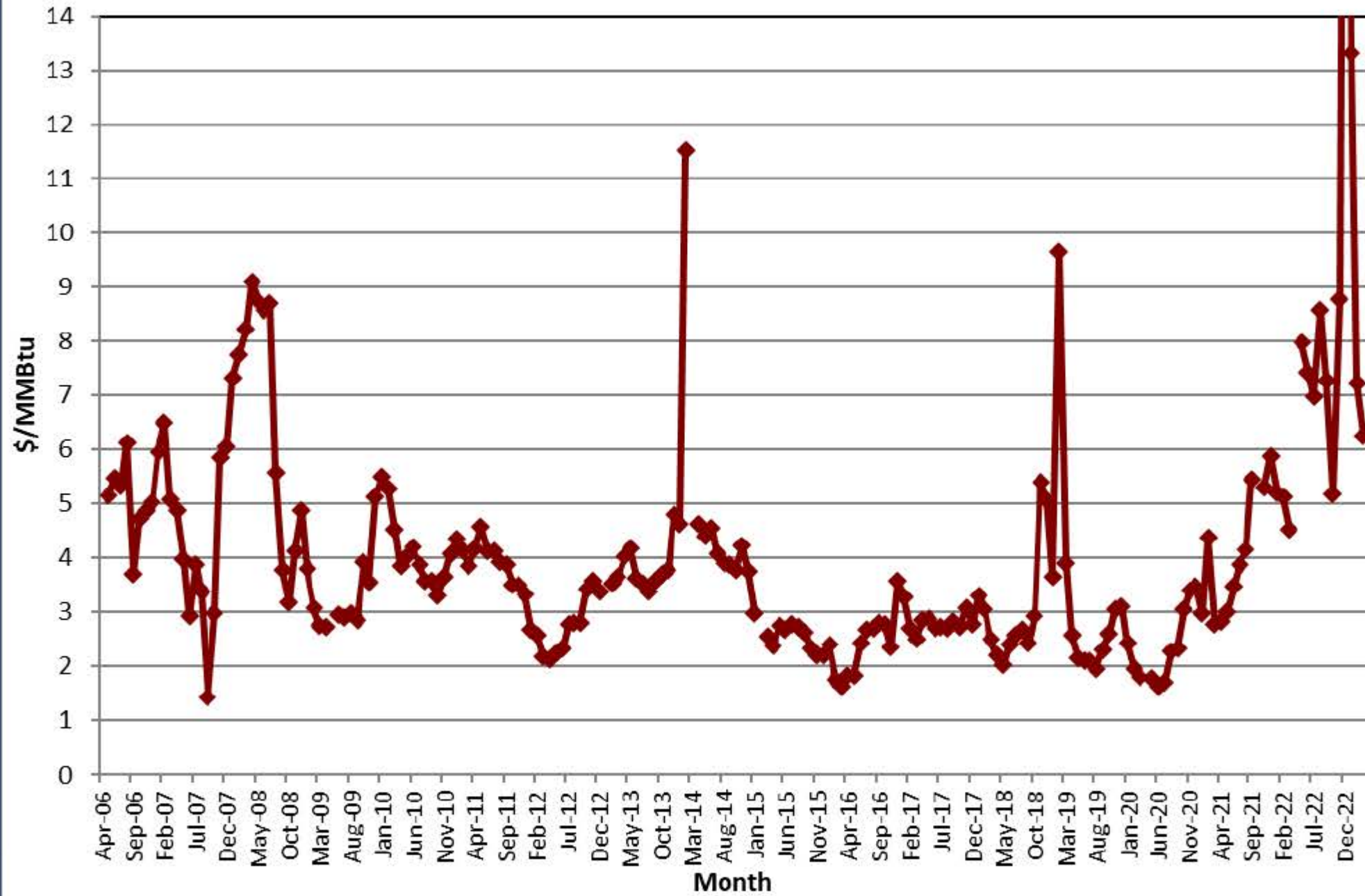
March Statistics

• Equiv. Availability Factor	100.00%
• Net Plant Heat Rate	8410
• Net Capacity Factor	82.69%
• CTG Starts	1
• Days Plant Ran	30
• Hours of Operations	723.12
• Average Hours/Day	23.33
• Average Plant Load	118.4
• Total Net MWh Output	85,642

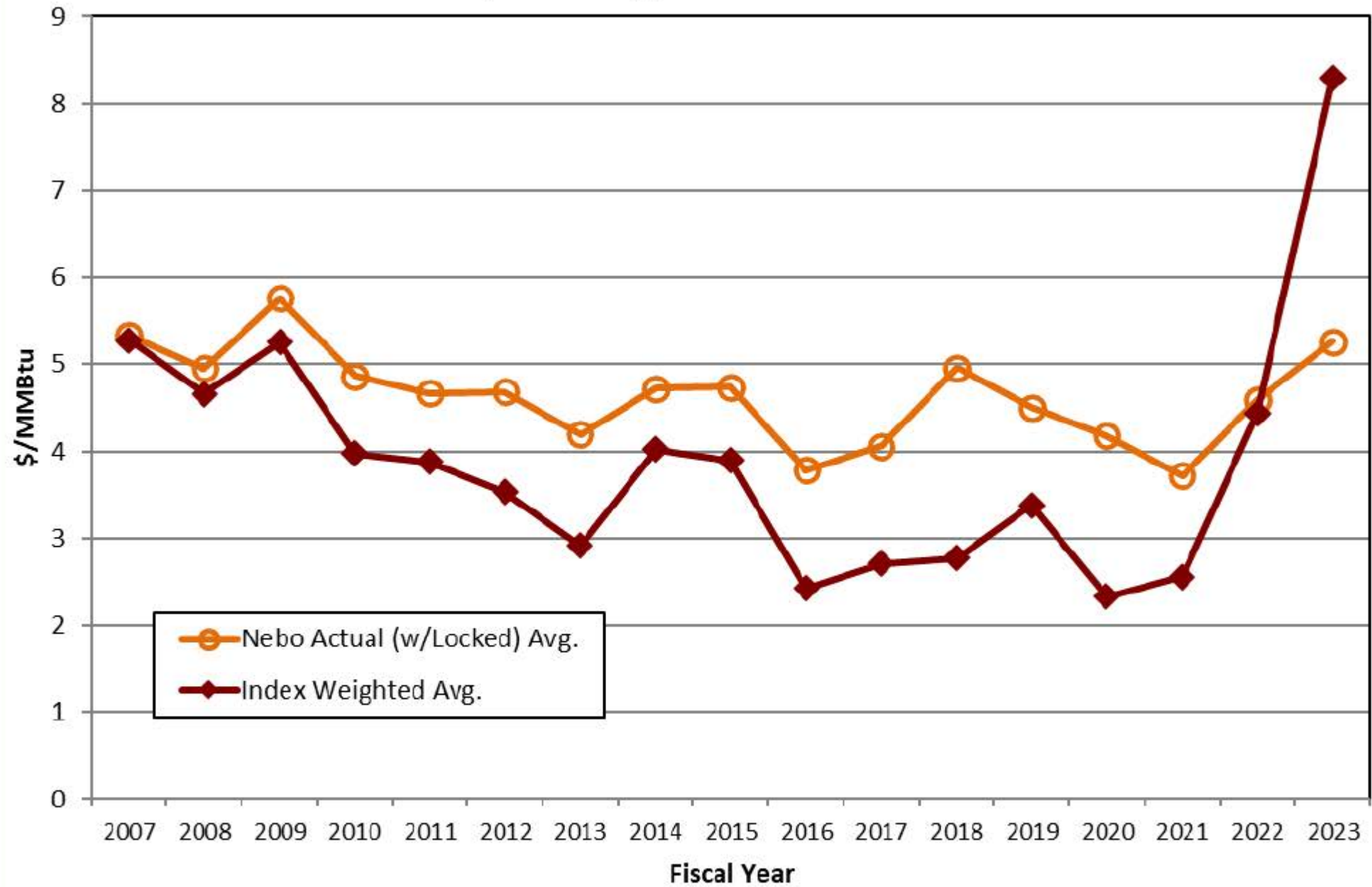
POOL PROJECT

PX & Scheduling Report March 2023

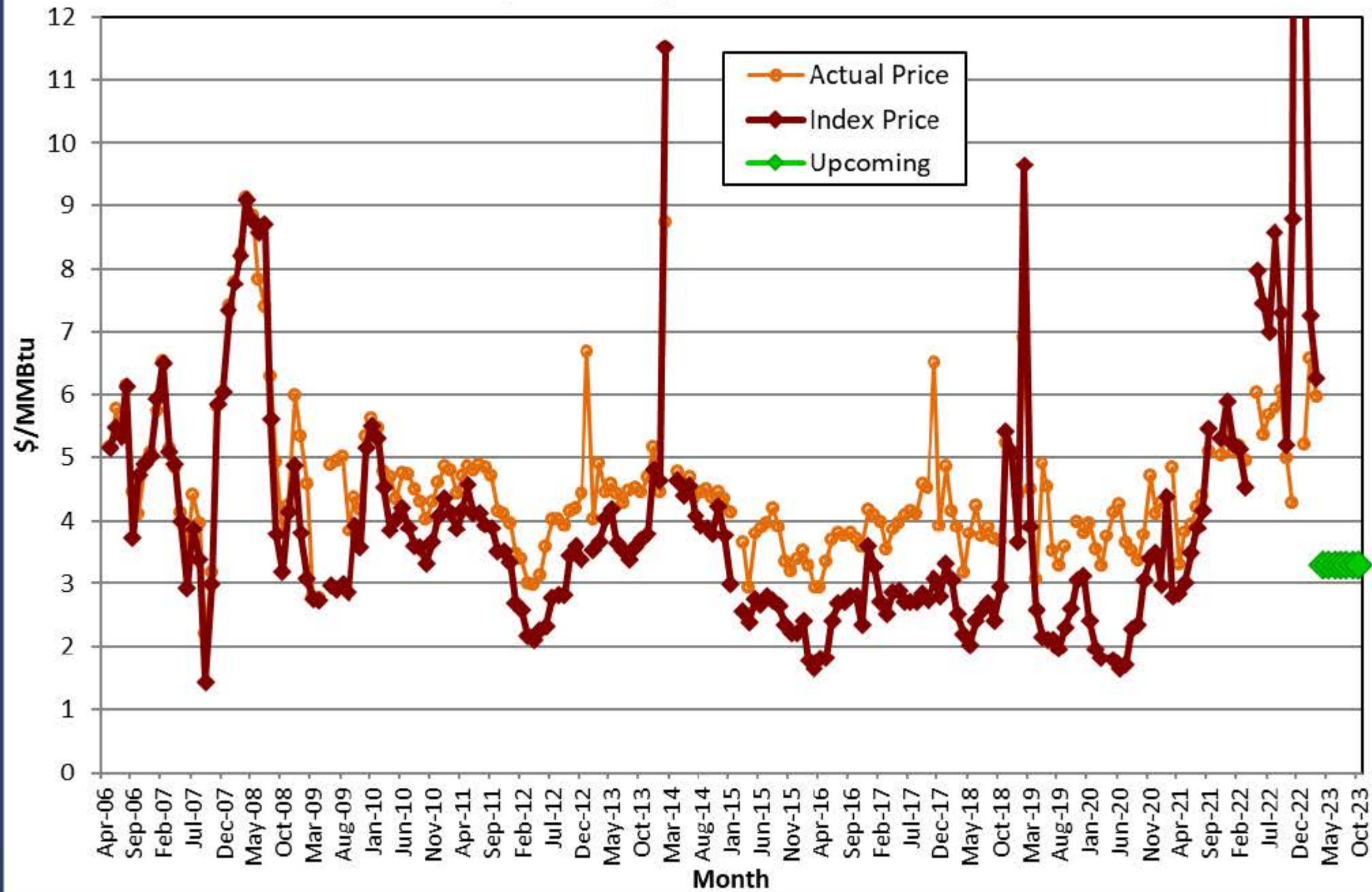
Monthly Average Nebo Index Gas Price



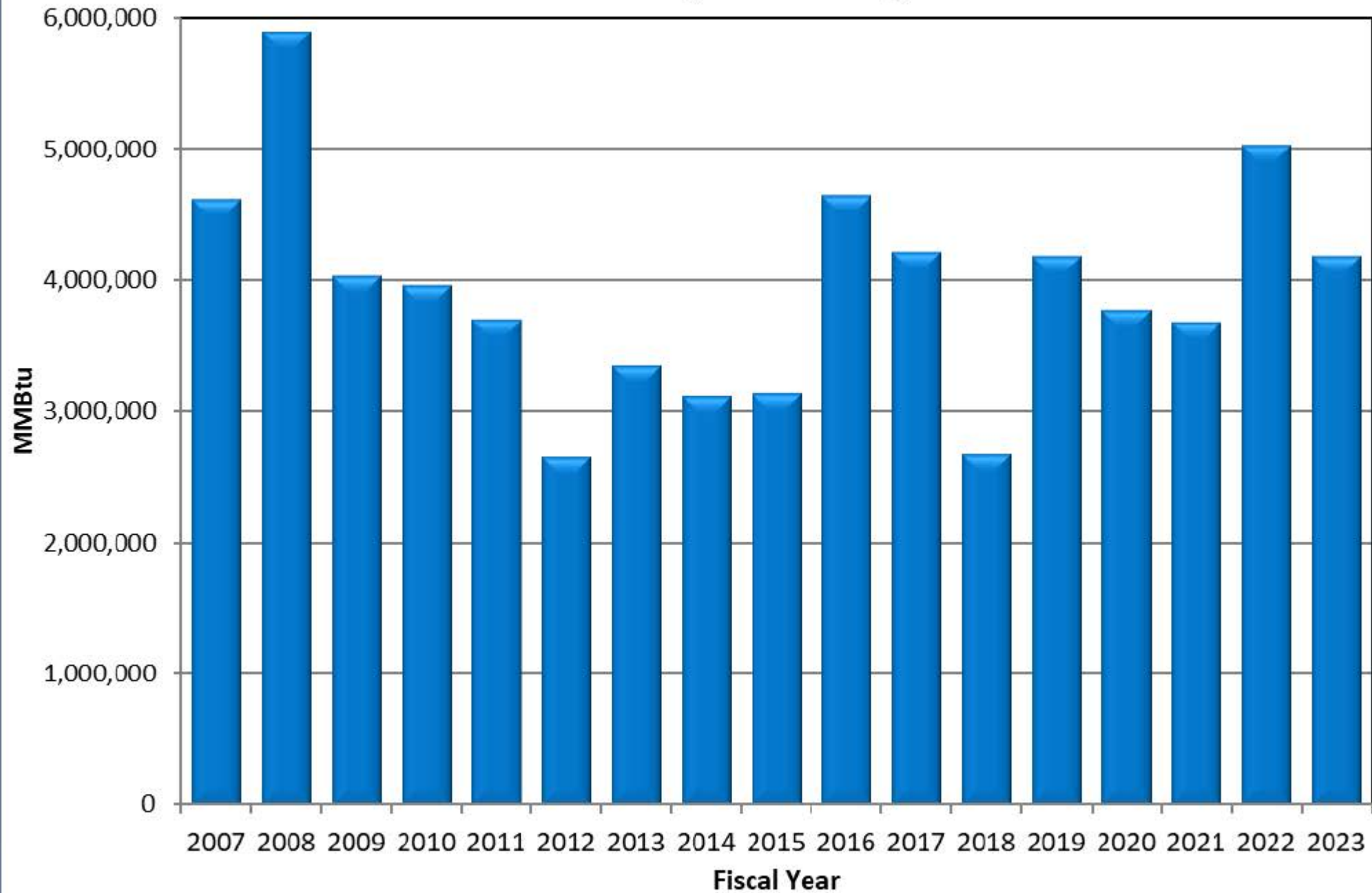
Yearly Average Nebo Gas Price



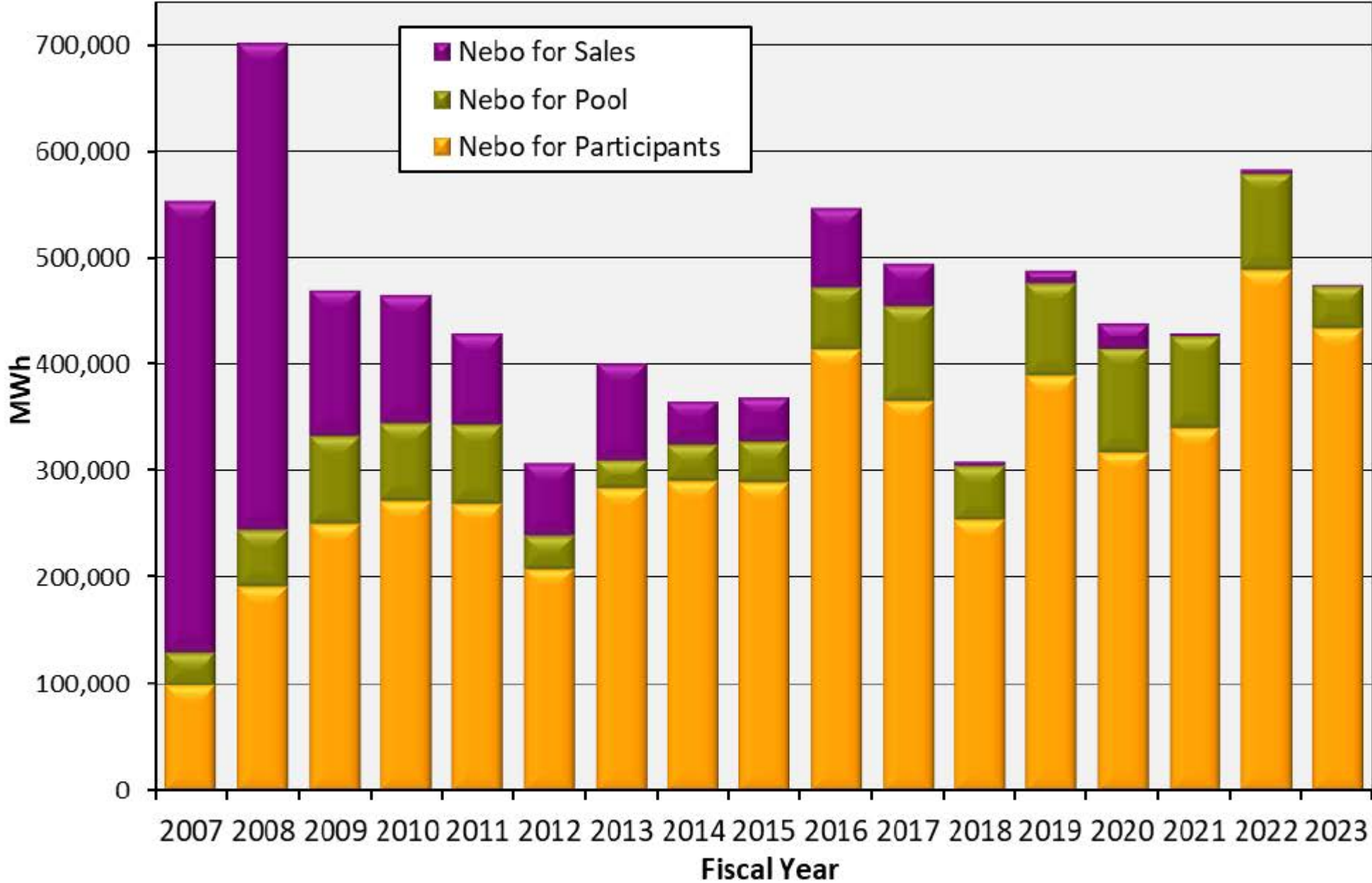
Monthly Average Nebo Gas Prices



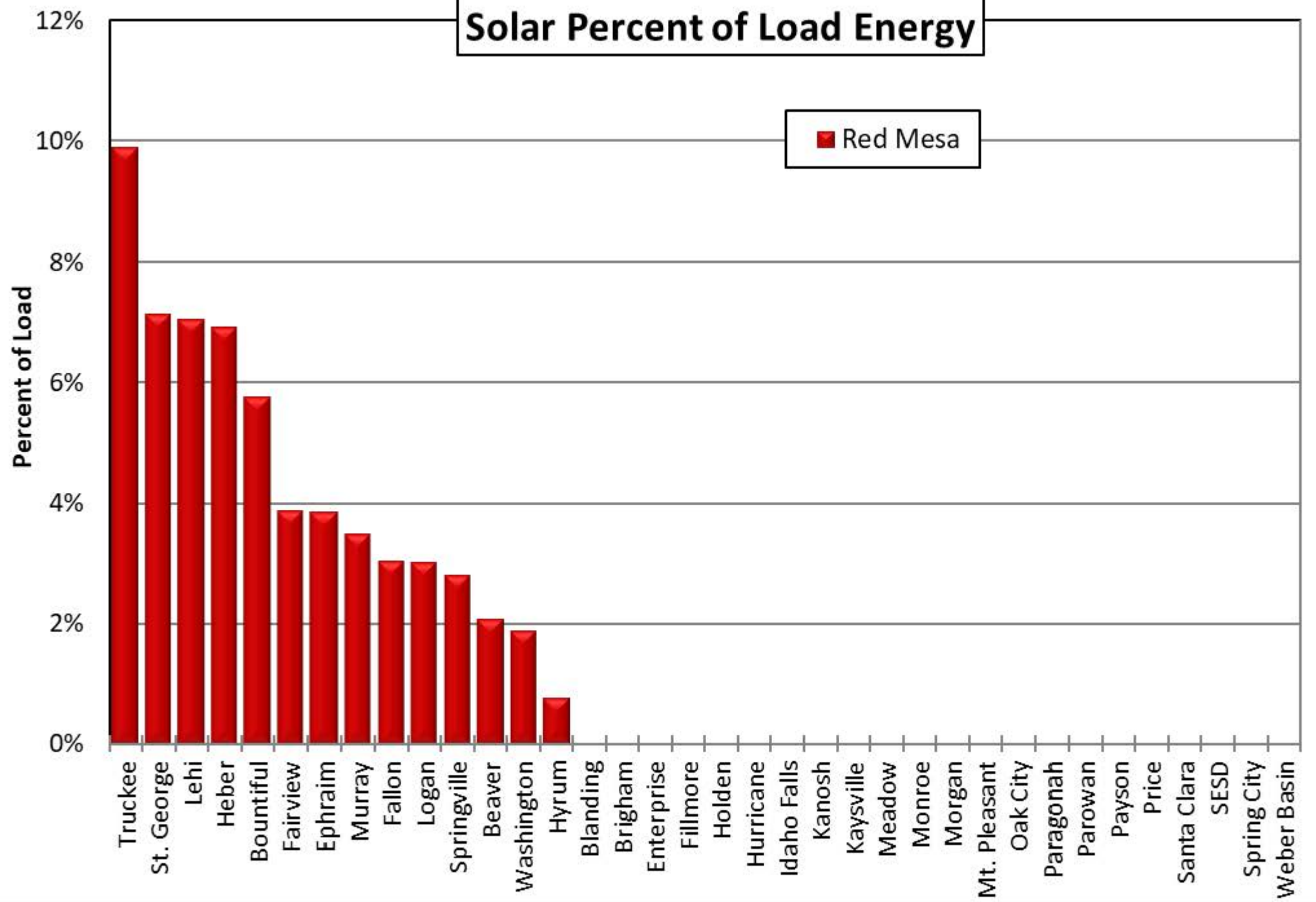
Nebo Yearly Gas Usage



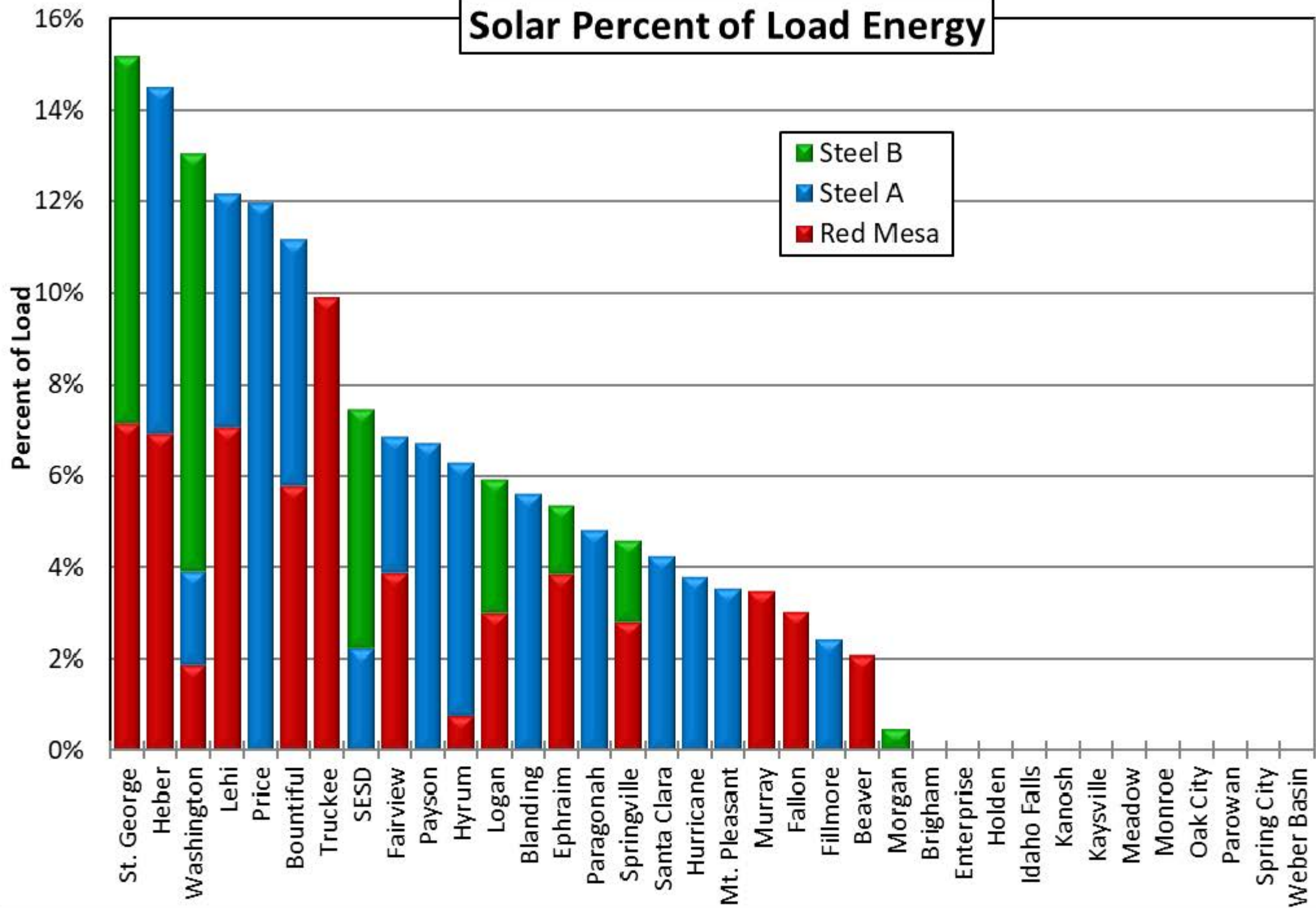
Nebo Yearly Generation Usage



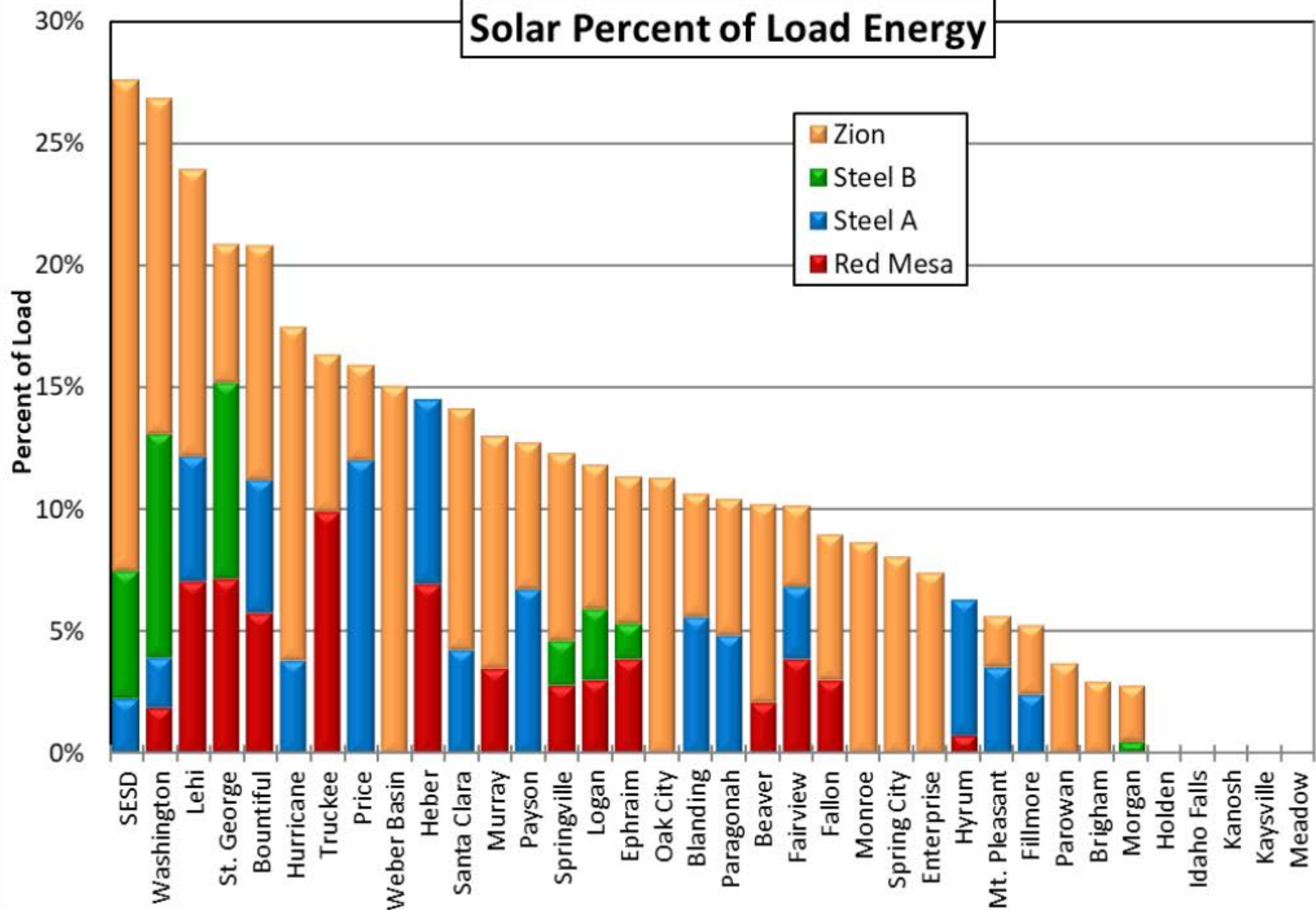
Solar Percent of Load Energy



Solar Percent of Load Energy



Solar Percent of Load Energy

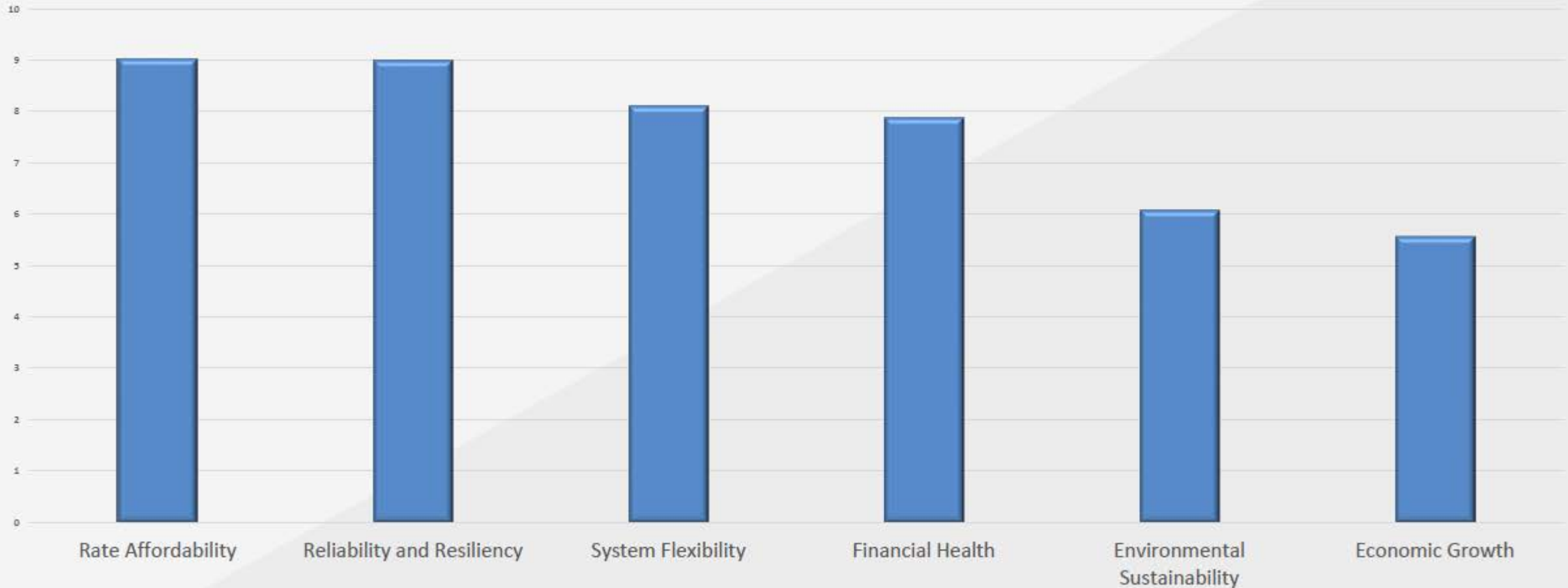


Summary

- Affordability and reliability scored the highest
- Environmental sustainability and impacts on member economic growth scored slightly lower
- These criteria will be used when determining the best match for resource portfolios

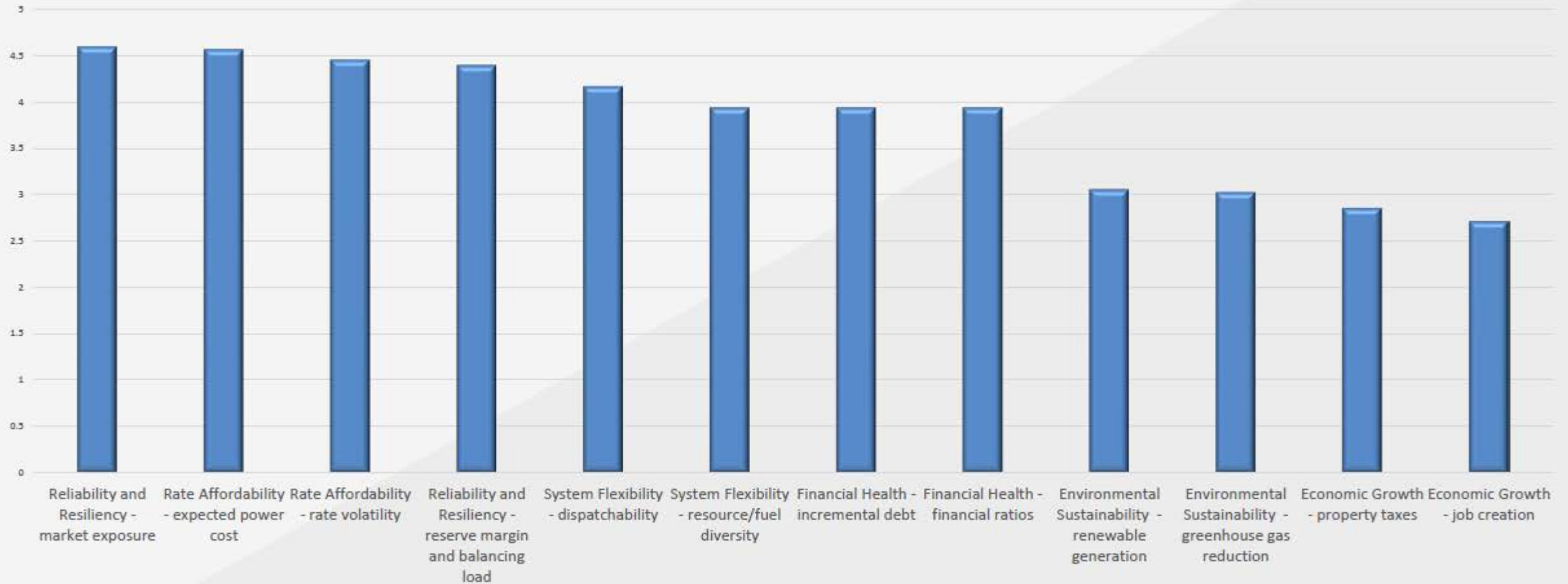
IRP Member Survey

Member Survey for IRP Criteria



IRP Member Survey

Member Survey for IRP Criteria



Prepaid Gas and Electricity

Payson Power Project

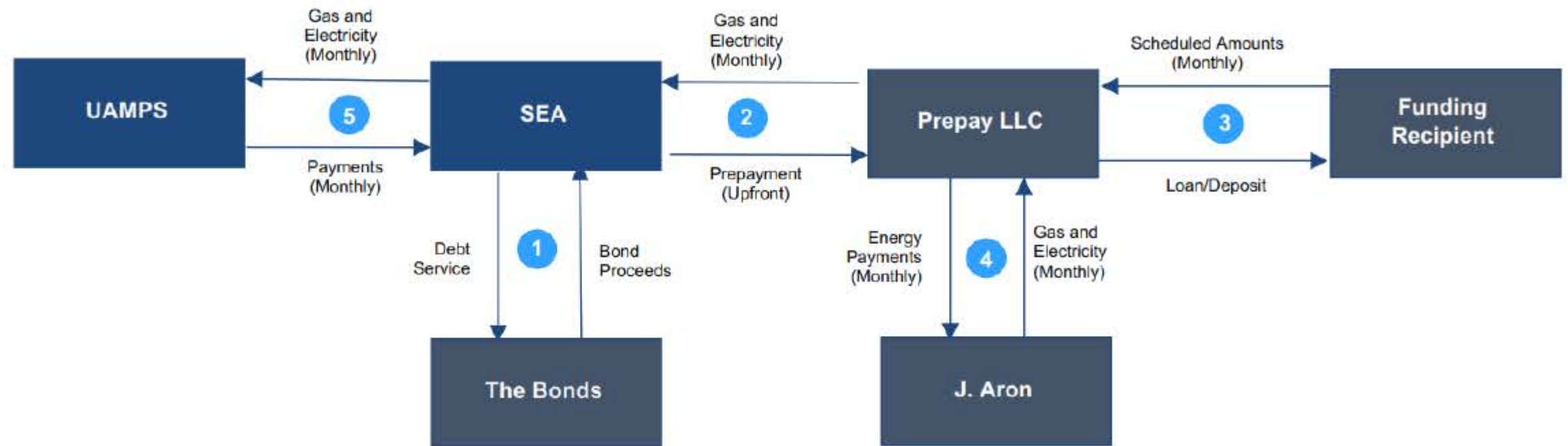
Firm Power Project

April 18, 2023



Prepay Transaction Diagram #1

PREPAID ENERGY TRANSACTION STRUCTURE



1. SEA issues bonds to fund the prepayment, capitalized interest, certain reserves and costs of issuance.
2. SEA prepays Prepay LLC for 30 years of energy deliveries, and Prepay LLC is obligated to deliver specified quantities of energy to SEA over the term of the Energy Purchase Agreement.
3. Prepay LLC loans/deposits the prepay proceeds with The Goldman Sachs Group or a third-party funding recipient under a Funding Agreement. The Funding Agreement pays a fixed rate of interest and provides monthly cashflows to Prepay LLC that are sufficient to meet its payment obligations under the prepay transaction.
4. Prepay LLC will purchase energy from from J. Aron on a pay-as-you-go basis in amount sufficient to enable Prepay LLC to meet its delivery obligations to SEA.
5. UAMPS purchases energy from Prepay LLC on a pay as you go basis at fixed prices, less the prepay discount. The amounts payable by UAMPS provide sufficient revenues to enable SEA to pay debt service on the bonds.

RESOURCE PROJECT

Entitlement
Correction –
fy2024

Key Items to Discuss

- FY2023 – Members (5) join the Resource Project
- FY2024 – Developed the Resource Project Entitlement
- FY2024 “Corrected” General Resource Project Entitlement
- Impact to General Resource Project Budget Allocation

FY2023 – Members (5) joined the Resource Project

- **September 2022** – Murray Joined
- **October 2022** – St. George Joined
- **November 2022** – Paragonah, Parowan
and Weber Basin Joined

General Resource Project

- Entitlements in the Project are based on the average of the percentage for each of the four allocators for the Project participants:
 1. **Number of Customers** based on the latest annual report
 2. **Equal Share pro rata** based on total amount of participants
 3. **Pool Usage** based on the total pooling dollars for the latest fiscal year, and
 4. **Energy Load** based on the total energy served by UAMPS for the latest fiscal year
- Generally, the entitlements for any Resource study project is calculated based on the General Resource Project entitlements for those participants that express interest in that study project unless directed otherwise by the participating members

Corrected FY2024 General Resource Entitlements

	Entitlement Share		
	Original	CORRECTED	Incr / (decr)
Beaver	1.3531%	1.1970%	-0.1561%
Blanding	1.3273%	1.1698%	-0.1575%
Bountiful	6.2051%	5.5463%	-0.6588%
Brigham City	4.4142%	3.9729%	-0.4412%
Enterprise	0.9718%	0.8502%	-0.1216%
Ephraim	1.4530%	1.2823%	-0.1708%
Fairview	0.9634%	0.8410%	-0.1224%
Fallon	2.9224%	2.6123%	-0.3101%
Fillmore	1.2464%	1.1085%	-0.1379%
Heber	5.5735%	4.9644%	-0.6091%
Holden	0.8221%	0.7150%	-0.1072%
Hurricane	4.2660%	3.8176%	-0.4484%
Hyrum	2.4119%	2.1786%	-0.2333%
Idaho Falls	10.8145%	9.9148%	-0.8997%
Kanosh	0.8226%	0.7153%	-0.1073%
Kaysville	3.5007%	3.1303%	-0.3704%
Lassen PUD	1.8815%	1.5763%	-0.3052%
Lehi	9.3361%	8.4013%	-0.9348%
Logan	7.7241%	6.9952%	-0.7289%
Los Alamos	1.6962%	1.4249%	-0.2713%
Monroe	1.0333%	0.9033%	-0.1300%
Morgan	1.2770%	1.1210%	-0.1560%
Mt. Pleasant	1.3444%	1.1778%	-0.1666%
Murray	-	3.5933%	3.5933%
Oak City	0.8320%	0.7244%	-0.1077%
Paragonah	-	0.7023%	0.7023%
Parowan	-	0.9138%	0.9138%
Payson	3.0376%	2.7069%	-0.3308%
Plumas Sierra	1.5775%	1.3279%	-0.2496%
Price	2.0268%	1.8000%	-0.2268%
Santa Clara	1.8570%	1.6476%	-0.2094%
SESD	1.9536%	1.7327%	-0.2209%
Spring City	0.8814%	0.7664%	-0.1150%
Springville	5.7538%	5.1949%	-0.5589%
St. George	-	4.7532%	4.7532%
Truckee Donner	4.7094%	4.1807%	-0.5287%
Washington	4.0102%	3.5715%	-0.4388%
Weber Basin	-	0.7685%	0.7685%
TOTAL	100.0000%	100.0000%	0.0000%

Corrected FY2024 General Resource Allocated Budget

	FY2024 Budget - General Resource		
	Original	CORRECTED	Incr / (decr)
Beaver	\$ 8,662	\$ 7,663	\$ (999)
Blanding	8,497	7,488	(1,008)
Bountiful	39,721	35,504	(4,217)
Brigham City	28,257	25,433	(2,824)
Enterprise	6,221	5,442	(778)
Ephraim	9,301	8,208	(1,093)
Fairview	6,167	5,383	(784)
Fallon	18,708	16,723	(1,985)
Fillmore	7,979	7,096	(883)
Heber	35,678	31,780	(3,899)
Holden	5,263	4,577	(686)
Hurricane	27,309	24,438	(2,870)
Hyrum	15,440	13,946	(1,494)
Idaho Falls	69,229	63,469	(5,760)
Kanosh	5,266	4,579	(687)
Kaysville	22,410	20,038	(2,371)
Lassen PUD	12,044	10,090	(1,954)
Lehi	59,765	53,780	(5,984)
Logan	49,446	44,780	(4,666)
Los Alamos	10,858	9,121	(1,737)
Monroe	6,615	5,783	(832)
Morgan	8,175	7,176	(998)
Mt. Pleasant	8,606	7,540	(1,066)
Murray	-	23,003	23,003
Oak City	5,326	4,637	(689)
Paragonah	-	4,496	4,496
Parowan	-	5,849	5,849
Payson	19,445	17,328	(2,117)
Plumas Sierra	10,098	8,500	(1,598)
Price	12,975	11,523	(1,452)
Santa Clara	11,887	10,547	(1,340)
SESD	12,506	11,092	(1,414)
Spring City	5,642	4,906	(736)
Springville	36,833	33,255	(3,578)
St. George	-	30,427	30,427
Truckee Donner	30,147	26,763	(3,385)
Washington	25,671	22,863	(2,809)
Weber Basin	-	4,920	4,920
TOTAL	\$ 640,146	\$ 640,146	\$ 0

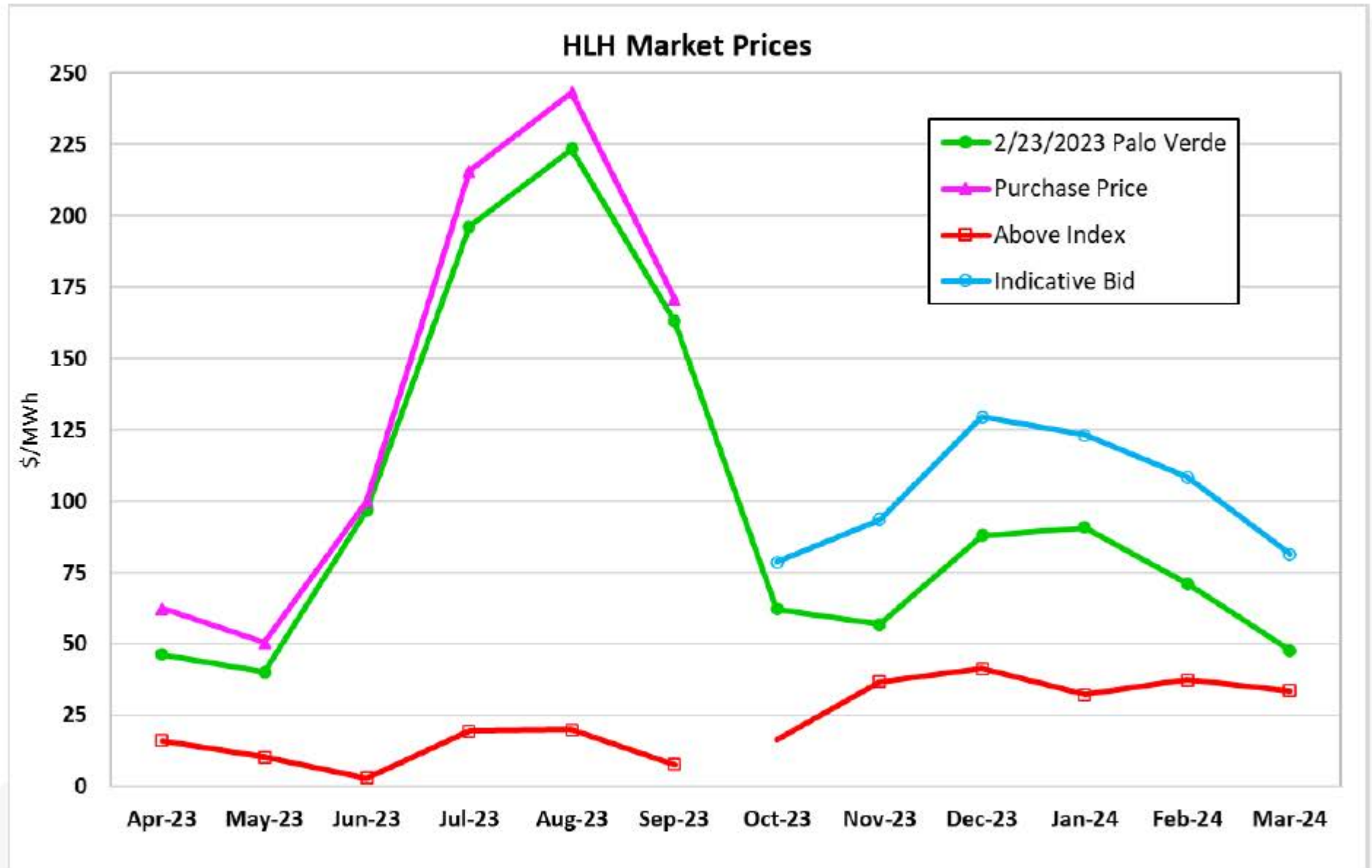
FIRM POWER SUPPLY PROJECT

TERM PURCHASES

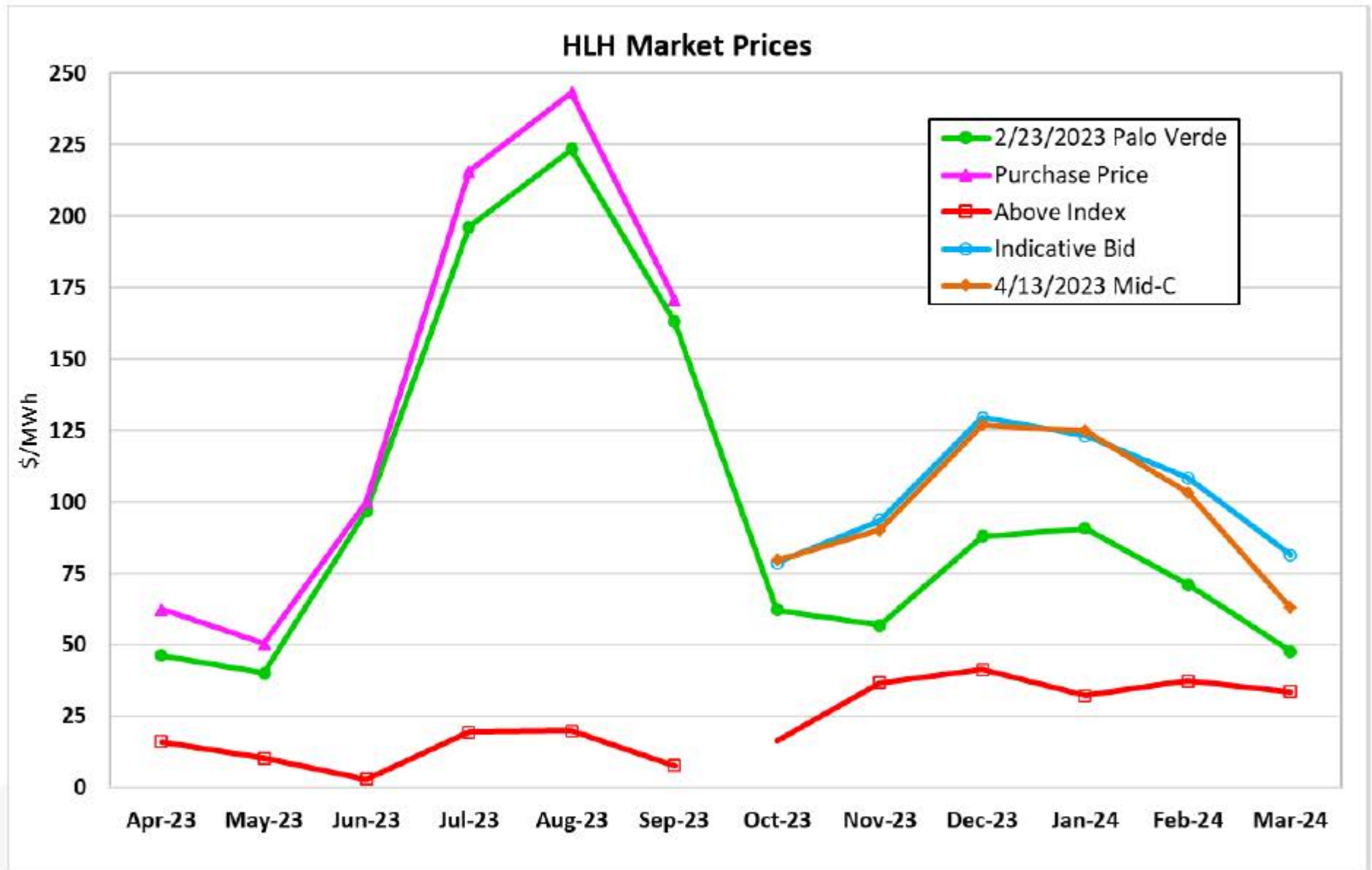
Topic Discussions

- Summer Purchase 2023: Completed
- Winter Purchase 2023-2024: Pending
- Longer Term Purchases: Potential

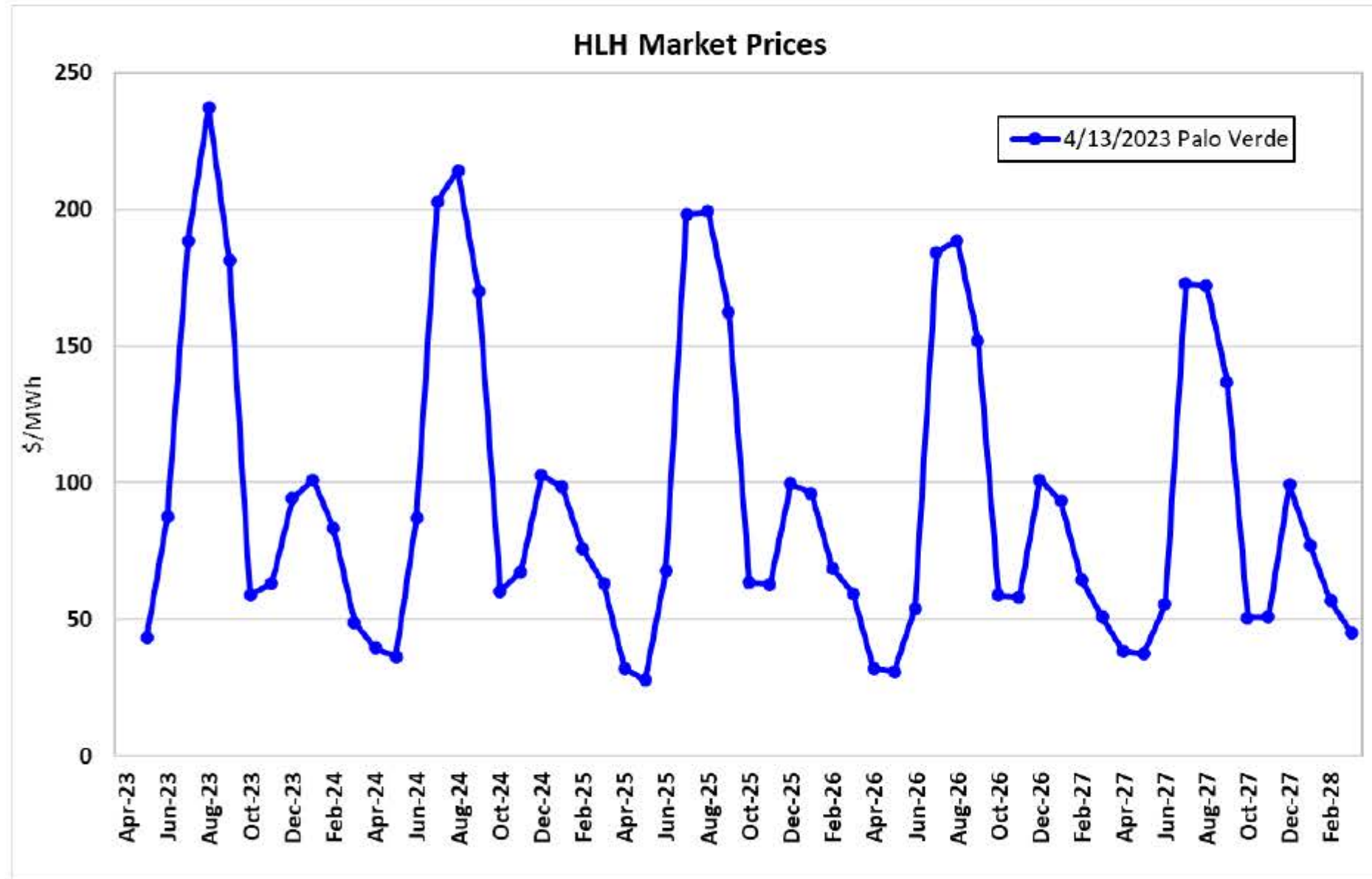
Upcoming Year Purchase



Upcoming Year Purchase



Forward Year Purchases



- Could not get bids for years 4 and 5 from counterparties
- Years 2 and 3 have larger price buffer built in if available

Forecasting Uncertainties

- For forward years, what to include in forecast to estimate need:
- Include Sunnyside or not?
- When will Steel solar come online?
- When to include Hunter?
- Include IPP callback?
- How much CRSP will we receive?

BOARD OF DIRECTORS

OPERATIONS REPORT

UAMPS



Transmission Project Update

TransWest

Cross-Tie

TransWest Express

- TransWest Express, LLC. project
- 732 miles of high voltage transmission line
- Will provide two systems:
 - 3,000 MW DC segment with terminals near Sinclair, Wyoming and Delta, Utah (IPP)
 - 1,500 MW's AC segment from the Utah terminal to southern Nevada
- Estimated cost \$3 billion
- State and county permitting is completed
- **BLM issued a notice to proceed on April 12th**
 - of note, BLM began reviewing the project in 2008
- **First phase of completion in 2027**
- **Will break ground 2023**



Cross-Tie

- Pinnacle West & Berkshire Hathaway Energy joint project
- 214-mile, 1500 MW, 500 kV transmission line from Utah to Nevada
- Will connect the PacifiCorp, NV Energy, Idaho Power & CAISO BA's
- Will provide 3,000 MW's of transfer capacity
- Estimated cost \$667 million
- Permitting underway
- Proposed in service 2027

Figure 1 Cross-Tie Transmission Project Overview





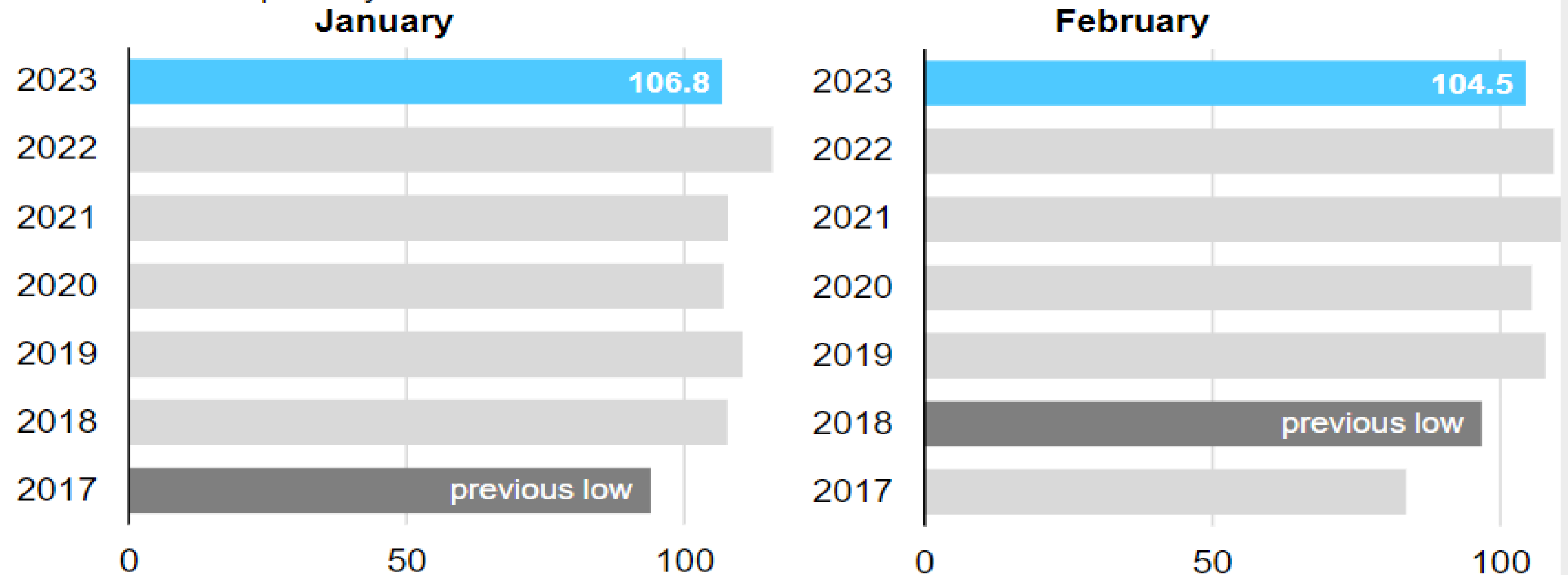
Natural Gas

Natural Gas Consumption

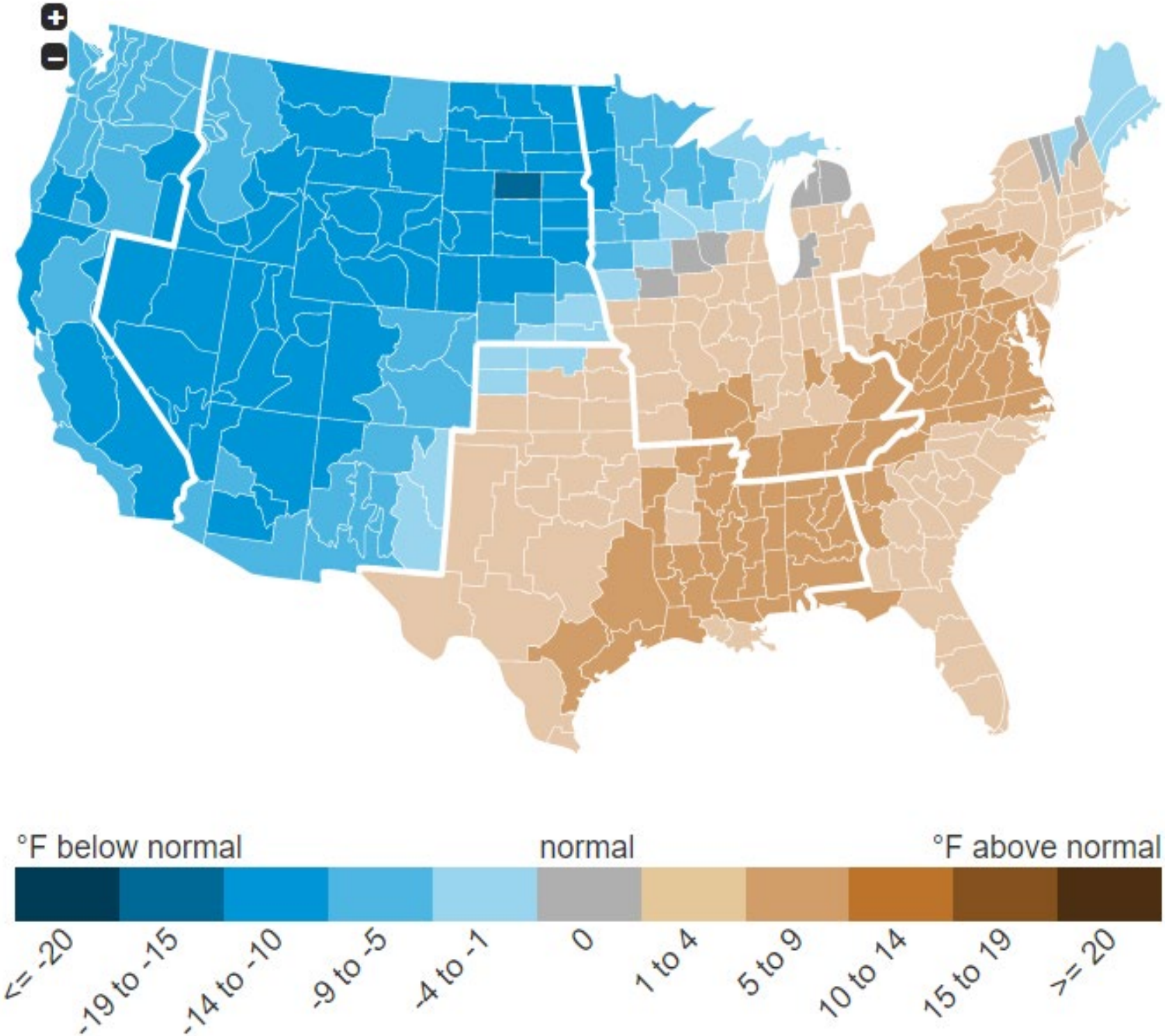
- Mild winter temperatures in January and February in the residential and commercial sectors drove down the overall U.S. natural gas consumption
- Overall natural gas consumption in January 2023 was 8% less than 2022
- Overall natural gas consumption in February 2023 was 4% less than 2022
- Natural gas consumption in the residential and commercial sectors, which was down 16% in January and 12% in February, as compared to 2022, were lower due to above average temperatures reducing seasonal heating demand.

U.S. monthly winter natural gas consumption (Jan–Feb, 2017–2023)

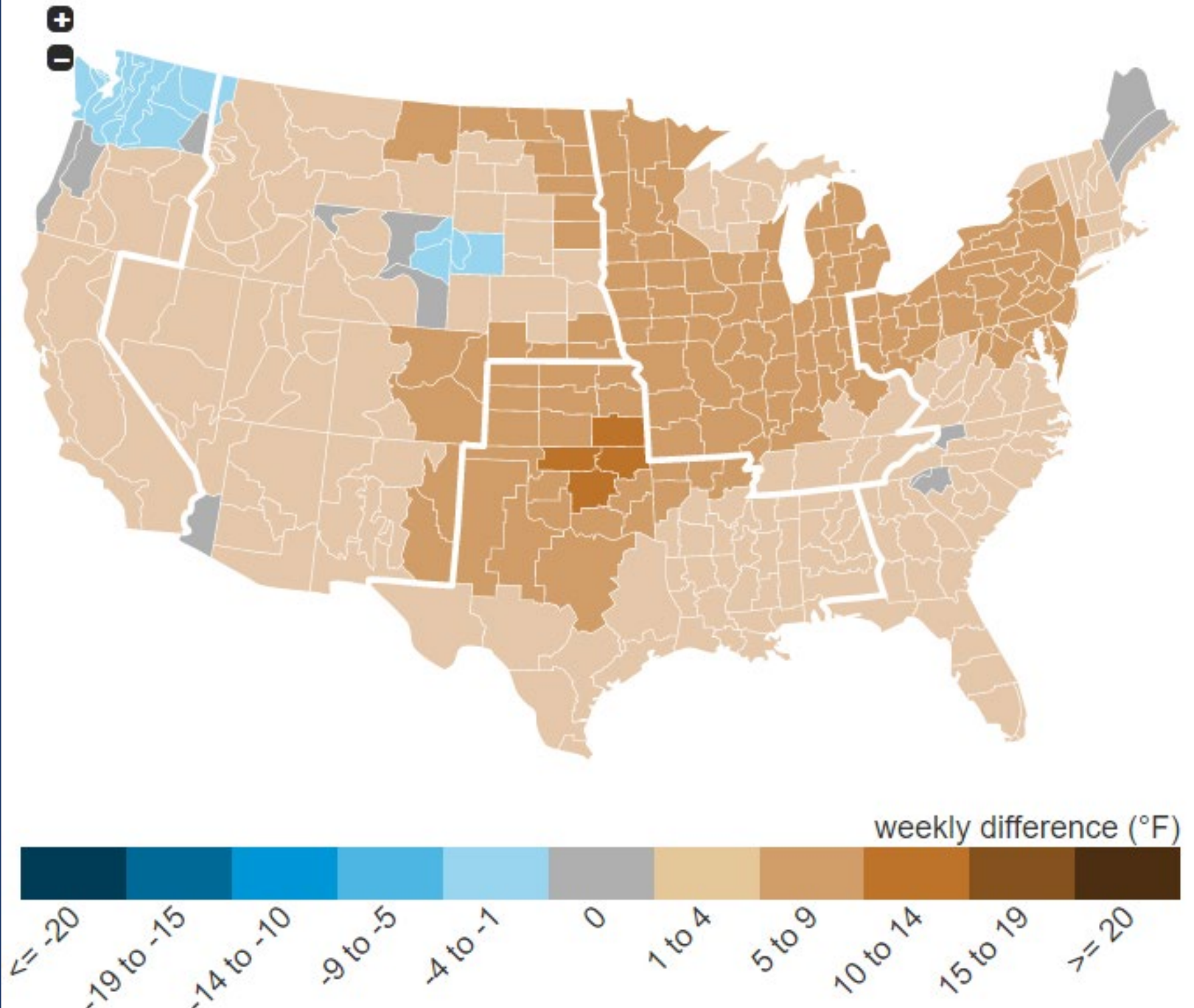
billion cubic feet per day



Weekly average departure from normal temperatures as of April 6, 2023



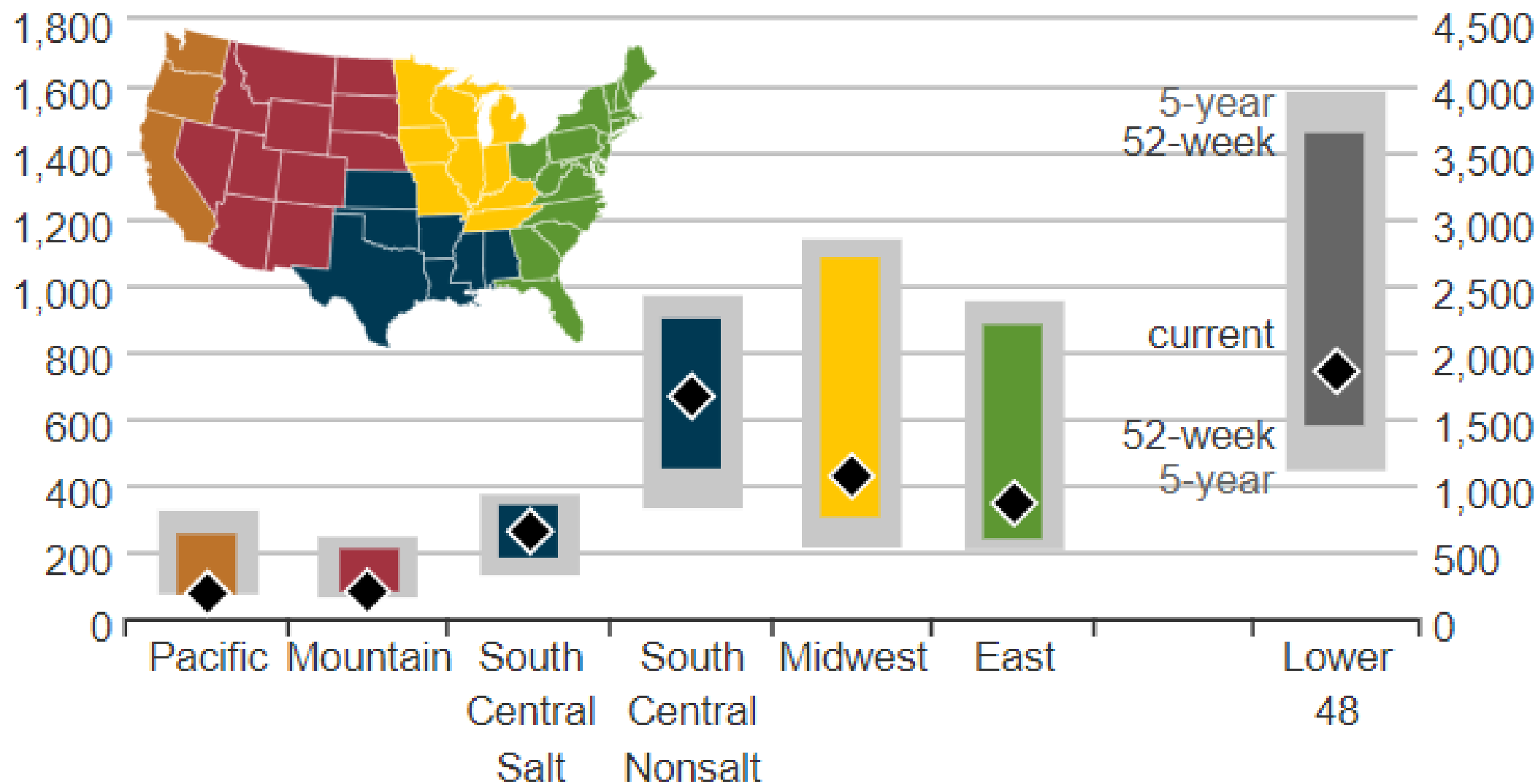
Weekly average difference from prior week as of April 6, 2023



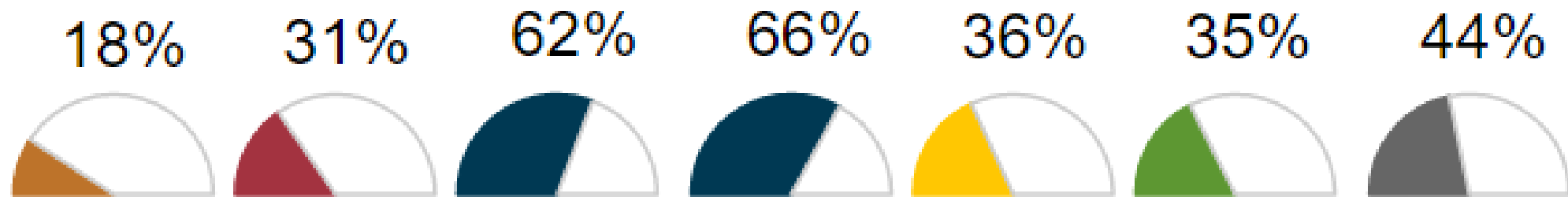
Weather Impacts

Underground working natural gas storage summary as of April 7, 2023

billion cubic feet



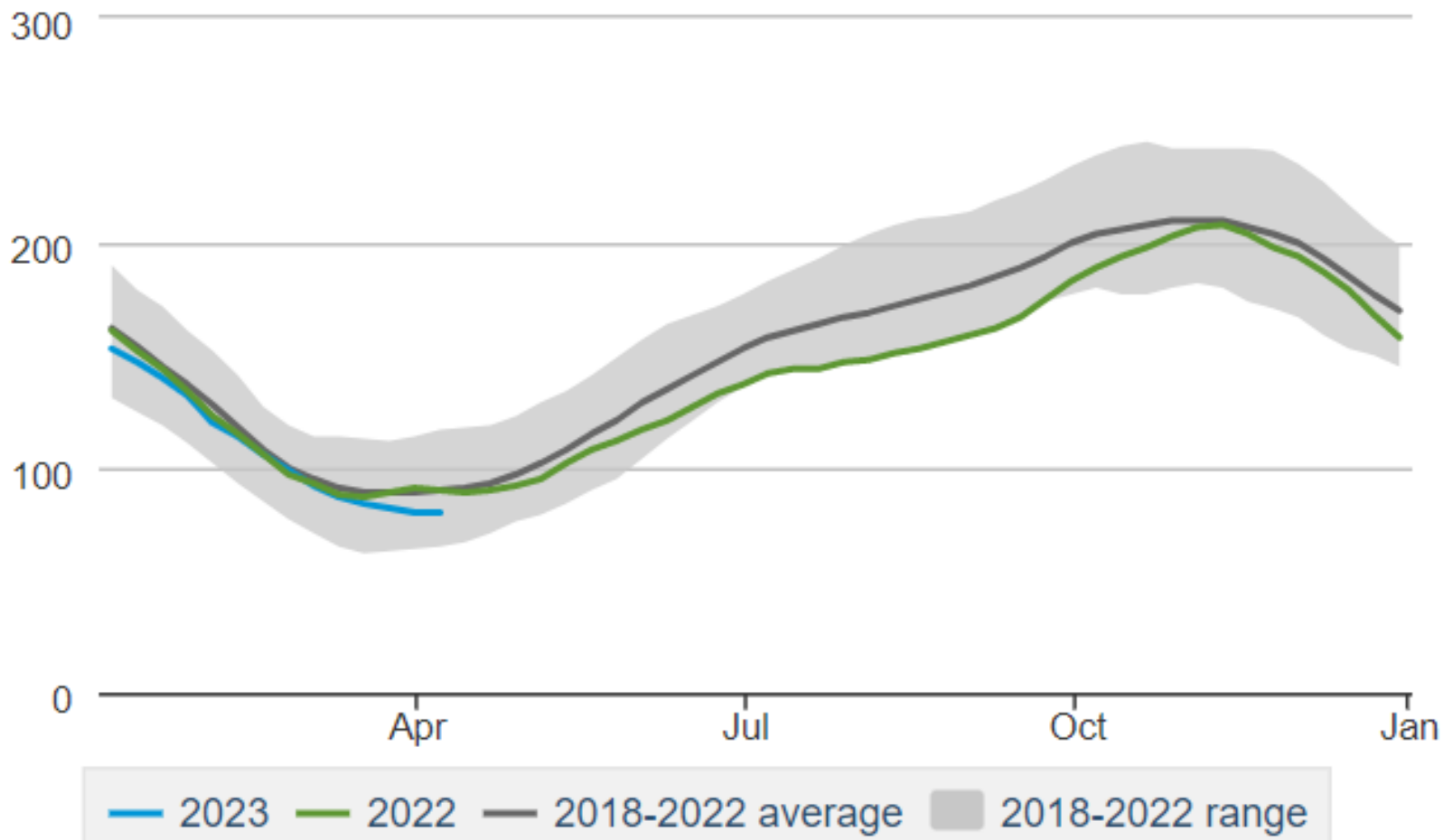
Underground storage capacity utilization



National Storage

Mountain region weekly working gas in underground storage

billion cubic feet

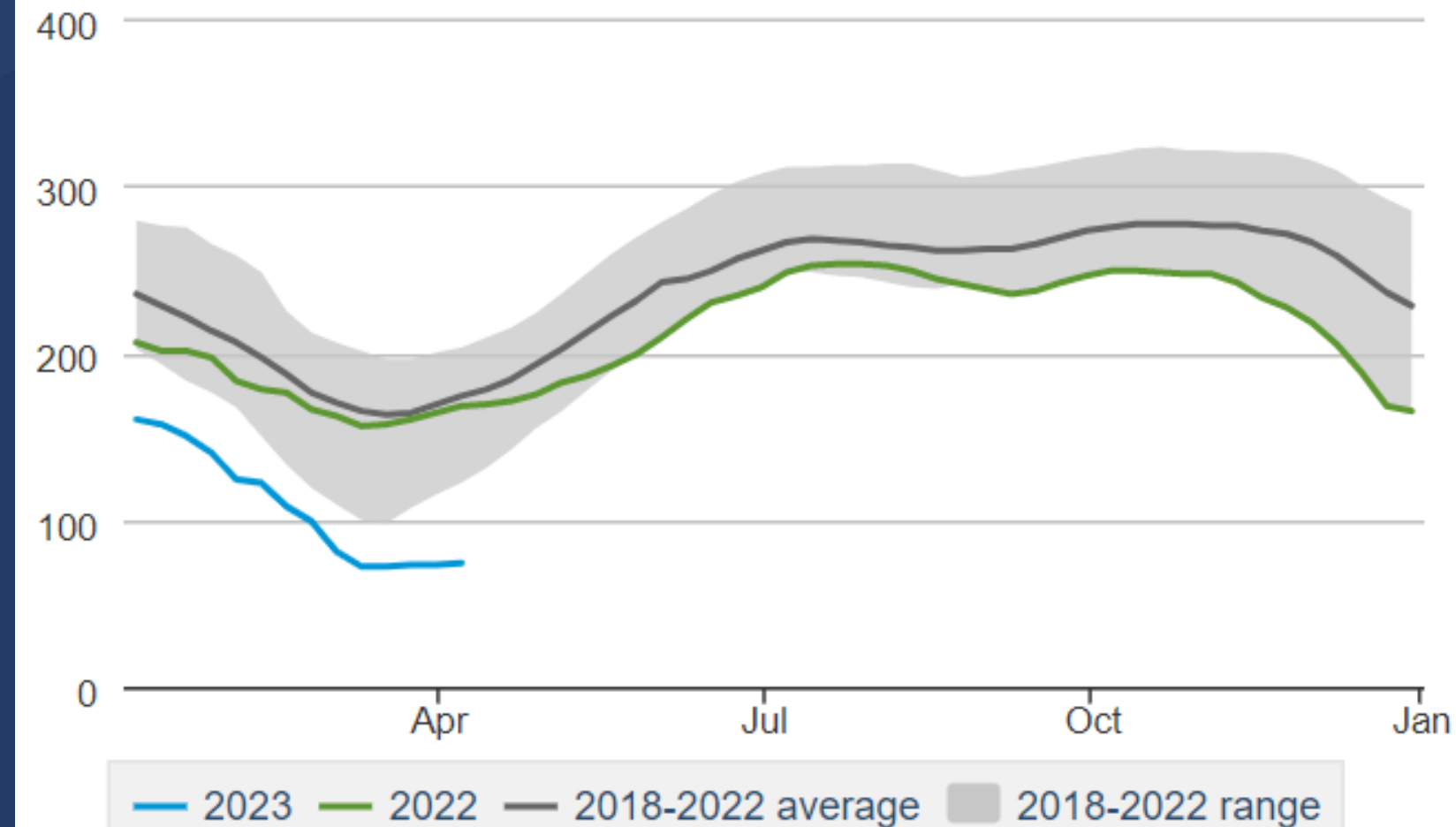


Mountain Region

Pacific Region

Pacific region weekly working gas in underground storage

billion cubic feet

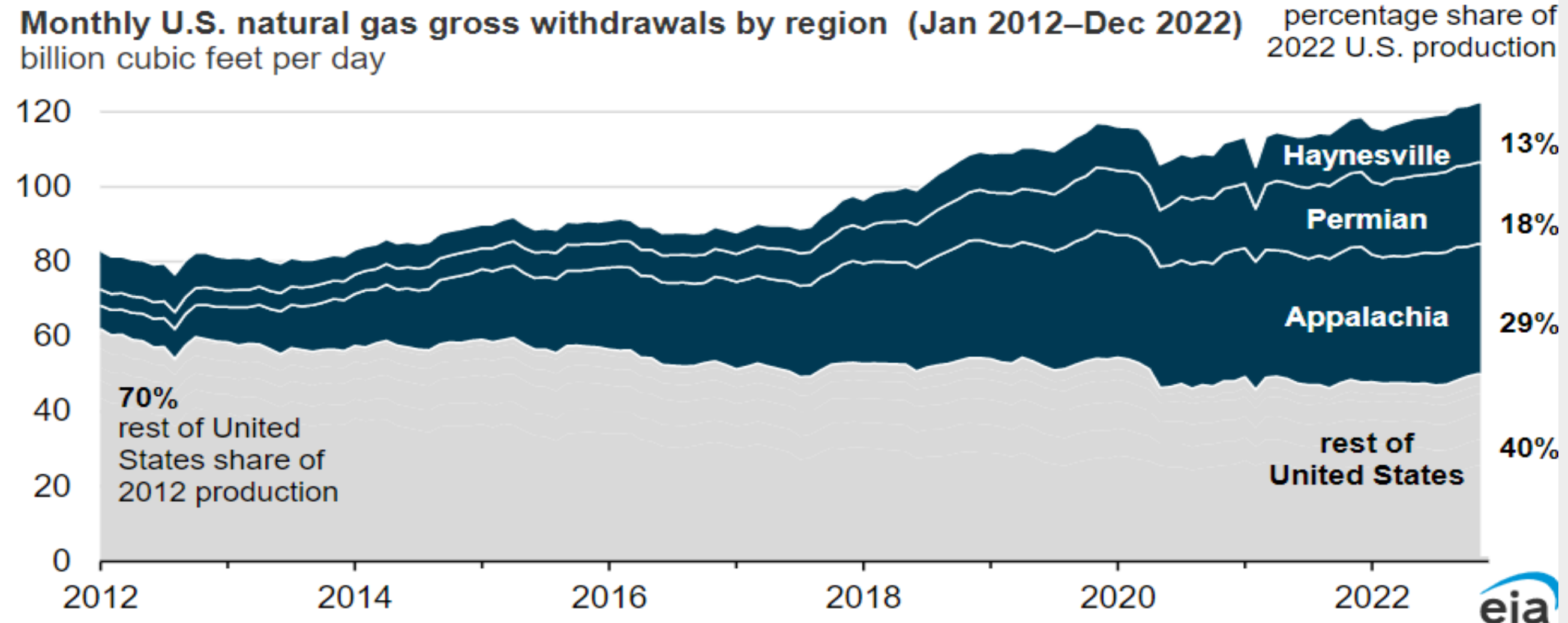


UAMPS



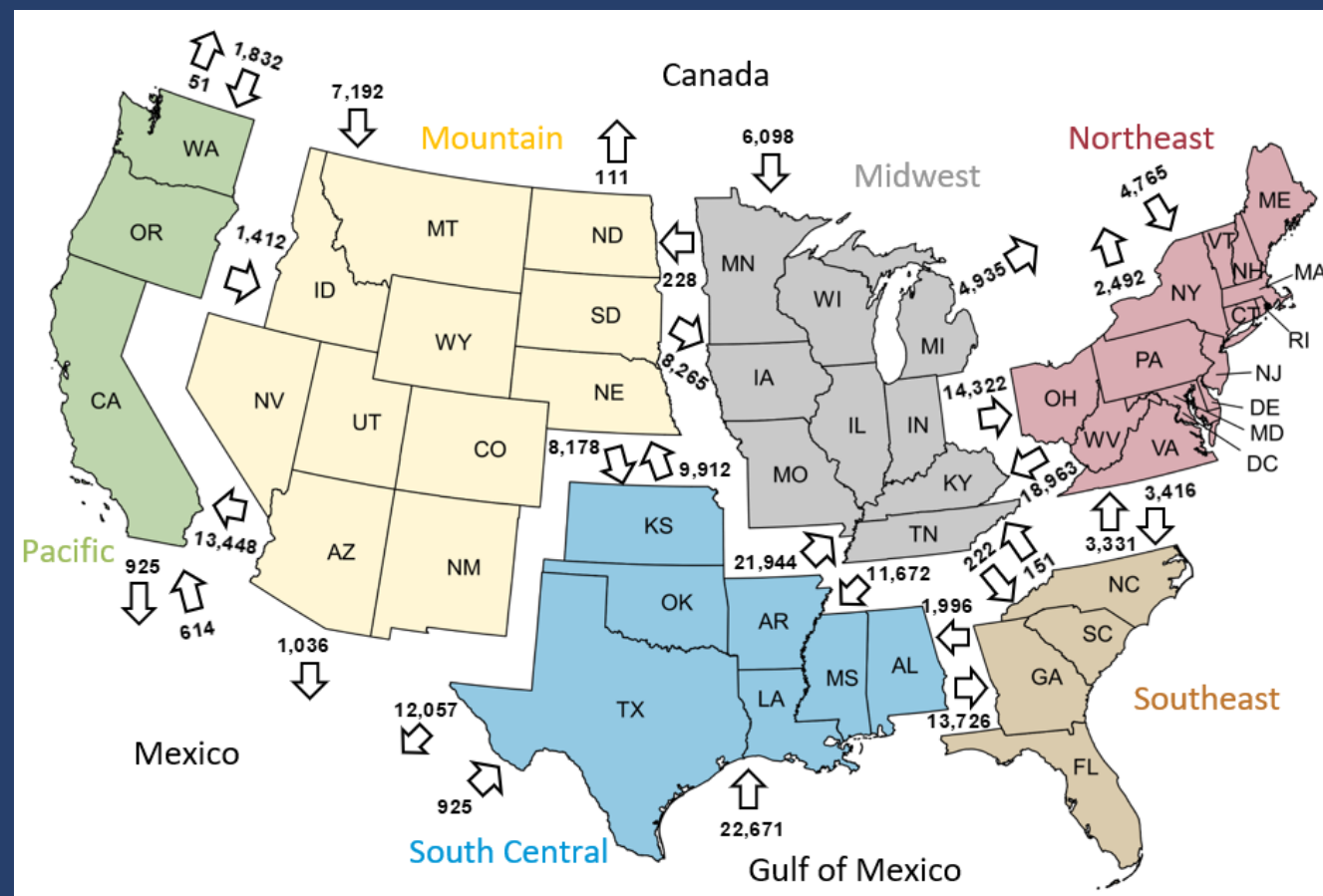
Natural Gas Production

- U.S. natural gas production grew by 4% in 2022.
- Three regions (Appalachia, Permian, and Haynesville) accounted for 60% of all U.S. production in 2022.
- Appalachia region produced more natural gas than any other U.S. region, accounting for 29% of U.S. gross natural gas. However, growth has been slowing because sufficient pipeline capacity is not available to transport more natural gas.
- The Permian region is the second-largest U.S. natural gas producing region, accounting for 18% of U.S. production.
- Gross natural gas withdrawals in the Haynesville region grew and accounts for 13% of U.S. gross natural gas production. The Haynesville region is a strategic location for operators to drill for natural gas because of its proximity to the Gulf Coast, where demand from liquefied natural gas export terminals and industrial facilities has been growing.



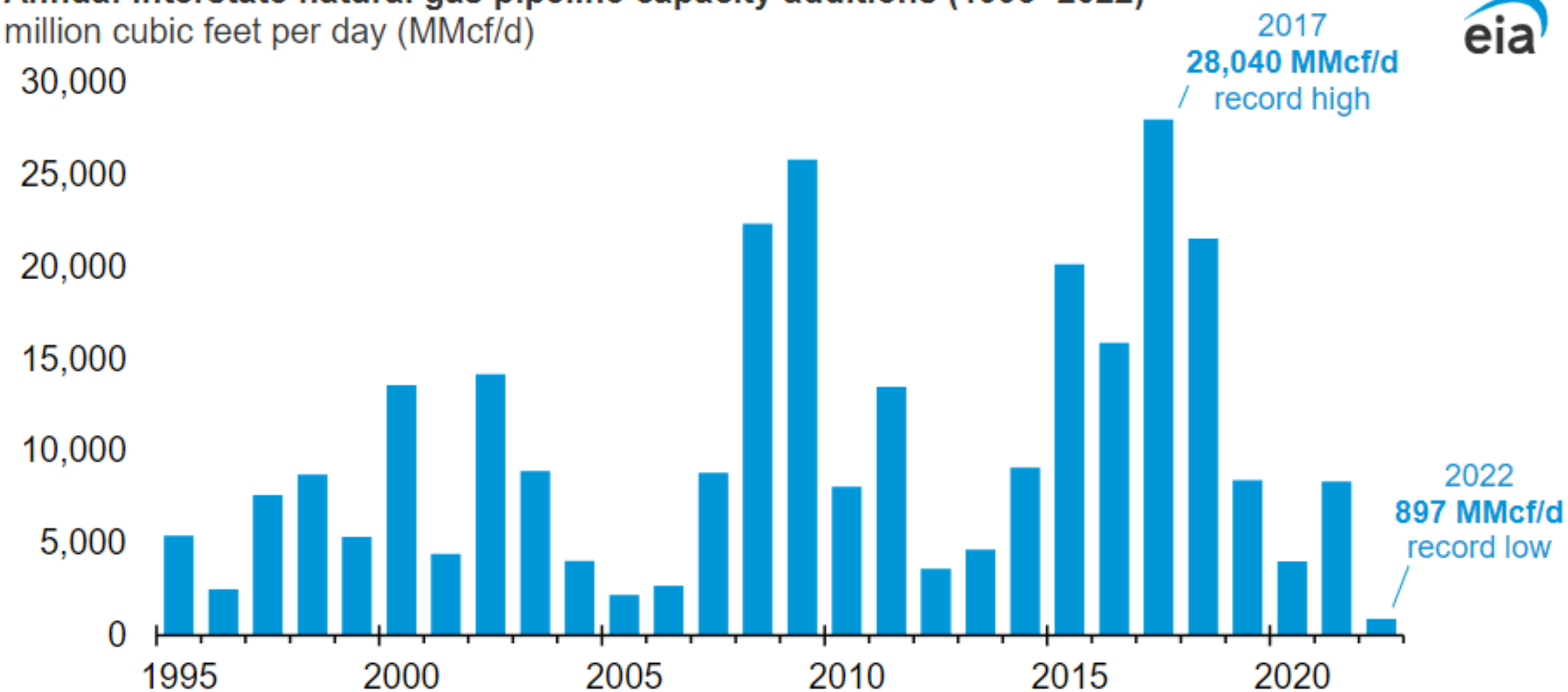
Pipeline Infrastructure

- In 2022, 897 million cubic feet per day of interstate natural gas pipeline capacity was added collectively from five projects.
- While this may sound impressive, the increase is the least annual interstate natural gas pipeline capacity added since data tracking began in 1995.
- However, capacity was added to intrastate pipelines which are usually strategically located to provide ease of access to LNG export terminals.



Region to Region Natural Gas Capacity

Annual interstate natural gas pipeline capacity additions (1995–2022)
million cubic feet per day (MMcf/d)





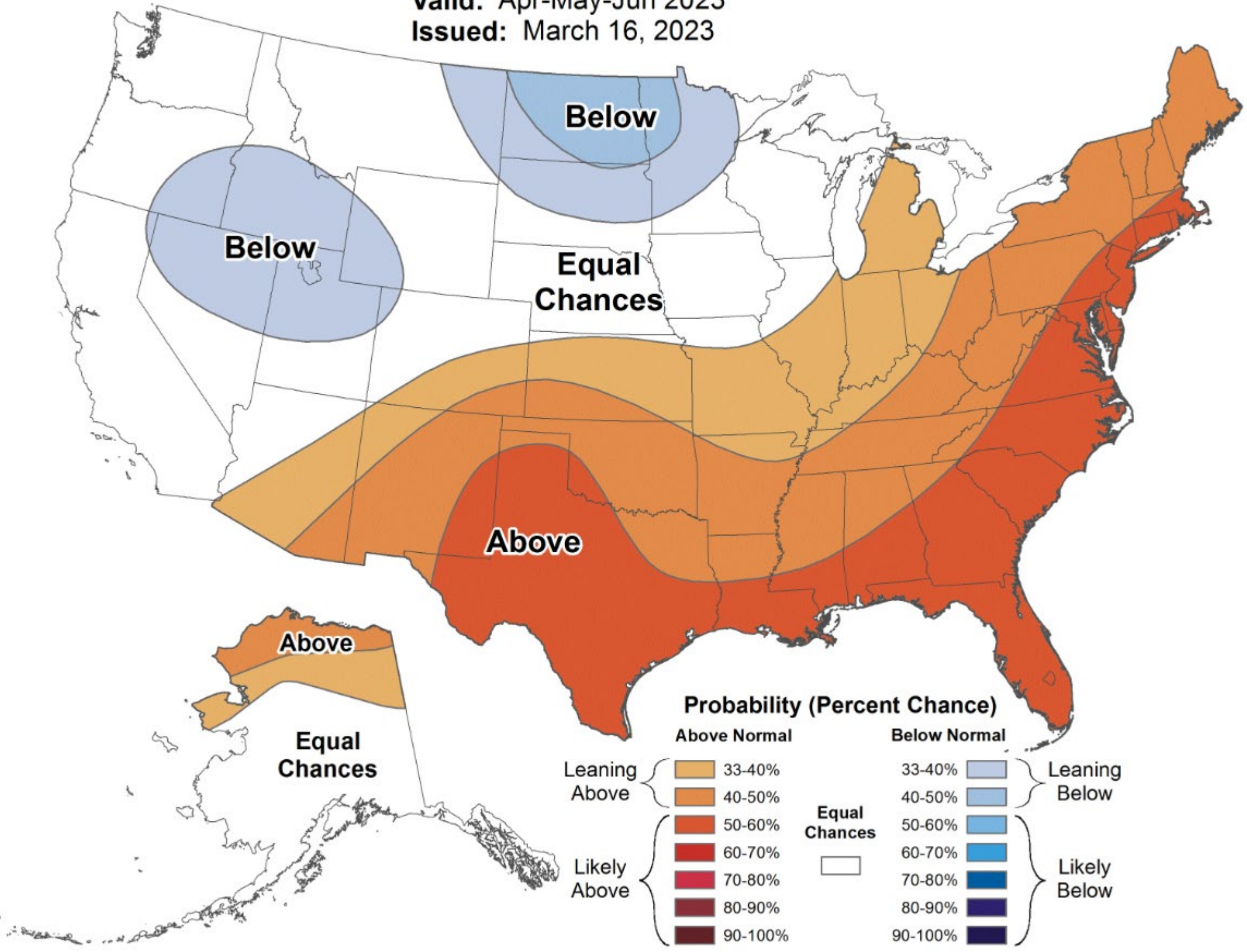
Industry News



Seasonal Temperature Outlook



Valid: Apr-May-Jun 2023
Issued: March 16, 2023



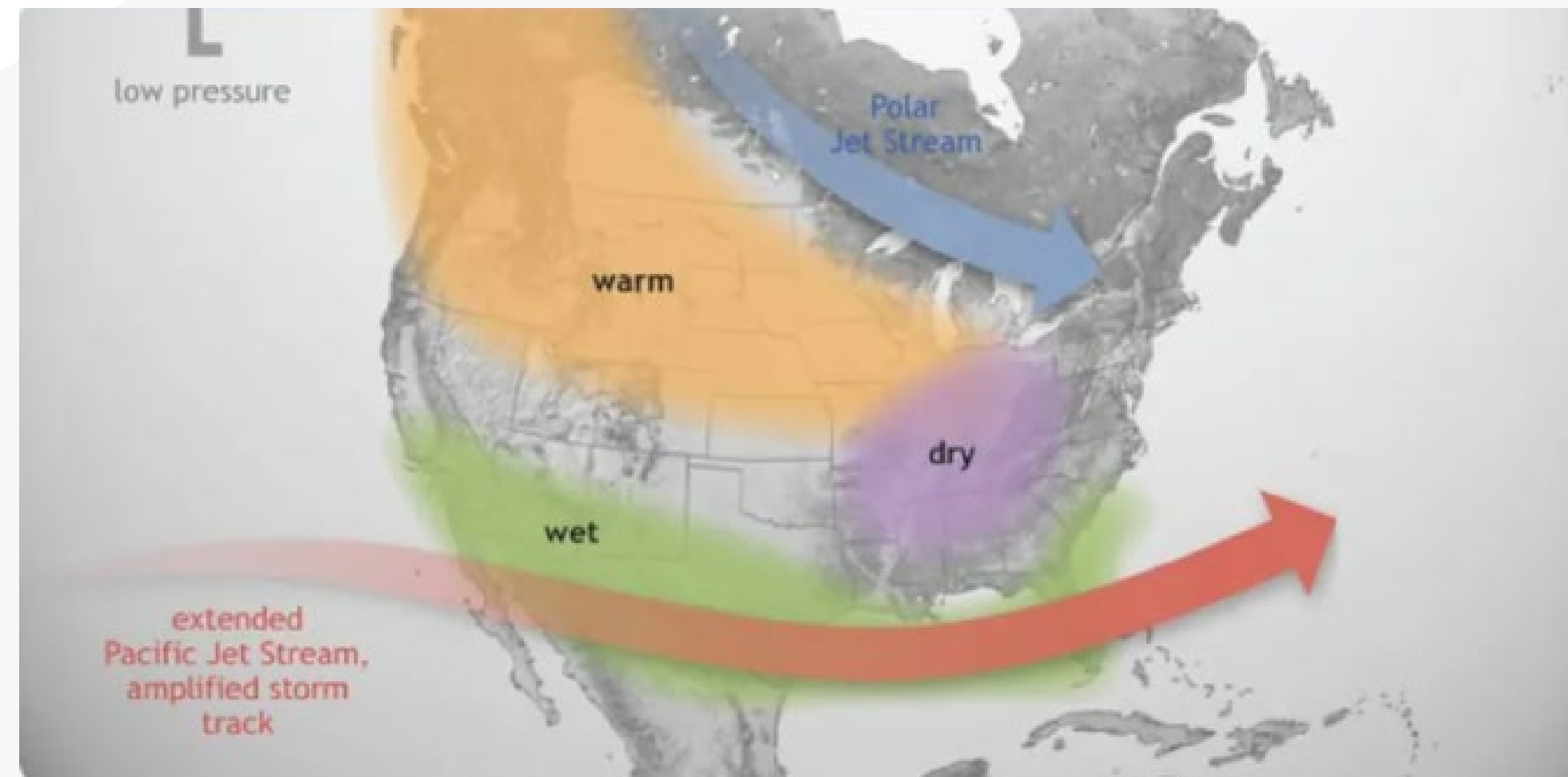
Seasonal Outlook



El Niño Watch Issued

- Multiple climate models across the globe have issued a formal watch for the formation of an El Niño as early as May, but is expected to be in full swing by June, 2023 and persisting through the fall and into winter.
- El Niño also significantly impacts California's weather and could mean a continuation of the current wet pattern experienced through 2022-2023 and impact energy pricing under EIM.
- Entering an El Niño phase now is likely to fuel another spike in global temperatures.
- If El Niño arrives for summer, we could see a spike in electric demand as the nation attempts to stay cool.
- If El Niño continues through the fall and winter the warmer temperatures could keep heating demands lower than normal.

What is an El Niño? *El Niño is a climate pattern defined by sea surface temperature and abnormal precipitation across the Pacific Ocean that can influence weather and climate patterns across the U.S. and around the world.*



4/17/2023

CENTRAL-ST.GEORGE 138kV TRANSMISSION PROJECT				
2023-2024 System Usage Analysis Results - PROJECTED ENERGY BASED				
Description	St.George	Santa Clara	Washington	Hurricane
2023-2024 SYSTEM USAGE for Approved Configuration	66.09%	5.95%	14.60%	13.36%

Notes:

1. Analysis based on facilities Initial cost.
2. % Usage based on Period Energy Use and Approved Normal System Configuration --- Analysis Includes generation energy.

Table 1

2023 -2024		Projected 12 Month Energy Usage		
		Period (YYMMDD)	Total Projected Energy (MWH)	Percent of Total
South West Utah Total - Gross		230401 thru 240331	1,123,548.5	100%
St. George Energy Services		230401 thru 240331	740,581.9	65.9145%
Washington		230401 thru 240331	158,245.3	14.0844%
Santa Clara		230401 thru 240331	57,655.7	5.1316%
Hurricane		230401 thru 240331	167,065.6	14.8695%
Ledges	(included in St. George number)	230401 thru 240331	13,463	1.1983%

Table 2

River/Skyline System Energy Flow for 04/01/2023 thru 03/31/2024 Configuration									
Projected River Flows for 2023/2024(Gross Energy)		+	-	-	+	+			Total
(2023/2024 Configuration; Hurricane Sienna Hills & Coral Canyon at Purgatory)		371,029	0	0	0	0			371,029
Panorama and Twin Lakes @ River		(Stg to Riv)	Riv to Stg	Mill Creek- Dixie	(MC#1)	(MC#2)			
Projected Purgatory Flow (Gross Energy)			167,065.6	29,734.6	22,370.0				219,170.3
			Hurricane	Sienna Hill	Coral Canyon				
Projected Skyline Flows (Gross Energy)		+	+	+	+	-	-		
		259,943	259,943	0	0	0	0		
Panorama and Twin Lakes @ River		Stg-Sky#1	Stg-Sky#2	Bloom Gen	(SC- Gen)	Red Rock Gen	Red Mt	Bloom- Dix	
									Ledges
									519,886
									13,463.5

Analysis % Usage Results

	2019_2020	2020_2021		2021_2022	2022_2023	2023_2024
		Projected	Actual			
St.George	68.25%	67.979%	67.33	67.82%	66.47%	66.09%
Washington	13.28%	13.605%	14.04	13.94%	14.48%	14.60%
Santa Clara	5.11%	5.246%	5.74	5.44%	5.79%	5.95%
Hurricane	13.36%	13.170%	12.89	12.80%	13.26	13.36%

Entity Projection and Actual Values

	2019_2020				2020_2021				2021_2022				2022_2023				2023_2024	
	Projection (MWhr) (2018- 2019 actual values)	% of Total	Actual	% of Actual	Projection (MWhr)	% of Projection Total	Actual (MWhr)	% of Actual	Projection (MWhr)	% of Total	Actual (MWhr)	% of Actual	Projection (MWhr)	% of Total	Actual (MWhr)	% of Actual	Projection (MWhr)	% of Total
Total	1,019,346	----	977926.42	----	1,007,781	----	1,035,484	----	1,043,421.9	----	1,078,020.0	----	1,109,847.3	----	1,114,797.0	----	1,123,548.5	----
St.George	712,108	69.86%	677,714	69.30%	691,291	68.60%	700,220	67.62%	708,200.0	67.87%	722,334.0	67.01%	735,260.7	66.25%	736,917.0	66.10%	740,581.9	65.91%
Washington	123,756	12.14%	121,094	12.38%	126,451	12.55%	136,677	13.20%	136,727.7	13.10%	146,354.0	13.58%	154,849.6	13.95%	153,848.0	13.80%	158,245.3	14.08%
Santa Clara	46,811	4.59%	45,399	4.64%	47,739	4.74%	51,348	4.96%	51,394.2	4.93%	54,140.0	5.02%	56,106.4	5.06%	57,164.0	5.13%	57,655.7	5.13%
Hurricane	136,689	13.41%	133,719	13.67%	142,300	14.12%	147,239	14.22%	147,100.0	14.10%	155,192.0	14.40%	163,630.6	14.74%	166,868.0	14.97%	167,065.6	14.87%
Ledges(included in St.Geo. Total	9370.0		9,452.2		9,858.0		12,486.9		12,629.3		13,559.0		13,801.0				13,463.5	

2018 to 2023_2024 growth

St.George	4.0%
Washington	27.9%
Santa Clara	23.2%
Hurricane	22.2%

ISE ANALYSIS - Based on 04/01/2023 thru 03/31/2024 Energy Projection

	Peak MW	ENERGY (Annual MWhr)	Percent Usage		
Total Energy	----	1,123,548.5	----	(UAMPS Projection)	
Ledges Total Energy	----	13,463.5	----	(UAMPS Projections -- From "Ratio" Tab)	
St.George (SGES) total Energy (including Ledges)	----	740,581.9	----	(UAMPS Projections)	
Washington City Total Energy (2023/2024 Configuration)	----	158,245.3	----	(UAMPS Projection)	
Washington River Total Energy (2023/2024 Configuration)	----	106,140.7	----	(UAMPS 2023_2024 Projection Minus Sienna Hill minus Coral Canyon Proportioned From Ratio)	
Washington Coral Canyon Total Energy	----	22,370.0	----	(UAMPS Projections -- From "Ratio" Tab)	
Washington Sienna Hills Total Energy	----	29,734.6	----	(UAMPS Projections -- From "Ratio" Tab)	
Washington Purgatory Total Load	----	52,104.6	----	(Sienna Hill plus Coral Canyon)	
Hurricane Total Energy	----	167,065.6	----	(UAMPS Projection)	
Hurricane Anticline Energy (to PAC)	----	-----	----		
PAC Gateway energy to Hurricane		-----		UAMPS Data	
Hurricane Anticline Total Energy	----	30303.51	----	UAMPS projection proportioned -- See Ratio tab	
Anticline Meter #1	----	-----	----	(UAMPS meter Data)	
Anticline Meter #2	----	-----	----	(UAMPS meter Data)	
Hurricane Brentwood & Clifton Wilson Energy	----	136,762.1	----	UAMPS projection proportioned -- See Ratio tab	
Santa Clara Total Energy	22.3	57,655.7	----	(UAMPS Projection)	
St.George to Skyline Line #1 Total energy	90.9	259,943.0	----	(UAMPS Projection and Load flow verified)	Note: indicated peak is based on 2023 Projections
St.George to Skyline Line #2 Total energy	90.9	259,943.0	----	(UAMPS Projection and Load flow verified)	Note: indicated peak is based on 2023 Projections
Skyline Substation Total Energy	181.8	519,886.0	----	(UAMPS Projection and Load flow verified)	
SGES Skyline Energy	159.5	462,230.3	----	SGES Skyline 1 &2 Meter minus Santa Clara)	
Santa Clara Skyline Energy	22.3	57,655.7	----	(UAMPS Projection)	
SGES Skyline MWhr/peak MW	----	2,898.0	----	(St.George Skyline Energy/St.George Peak Skyline MW)	
Santa Clara Skyline Usage	----	-----	11.1%		
St.George Skyline Usage	----	-----	88.9%		
Santa Clara St.George to Skyline #1 & #2 Usage	----	-----	11.1%	(Santa Clara Skyline Energy/ (St.George #1 Pluse #2))	
ST.George -- St.George to Skyline #1 & #2 Usage	----	-----	88.9%	(St. George Skyline Energy/ (St.George #1 Pluse #2))	
Skyline to Red Hills Peak and Total Energy:	58.7	163,142.7	----	(Santa Clara Energy Plus St.George Skyline to RedRock line Energy)	Note: Line load flow from system load flow analysis
Santa Clara Peak MW	22.3	-----	----	(Projection)	
SGES Peak MW line flow	36.4	-----	----	(line load flow minus Santa Clara peak MW load)	Note: Line load flow from system load flow analysis
Santa Clara Energy	-----	57,655.7	----	(UAMPS Projection)	
SGES Line Energy	-----	105,487.1	----	((St.George Skyline MWhr/peak MW) times peak St.George MW Line Flow))	
% Santa Clara	-----	-----	35.3%	(Santa Clara Energy/Skyline to Rock Total Energy)	
% SGES	-----	-----	64.7%	(St.George Line Energy/Skyline to Rock Total Energy)	
Red Hills to Sunset Tap Peak and Total Energy	44.7	122,570.8	----	(Santa Clara Energy Plus St.George Red Rock to Snow Canyon Tap line Energy)	Note: Line load flow from system load flow analysis
Santa Clara Peak MW	22.3	-----	----	(Projection)	
SGES Peak line MW	22.4	-----	----	(line load flow from system study minus Santa Clara peak MW load)	
Santa Clara Energy	-----	57,655.7	----	(UAMPS Projection)	
SGES Line Energy	-----	64,915.1	----	((St.George Skyline MWhr/peak MW) times peak St.George MW Line Flow))	
% Santa Clara	-----	-----	47.0%	(Santa Clara Energy/Red Rock to Snow Canyon Tap Total Energy)	
% SGES	-----	-----	53.0%	(St.George Line Energy/Red Rock to Snow Canyon Tap Total Energy)	
Sunset Tap to Snow Canyon Peak and Total Energy	44.7	122,570.8	----	(Santa Clara Energy Plus St.GeorgeSnow Canyon Tap to Snow Canyon line Energy)	
Santa Clara Peak MW	22.3	-----	----	(Projection)	
SGES Peak MW on line	22.4	-----	----	(line load flow from system study minus Santa Clara peak MW load)	
Santa Clara Energy	-----	57,655.7	----	(UAMPS Projection)	
St.George Energy thru Line	-----	64,915.1	----	((St.George Skyline MWhr/peak MW) times peak St.George MW Line Flow))	
% Santa Clara	-----	-----	47.0%	(Santa Clara Energy/Snow Canyon Tap to snow Canyon Total Energy)	
% SGES	-----	-----	53.0%	(St.George Line Energy/Snow Canyon Tap to Snow Canyon Total Energy)	
Snow Canyon to Santa Clara Peak and Total Energy				Santa Clara Energy Only)	
Santa Clara Energy	22.3	57,655.7	----	(UAMPS Projection)	
% Santa Clara	----	-----	100.0%		
Snow Canyon Energy	----	122,570.8	----	(Santa Clara Energy Plus St.George Snow Canyon Energy)	
Santa Clara Energy	22.3	57,655.7	----	(UAMPS Projection)	
SGE Peak MW into SnowCanyon	22.4	-----	----	(From St. George data)	
SGES Snow Canyon Energy	-----	64,915.1	----	((St.George Skyline MWhr/peak MW) times Snow Canyon Peak MW)	
% Santa Clara	-----	-----	47.0%	(Santa Clara Energy/Total Snow Canyon Energy)	
% SGES	-----	-----	53.0%	((St.George Energy into Snow Canyon)/ total Snow Canyon Energy)	
ST.George to River line Energy	----	371,028.7			
ST.George to River line Peak MW	94.7	-----		Note: indicated peak is based on Southgated and TL at Skyline.	
ST.George to River line Energy	----	371,028.7	----	(UAMPS meter Data minus Hurricane Minus Sienna Hill Minus Coral Canyon)	
ST.George to River line Peak MW	94.7	-----	----	adjusted to include Panorama	
SGES line Energy Flow	-----	264,888.1	----	(Proportioned UAMPS meter Data & Load Flow)	
Washington Line Energy Flow	-----	106,140.7	----	(UAMPS projection -- proportioned -- Washington meter Minus Sienna Hills Minus Coral Canyon)	
% Washington	----	-----	28.6%		
% SGES	----	-----	71.4%		
River Substation Total Energy	----	371,028.7	----	(UAMPS meter Data minus Hurricane Minus Sienna Hill Minus Coral Canyon)	
Washington RIVER Peak MW	36.5	-----	----	(From load Flow+ Meter data)	
SGES River MW @ Peak	58.2	-----	----	(UAMPS meter Data & Load Flow)	
Washington Energy Thru River	-----	106,140.7	----	(UAMPS meter Data -- Washington meter Minus Sienna Hills Minus Coral Canyon)	
SGES Energy Thru River	-----	264,888.1	----	(UAMPS Meter Data -- St.George River Meter Minus Washington Minus Hurricane)	
SGES River MWhr/peak MW	----	4,551.3	----	(St.George River Energy/St.George Peak River MW)	
River % USAGE:					
% Washington	----	-----	28.6%	(Washington Energy thru River/Total River Energy)	
% SGES	----	-----	71.4%	(St.George Energy thru River/Total River Energy)	
River to Mill Creek total Line Energy		163,032.4	----	(Washington Energy Thru River plus ((St.Geo River MWhr/peak MW) times Mill Creek Peak MW))	
Line Peak MW	49.0	-----	----	(From Load Flow-2023 projection)	
Washington Peak MW	36.5	-----	----	(From Load Flow-2023 projection)	
SGES Peak MW	12.5	-----	----	(Mill Creek Distribution peak Load - St. George Data)	
SGES Line Energy	-----	56,891.8	----	((SGES Line PEAK MW)time(St.George River MWhr/peak MW))	
Washington Line Energy	-----	106,140.7	----	(Equals Washington Energy thru River)	
% Washington	----	-----	65.1%	(Washington Load Thru River)/River to Mill Creek Total Energy)	
% SGES	----	-----	34.9%	(St.George Line Energy/River to Mill Creek Total Energy)	
Purgatory to Anticline Total Energy:	----	82,408.2	----	(Hurricane Anticline plus Washington Sienna Hills Plus Coral Canyon)	
Anticline #1&2	----	30,303.5	----		
Coral Canyon	----	22,370.0	----		
Sienna Hills	----	29,734.6	----		
Washington Line Energy	----	52,104.6	----	(Sienna Hills Pluse Coral Canyon)	
Hurricane Line Energy	----	30,303.5	----	(Proportioned UAMPS Anticline Meter Data)	
% Washington	----	-----	63.2%	(Washington Line Energy/ Total Line Energy)	
% Hurricane	----	-----	36.8%	(Hurricane Line Energy/ Total Line Energy)	
Purgatory to Brentwood/Clifton Wilson Total Line Energy:				(Hurricane Brentwood Pluse Clifton Wilson Energy)	
% Hurricane			100.0%	(ALL ENERGY ON Line Hurricane Flows)	
Purgatory to Mill Creek:				Not Used 2022 thru 2023 -- Percent usage equal division - stand-by usages available to each entity	
% Washington			33.3%		
% Hurricane			33.3%		
% SGES			33.3%		
Capacitor Banks:					
Skyline and River Energy		-----	890,914.7	----	
SGES Skyline and River Energy		-----	727,118.4	----	
Santa Clara Skyline And River Energy		-----	57,655.7	----	
Washington Skyline and River Energy		-----	106,140.7	----	
% Santa Clara		-----	-----	6.5%	
% Washington		-----	-----	11.9%	
% SGES		-----	-----	81.6%	
NOTE: COMMON SYSTEM (CENTRAL, ST.GEORGE, Interconnecting 138kV LINES) USAGE ASSIGNED at % of TOTAL ENERGY PER ENTITY.					

SYSTEM USAGE ANALYSIS - BASED on 04/2022 thru 03/31/2023 PROJECTIONS											
--- ENERGY BASED -- Energy DATA From UAMPS Forecast March 2022 to March 2023 - 100% Hurricane and 32% Washington at Purgatory System --											
No.	System Component	Participant % Usage ⁽²⁾				Component Initial Cost ⁽⁰⁾		Value Usage			
		St.George	Santa Clara	Washington	Hurricane			St.George	Santa Clara	Washington	Hurricane
1		65.9145%	5.1316%	14.0844%	14.8695%	\$9,738,290.00	From 2009 Bond Data	\$6,418,945.16	\$499,730.09	\$1,371,579.72	\$1,448,035.03
2	Central - St George #2	65.9145%	5.1316%	14.0844%	14.8695%	\$9,738,290.00	From 2009 Bond Data	\$6,418,945.16	\$499,730.09	\$1,371,579.72	\$1,448,035.03
3	Red Butte - St.George #1	65.9145%	5.1316%	14.0844%	14.8695%	\$5,628,500.00	From 1993 Bond Data	\$3,709,997.63	\$288,832.11	\$792,740.45	\$836,929.81
4	RedButte - St.George #2 including station work	65.9145%	5.1316%	14.0844%	14.8695%	\$4,155,000.00	1997B Bond	\$2,738,747.48	\$213,217.98	\$585,206.82	\$617,827.73
5	4th Circuit Interconnection	65.9145%	5.1316%	14.0844%	14.8695%	\$540,000.00	Agreement Estimate	\$355,938.30	\$27,710.64	\$76,055.76	\$80,295.30
6	St. George -Skyline #1	88.90%	11.10%	0.00%	0.00%	\$603,275.00	From June 2000 Minutes	\$536,311.48	\$66,963.53	\$0.00	\$0.00
7	St. George -Skyline #2	88.90%	11.10%	0.00%	0.00%	\$300,000.00	ICPE Data	\$266,700.00	\$33,300.00	\$0.00	\$0.00
8	St. George -River ⁽¹⁾	71.40%	0.00%	28.60%	0.00%	\$584,975.00	Bid Data	\$417,672.15	\$0.00	\$167,302.85	\$0.00
9	Skyline - Red Hills 69kV	64.70%	35.30%	0.00%	0.00%	\$207,104.00	From June 2000 Minutes	\$133,996.29	\$73,107.71	\$0.00	\$0.00
10	Red Hills - Sunset Tap	53.00%	47.00%	0.00%	0.00%	\$112,996.00	From June 2000 Minutes	\$59,887.88	\$53,108.12	\$0.00	\$0.00
11	SunSet Tap - Snow Canyon	53.00%	47.00%	0.00%	0.00%	\$60,248.00	From June 2000 Minutes	\$31,931.44	\$28,316.56	\$0.00	\$0.00
12	Snow Canyon Substation Expansion	53.00%	47.00%	0.00%	0.00%	\$150,000.00	est.	\$79,500.00	\$70,500.00	\$0.00	\$0.00
13	Snow Canyon -Santa Clara Junction	0.00%	100.00%	0.00%	0.00%	\$98,760.00	From June 2000 Minutes	\$0.00	\$98,760.00	\$0.00	\$0.00
14	Santa Clara Interconnection Line	0.00%	100.00%	0.00%	0.00%	\$68,749.00	1993 PMC Minutes (est.)	\$0.00	\$68,749.00	\$0.00	\$0.00
15	River - Mill Creek 69kV	34.90%	0.00%	65.10%	0.00%	\$195,000.00	From June 2000 Minutes	\$68,055.00	\$0.00	\$126,945.00	\$0.00
16	Mill Creek - Purgatory ⁽¹⁾⁽⁷⁾⁽⁸⁾	33.33%	0.00%	33.33%	33.33%	\$934,700.00	Initial const. & Final Purg. Cost	\$311,566.36	\$0.00	\$311,566.36	\$311,566.36
17	Purgatory - AnticlineTap ⁽⁷⁾	0.00%	0.00%	63.20%	36.80%	\$425,937.00	Initial const. & Final Purg. Cost	\$0.00	\$0.00	\$269,192.18	\$156,744.82
18	Purgatory - Brentwood/Clifton Wilson ⁽¹⁾⁽⁷⁾⁽¹⁰⁾	0.00%	0.00%	0.00%	100.00%	\$817,000.00	Initial const. & Final Purg. Cost	\$0.00	\$0.00	\$0.00	\$817,000.00
19	RCLF-Washington 69kV ⁽⁶⁾⁽¹⁾	0.00%	0.00%	100.00%	0.00%	\$419,263.00	1993 PMC Minutes (est.)	\$0.00	\$0.00	\$419,263.00	\$0.00
20	MillCreek - Washington 69kV	(Washington Project)									
21	Syline Substation (Initial Purchase) ⁽⁶⁾	88.90%	11.10%	0.00%	0.00%	\$500,000.00	est.	\$444,500.00	\$55,500.00	\$0.00	\$0.00
22	Central Substation	65.9145%	5.1316%	14.0844%	14.8695%	\$5,089,045.00	From 1993 Bond Data	\$3,354,418.57	\$261,149.43	\$716,761.45	\$756,715.55
23	St.George Station	65.9145%	5.1316%	14.0844%	14.8695%	\$1,765,391.00	From 1993 Bond Data	\$1,163,648.65	\$90,592.80	\$248,644.73	\$262,504.81
24	Skyline Substation ⁽⁴⁾	88.90%	11.10%	0.00%	0.00%	\$4,850,000.00	ICPE Data	\$4,311,650.00	\$538,350.00	\$0.00	\$0.00
25	River Substation ⁽³⁾	71.40%	0.00%	28.60%	0.00%	\$2,921,580.00	Initial Contract & ICPE Data	\$2,086,008.12	\$0.00	\$835,571.88	\$0.00
26	15kV Capacitor Banks	81.60%	6.50%	11.90%	0.00%	\$600,000.00	ICPE Data	\$489,600.00	\$39,000.00	\$71,400.00	\$0.00
27	MillCreek 69kV Breaker Addition #1	33.33%	0.00%	33.33%	33.33%	\$60,000.00	est.	\$19,999.98	\$0.00	\$19,999.98	\$19,999.98
28	MillCreek 69kV Breaker Addition #2	0.00%	0.00%	0.00%	0.00%	\$0.00	Washington installed	\$0.00	\$0.00	\$0.00	\$0.00
						\$50,564,103.00		\$33,418,019.64	\$3,006,618.06	\$7,383,809.90	\$6,755,654.41
								66.09%	5.95%	14.60%	13.36%
								(Percent of Total Component Value)			

0. Dollar value indicated based on initial cost.

1. Cost component excludes Right of Way cost

2. % usage based on annual ENERGY and 2019-2020 Normal System Configuration --- Analysis includes generation energy

3. River equals initial construction; T2 additions; capacitor bank addition --excludes upgrade due to Mill Creek generation. \$1,621,580, \$900,000, \$400,000

4. Skyline equals #1 Transformer; #2 Transformer; 69kV Yard expansion; 69kV Cap Bank; 138kV Yard Expansion -- Excludes Initial Purchase

5. RCLF -Washington -- Bond indicates 602,000.00 --Contractor contract indicates \$158,000.00 excluding (OFM Material & Right of way Cost)

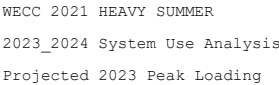
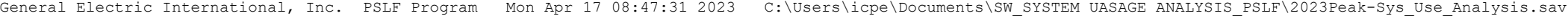
6. Value indicated is estimate -- 2000 Data for St. George facilities purchase excluded Skyline Value .

7. Mill Creek Purgatory, Purgatory - Anticline, Purgatory - Clifton Wilson sections cost component includes additional \$345,937.00 Per section for Purgatory Interconnection (adjusted for final actual Costs).

8. Component viewed as stranded cost - I.e. not used as normal configuration by any entity --- cost assigned based on availability for backup use.

9. Cost indicated does not include cost From tap to Washington System.

10. Initial Brentwood to Clifton Wilson Cost Removed___ Ownership Transferred to Hurricane City



Analysis Configuration as shown.

```
MW/MVAR
C:\Users\icpe\Documents
Rating =      1
```