



# 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

12/6/2023

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 November 2023

**STAFF REPORTS**

Scott Hughes/Power Director

Brian Anderson/Transmission & Distribution Superintendent

Mike Ramirez/Service Superintendent

Jared Ross/Substation & Generation Superintendent

**BUDGET**

1. Budget

**OLD BUSINESS**

1. Capacity Update
2. Update regarding Sky Ranch Area assets

**NEW BUSINESS**

1. Discussion and possible recommendation to the City Council regarding a resolution authorizing a tax certificate and agreement for UAMPS' Payson Power Project; and related matters
2. Discussion and update on solar projects
3. UAMPS Updates
  - A. Pooling Appendix MIG update
  - B. Hurricane/UAMPS Joint Use Agreement

**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



# HURRICANE CITY

## UTAH

**Mayor**

Nanette Billings

**City Manager**

Kaden C. DeMille

**Power Board**

Mac J. Hall, Chair

Jerry Brisk

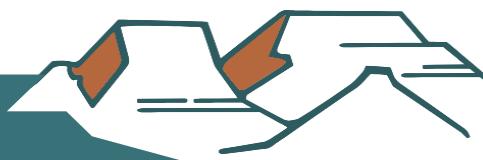
Pam Humphries

Dave Imlay

Joseph Prete

Charles Reeve

1 The Hurricane City Power Board met on November 8, 2023, at 4:00 p.m. at the Clifton Wilson Substation on  
2 526 W 600 N.  
3  
4 In attendance were Mac Hall, Jerry Brisk, Pam Humphries, Charles Reeve, Dave Imlay, Joseph Prete, Scott  
5 Hughes, Brian Anderson, Michael Ramirez, Jared Ross, Mike Vercimak, Kaden DeMille, Nanette Billings, Dayton  
6 Hall, Fred Resch, Crystal Wright, Amy Werrett, Clark Fawcett, Craig Anderson, Brett Skinner, Bruce  
7 Zimmerman, and Linda Zimmerman.  
8  
9 Mac Hall welcomed everyone to the meeting. The Pledge of Allegiance and prayer were done in the previous  
10 meeting and thus were not repeated. Pam Humphries motioned to approve minutes from the October 2023  
11 meeting. Joseph Prete seconded the motion. Motion passed unanimously. Dave Imlay abstained since he was  
12 absent.  
13  
14 **Scott Hughes:** Scott Hughes reported our employees are healthy and working hard. He spent time explaining  
15 the information contained in the slides from the Southwest Utah Technical Task Force report included in the  
16 packet. Southwest Utah Technical Task Force is a group that specifically discusses and deals with issues and  
17 infrastructure affecting the power grid for the southwest corner of Utah.  
18  
19 **Brian Anderson:** Brian Anderson reported on the lights that were strung down at the Community Center to  
20 provide more permanent event lighting over 100 West. The Line Crew also removed the overhead line down at  
21 the Standard Plumbing site. The Line Crew spent most of their time working on the 1100 West re-insulation  
22 project. That project is completed down to 400 South at this point.  
23  
24 **Mike Ramirez:** Mike Ramirez reported on the Dennett Construction project. There was some brand new wire  
25 that had been pulled in by Don Johnson. That wire faulted and was found to be damaged in a section. When  
26 we attempted to heat it up it caused about a 10-15 minute outage in the Industrial Park area. We received a  
27 call from the Santa Clara Power Superintendent regarding a large outage in Santa Clara they requested  
28 assistance with. We sent Jordan Steglich and Mike Ramirez over. They were on site somewhere between  
29 approximately 3:00 pm until 2:00-3:00 am. Santa Clara will be submitting a claim for the time and materials to  
30 the insurance company responsible. Santa Clara requested us to submit our overtime to include with theirs to  
31 be reimbursed as part of their claim. Discussion about the good collaboration between cities when assistance  
32 is needed.  
33  
34 **Jared Ross:** Jared Ross reported an update on the work done at the Three Falls Substation. They've been  
35 continuing to work on the bussing. He anticipates being able to energize one side of the substation by the end  
36 of February 2024. He reported on the attendance at hotline school where they were able to tour the Hoover  
37 Dam. He is appreciative of the substation employees he has currently. They both picked up a lot of information  
38 during hotline school that will be helpful.



39

40 **Introduction to Hurricane Power Resource Portfolio:** Scott Hughes described that we rearranged the order of  
41 the agenda from normal due to the invitation to the incoming city council candidates. We will briefly discuss  
42 Hurricane City Power's current resource portfolio. Dayton Hall summarized a press release that was just  
43 received regarding an update on the CFPP project. He showed a graph showing a pie chart of our current  
44 resource portfolio and discussed each of the projects in a little more detail along with projected end dates for  
45 each of them. Amy Werrett asked a question about average power prices. Scott Hughes explained a historical  
46 view of power prices.

47

48 **UAMPS Updates:** Scott Hughes reported that he is going to forego this topic due to time. There isn't anything  
49 major that needs to be reported currently.

50

51 **Budget:** Scott Hughes reported on the normal monthly graphs and numbers. He also presented some new  
52 graphs that he will begin presenting monthly based on numbers received from financial statements. These will  
53 look at energy revenue margins and deficits. He presented this information with both monthly and yearly data.  
54 Discussion regarding a rate structure needed to maintain the margin needed while replenishing reserves as  
55 well. Dave Imlay stated that last time we had to dip into reserves during the economic recession, it took us 8-9  
56 years to replenish those funds. Scott Hughes stated at the UAMPS conference they suggested reserves need to  
57 be replenished within 2-3 years. We need to keep a close eye on things, but August and September financials  
58 looked more promising.

59

60 **Capacity Update:** Scott Hughes reported on the capacity project that had been approved. The first project is in  
61 the works and a second project with a few other interested developers is progressing.

62

63 **Update regarding purchase of Sky Ranch Area assets from Rocky Mountain Power:** Scott Hughes provided an  
64 update on the progress of the purchase of assets. The meters have all been changed out at this point and he  
65 expressed gratitude to TJ Rees who handled the meter changeout with Rocky Mountain Power. The utility  
66 department has been creating accounts and getting all the meter information input. They have done a great  
67 job and he expressed appreciation for their hard work. There is a little cleanup still to take care of with the  
68 primary metering point, but this project is mostly complete.

69

70 **Update on 1150 West Acquisition:** Scott Hughes reported that we are still working on acquiring the easements  
71 for the extension along 1100 West. Nanette Billings stated that we should have signed purchase agreements  
72 soon.

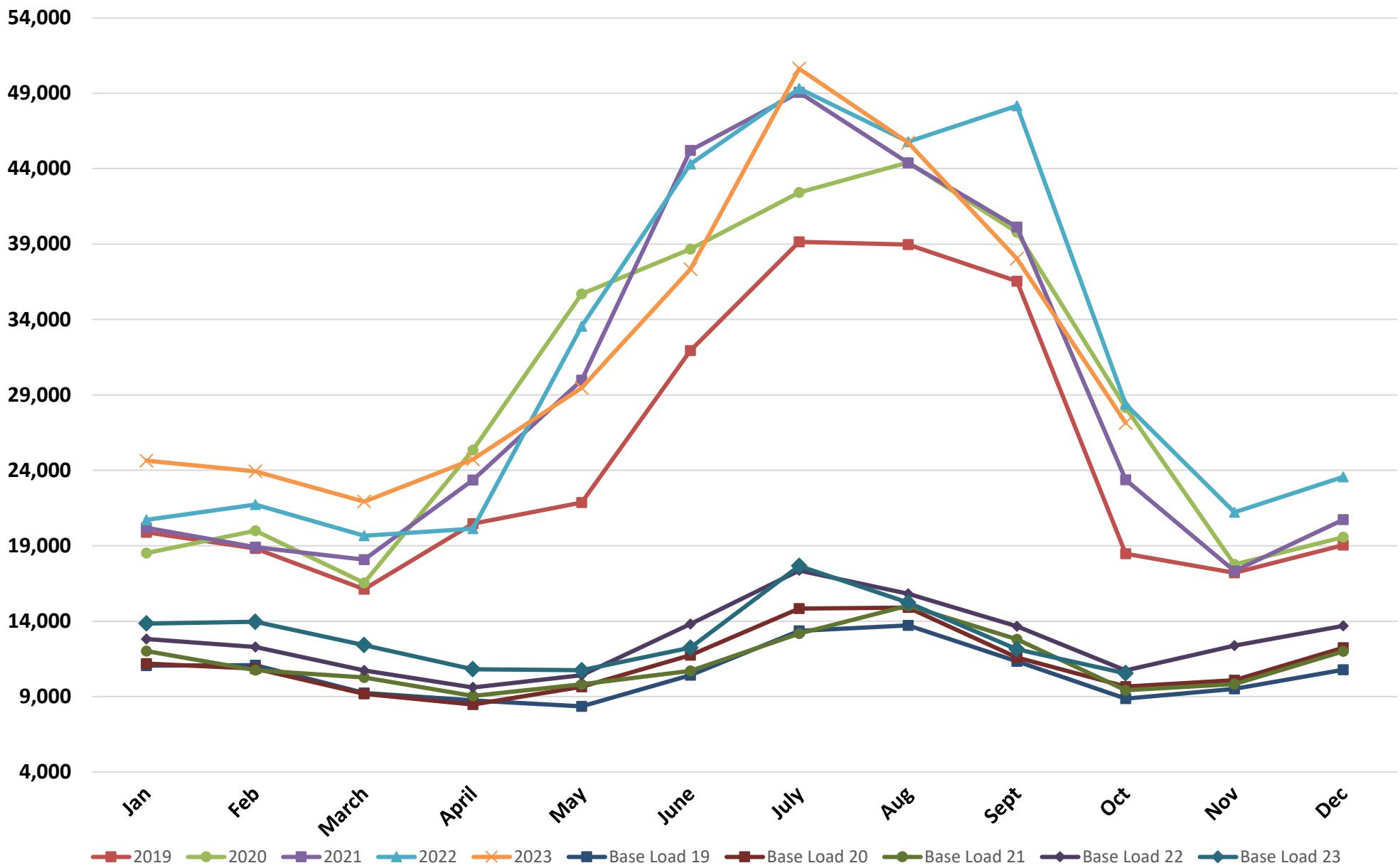
73

74 Power Board adjourned at 5:43 p.m. The next Power Board Meeting is scheduled for December 6, 2023, at  
75 3:00 p.m.

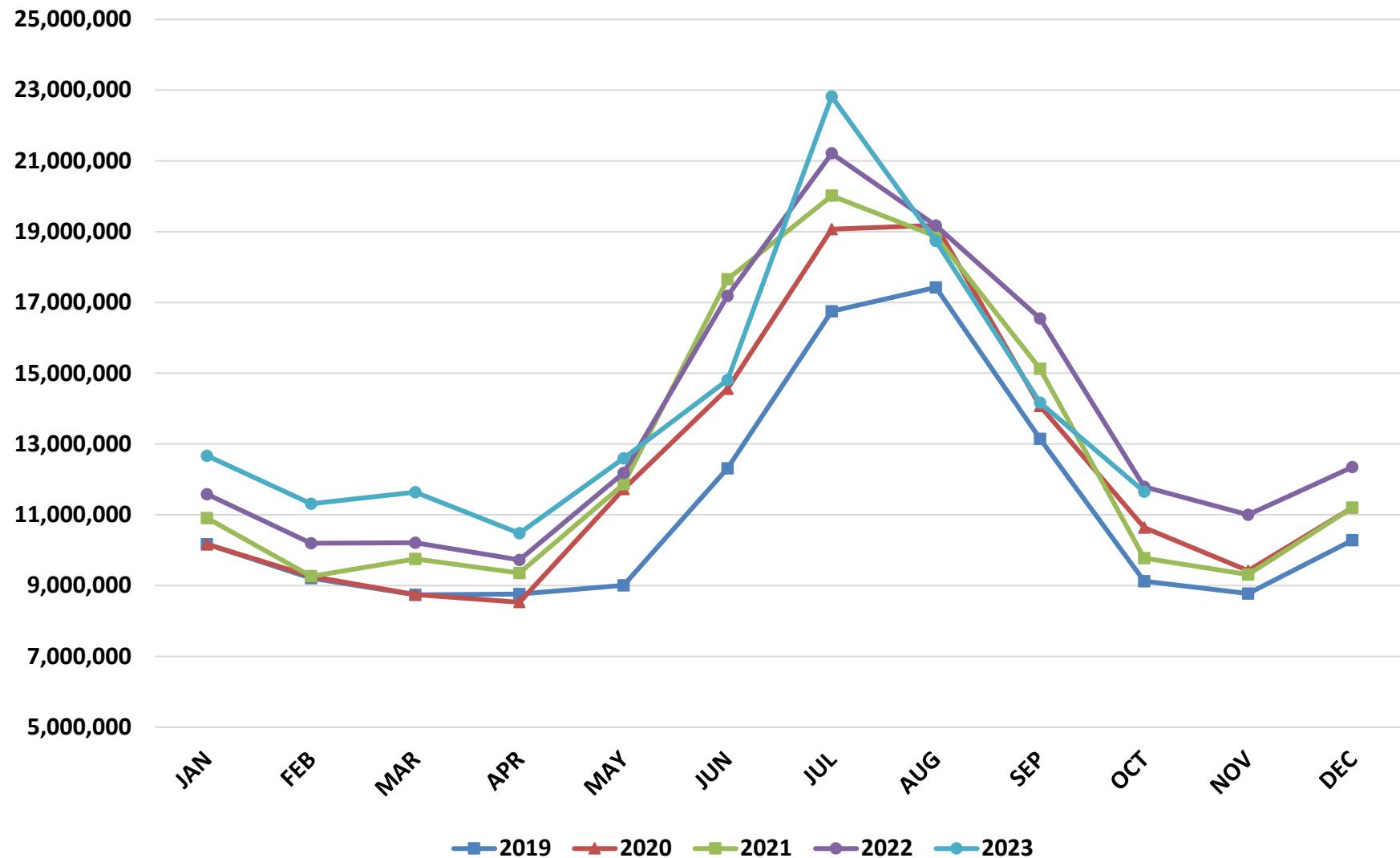
---

# BUDGET

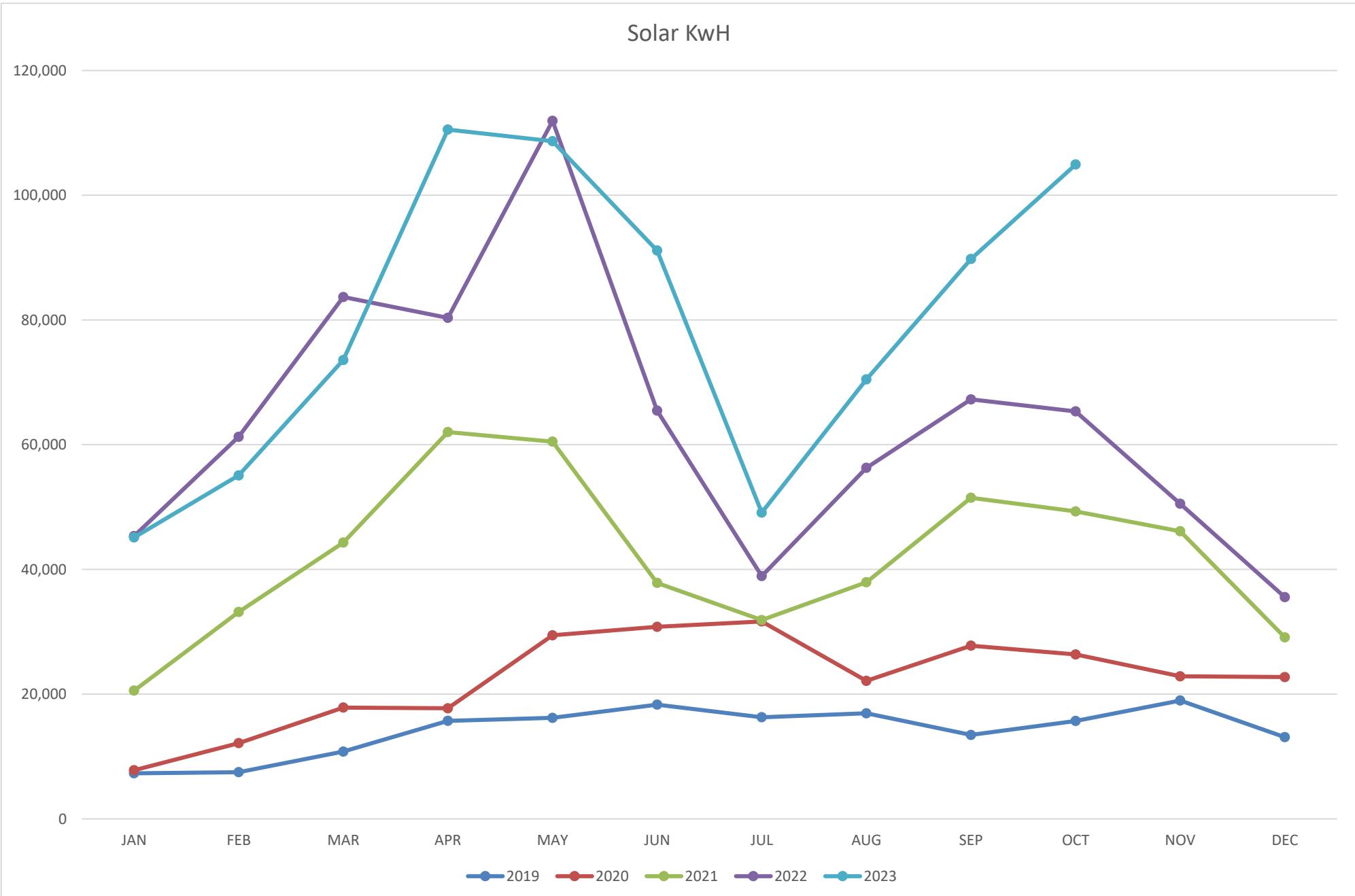
## 2019 - 2023 KW LOAD



## 2019 - 2023 KWH LOAD



## Solar KwH



## AVERAGE YEARLY POWER PRICES

23-24 bdgt amount (thru Sept 2023)

**\$84.15**

BDGT Year to Date

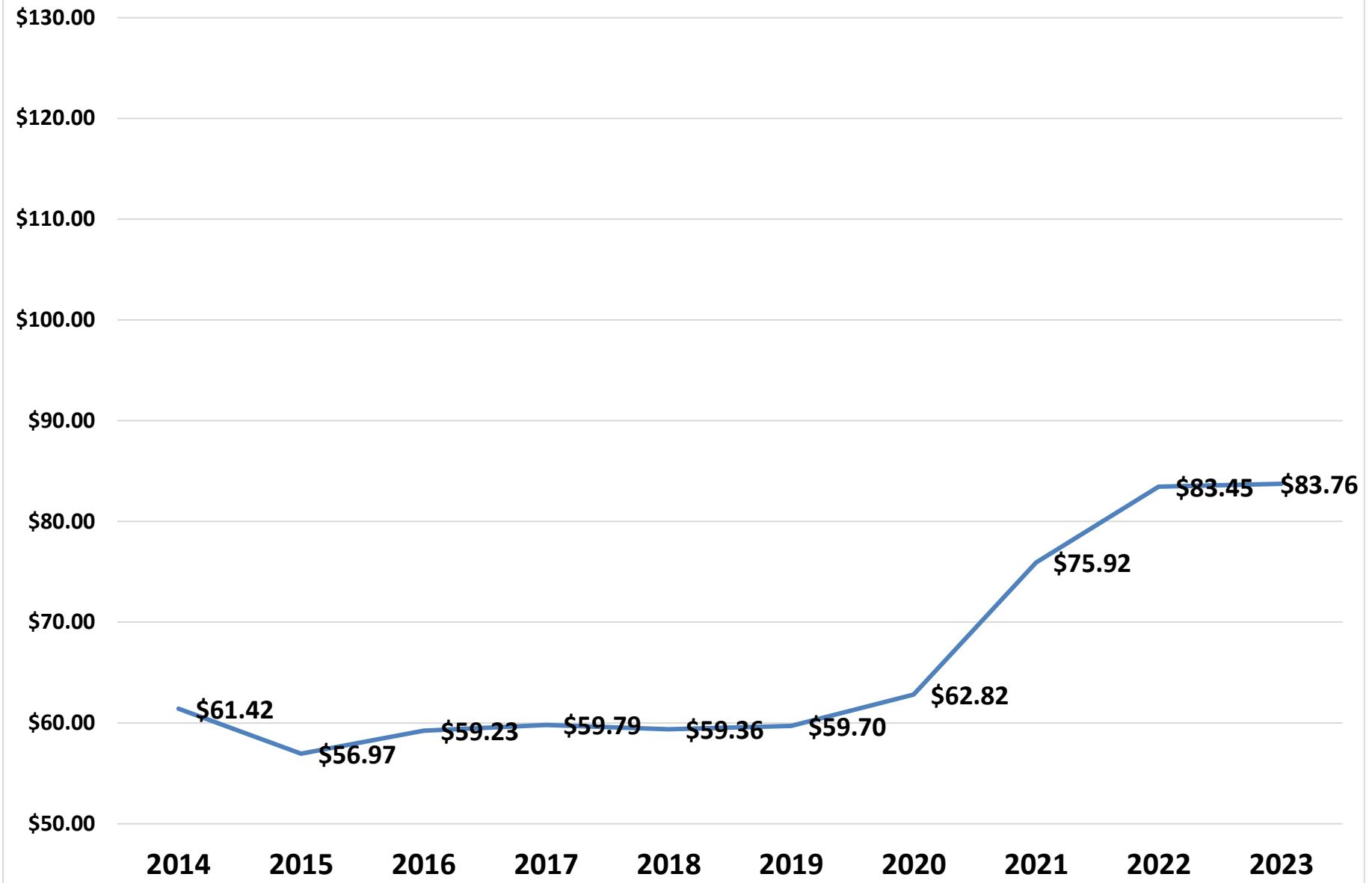
**\$82.32**

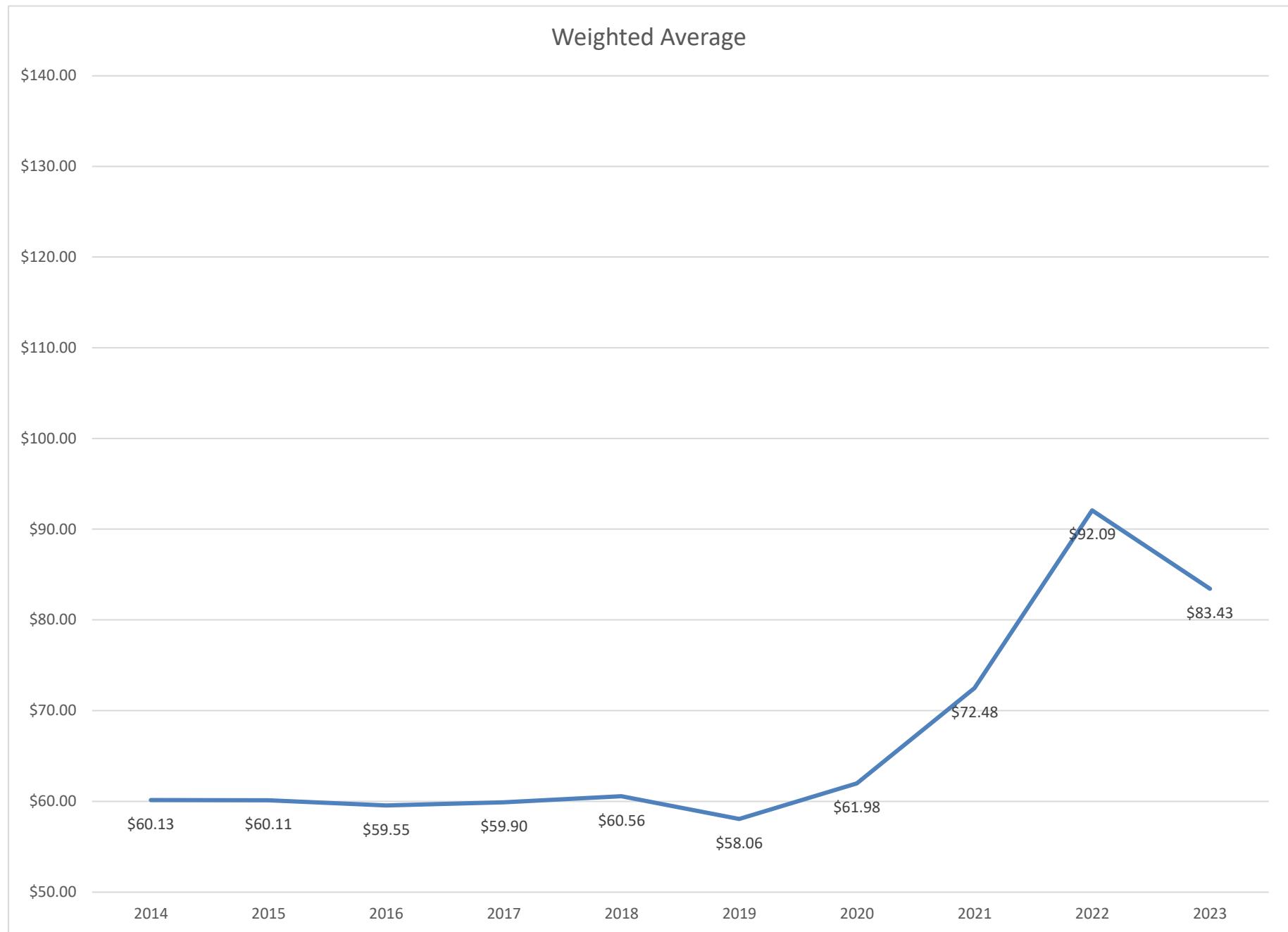
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Jan	\$56.66	\$60.76	\$58.36	\$59.86	\$57.87	\$59.07	\$60.62	\$59.75	\$57.76	\$60.14	\$68.25	\$132.00
Feb	\$59.78	\$58.15	\$64.45	\$65.94	\$62.38	\$63.04	\$60.96	\$67.00	\$60.67	\$63.19	\$70.88	\$85.08
Mar	\$57.28	\$63.50	\$60.83	\$62.03	\$61.77	\$60.99	\$60.09	\$65.17	\$64.67	\$63.64	\$67.28	\$81.89
Apr	\$55.43	\$63.77	\$63.75	\$61.88	\$59.71	\$59.49	\$55.02	\$55.44	\$55.92	\$61.86	\$82.63	\$71.74
May	\$53.31	\$60.28	\$61.64	\$64.71	\$65.51	\$60.32	\$58.86	\$58.55	\$58.55	\$59.69	\$72.66	\$67.01
June	\$50.09	\$56.05	\$59.15	\$58.30	\$65.51	\$58.54	\$52.17	\$55.30	\$53.44	\$86.91	\$77.60	\$69.40
Jul	\$51.16	\$55.62	\$56.85	\$56.91	\$56.95	\$58.29	\$67.87	\$54.29	\$55.98	\$81.04	\$85.31	\$90.02
Aug	\$51.57	\$55.49	\$56.84	\$55.27	\$57.67	\$59.00	\$66.55	\$54.58	\$78.40	\$72.03	\$96.60	\$82.90
Sep	\$54.79	\$58.80	\$59.46	\$56.06	\$56.97	\$62.36	\$55.00	\$54.34	\$64.93	\$82.38	\$127.29	\$68.06
Oct	\$62.68	\$60.35	\$61.42	\$56.97	\$59.23	\$59.79	\$59.36	\$59.70	\$62.82	\$75.92	\$83.45	\$83.76
Nov	\$63.37	\$61.65	\$63.03	\$59.68	\$64.18	\$62.14	\$64.60	\$63.80	\$63.60	\$70.47	\$96.34	
Dec	\$56.02	\$58.37	\$60.91	\$57.90	\$61.51	\$58.80	\$61.61	\$58.55	\$60.33	\$70.07	\$161.27	
Yr Avg	\$56.01	\$59.40	\$60.56	\$59.63	\$60.64	\$60.15	\$60.23	\$58.87	\$61.42	\$70.61	\$90.80	\$83.18
Weighted Avg	\$55.22	\$58.80	\$60.34	\$58.99	\$59.55	\$59.90	\$60.56	\$58.11	\$61.98	\$72.46	\$92.09	\$83.43

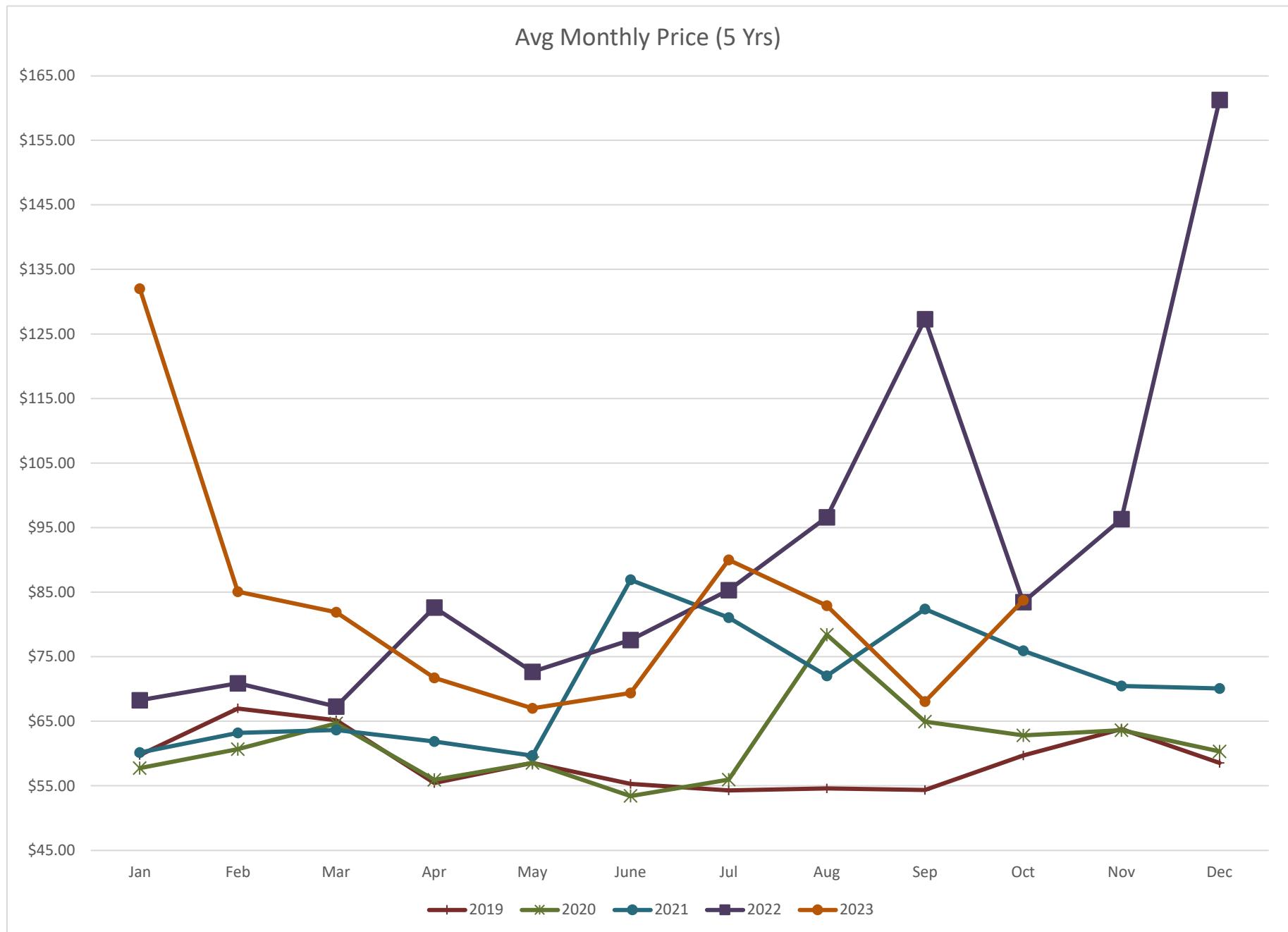
These figures capture the total cost of power to the power department. The power department uses costs only associated with the purchasing and generation of power and includes debt payments and interest associated with power resources.

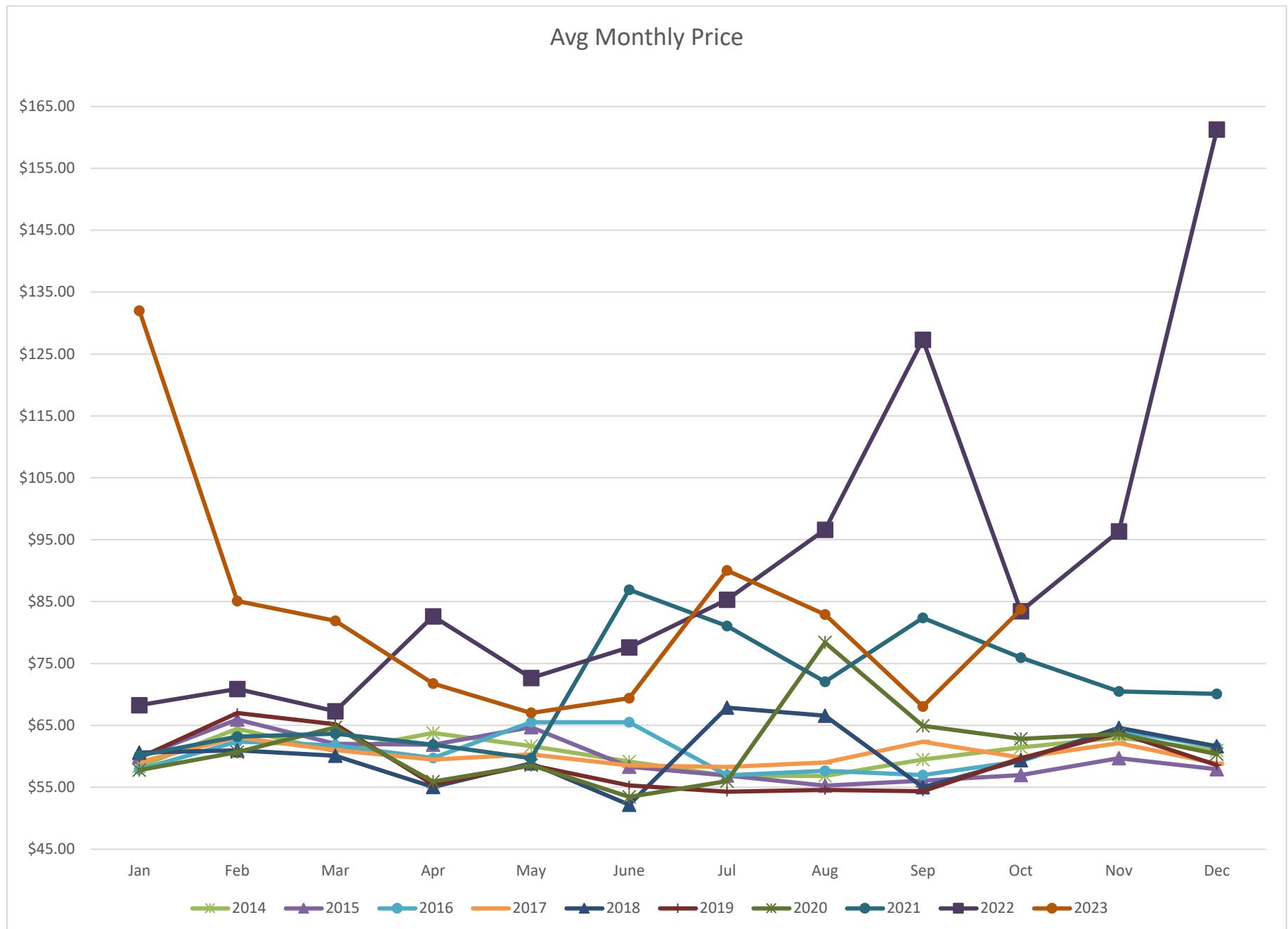
**Cy to Date**

Oct









**TALKING POINTS RE PREPAY TRANSACTION**  
**NOVEMBER 27, 2023**

## **OVERVIEW**

- The Internal Revenue Code and US Treasury Regulations ("Tax Code and Regulations") contain special provisions that allow tax-exempt bonds to be issued to finance prepayments for natural gas and electricity. The prepay transactions are structured to convert the difference between the issuer's lower (tax-exempt) cost of funds and the prepaid energy supplier's higher (taxable) cost of funds into a discounted price for prepaid energy.
  - The initial discount is expected to be at least 7.5% and will be determined before closing.
  - The amount of the discount will be reset periodically over the term of the prepay (every five to ten years) when the bonds are refinanced.
- UAMPS will assign existing gas or electricity purchase agreements into the prepay transaction and the discount will be applied to the contract prices under these agreements.
- The Tax Code and Regulations require that the prepaid (discounted) gas or electricity (including electricity that is generated using prepaid natural gas as fuel) be used by UAMPS members to serve retail customers in their municipal utility service areas. This is referred to as the "Qualifying Use" requirement.
- The date of closing has not yet been determined but will likely take place in Q1 2024.
- The term of the transaction is thirty years.

## **CONTRACT STRUCTURE**

- Southeast Energy Authority ("SEA") will issue bonds for a 30-year prepayment for gas or electricity from a special purpose entity ("Prepay LLC") organized by J. Aron & Company, the commodities affiliate of Goldman Sachs & Co.
  - UAMPS has no obligation on the bonds issued by SEA.
- UAMPS will assign previously-executed gas purchase or power purchase agreement(s) to J. Aron through a Limited Assignment Agreement ("LAA").
  - The LAA does not require any changes to the existing purchase agreement, but will be consented to by the seller.
  - The LAA is designed to leave the seller indifferent to the prepay. All interactions between UAMPS and seller remain the same.
  - The amount of gas or electricity purchases assigned to J. Aron under the LAA establishes the monthly cashflows required over the 30-year term of the prepay.
- UAMPS will first assign a 5-year gas purchase made to fuel the Nebo Power Plant into the prepay.
  - UAMPS is assigning less than the total amount of prepaid gas to allow for flexibility in future assignments.
  - In the future UAMPS will assign other gas or power purchase agreements, such as Red Mesa or Steel Solar, into the prepay to support the required monthly cashflows and to continue to receive the discount from the prepay.
- The LAA provides J. Aron "flash title" to the assigned gas or electricity, which is then delivered to Prepay LLC, which is then delivered to SEA, which then delivers the gas or electricity to UAMPS.

- If the prepaid transaction terminates for any reason, the LAA also terminates and UAMPS and the seller are restored to their original positions.
- UAMPS will enter a “Commodity Supply Agreement” with SEA to purchase the gas or electricity from SEA at a discount.
- The bonds issued by SEA will need to be refinanced from time to time over the 30-year term of the prepay. When the bonds are refinanced, the discount available to UAMPS under the Commodity Supply Agreement will need to be reset.
  - Changes in market conditions could lead to a lower (or higher) savings for UAMPS.
  - The Commodity Supply Agreement will specify the minimum discount to be achieved for each reset period. If minimum is not achieved, UAMPS may choose not to take energy from the prepay project during the reset period.

#### **QUALIFIED USE CERTIFICATE**

- UAMPS has provided a resolution for the governing boards of the Payson Power Project Participants (“Participants”) that approves the form of a “Qualified Use Certificate” for the prepaid energy. Please have the resolution signed and returned to UAMPS.
  - Complete the resolution by filling in the date it was adopted on page 2 Please do not make changes to these documents without contacting UAMPS.
  - The resolution may be passed at any time.
  - Do not complete or sign the generic form of the Qualified Use Certificate that’s attached to the resolution. We will send you a final, individualized Qualified Use Certificate a few weeks before the bond closing for execution.
- The Qualified Use Certificate states that the electricity that the Participant receives from the prepay will be used to serve retail customers located in the established service territory of its electric utility system.
  - If, during the term of the prepay, a Participant uses the electricity for a non-Qualified Use, it agrees that it will cooperate with UAMPS to remediate the non-Qualified Use through its other power purchases from UAMPS.
- The Participant must also confirm in the Qualified Use Certificate that the amount of its historic electricity sales to its retail customers equals or exceeds the amount of electricity attributable to its Entitlement Share under the Payson Power Sales Contract.

# *Prepay Resolution Update*

## Payson Project



---

Jackie Coombs



# *Prepayment Update*

- Prepay is unlikely to close by the end of the year
- Southeast Energy Authority needs additional off-takers for the transaction
- In preparation of closing after the first of the year, staff recommends the Participants' city council approve and execute the resolution in November or December 2023
- Resolution authorizes the Member Representative/Alternate Representative to deliver, prior to the date of closing
  - Tax Certificate
  - Order of Resources

## Next Steps

- Staff will issue the final resolution and associated documents (tax certificate and order of resources) to the Participants by the end of the week
- Participants will return the approved and executed resolution to UAMPS prior to the end of the year
- Upon staff's notification, Member Representatives will execute and deliver the tax certificate and order of resources prior to the closing date

A RESOLUTION AUTHORIZING A TAX CERTIFICATE AND AGREEMENT  
FOR UAMPS' PAYSON POWER PROJECT; AND RELATED MATTERS.

\*\*\*            \*\*\*            \*\*\*

WHEREAS, Hurricane City, Utah (the "*Participant*") is a member of Utah Associated Municipal Power Systems ("UAMPS") and is a Participant in the Payson Power Project (the "*Project*") under the Payson Power Project Power Sales Contract dated as of June 1, 2002, as supplemented (the "*Power Sales Contract*") between the Participant and UAMPS;\*

WHEREAS, the Participant has been advised that UAMPS proposes to enter into a Commodity Supply Contract (the "*Supply Contract*") with Southeast Energy Authority, a Cooperative District ("SEA") to purchase a portion of the natural gas necessary for the operation of the Project at price that reflects a discount from the current contract price of natural gas for the Project being paid by UAMPS, and that the savings from such discount will be applied by UAMPS for the benefit of the Participant and the other Participants in the Project based on their respective Entitlement Shares;

WHEREAS, the Participant has been advised that SEA will issue bonds to finance a prepayment for the natural gas that it sells to UAMPS under the Supply Contract (the "*Prepay Bonds*") with the intention that the interest on the Prepay Bonds will qualify for tax exemption under Section 103 of the Internal Revenue Code of 1986, as amended (the "*Code*"); and

WHEREAS, the Participant acknowledges that its use of the electricity it purchases from its Entitlement Share under the Power Sales Contract will be subject to certain restrictions that are necessary to establish and maintain the tax-exempt status of interest on the Prepay Bonds, and desires to adopt this resolution to authorize a Tax Certificate and Agreement that sets forth the Participant's agreement to comply with such restrictions;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF HURRICANE CITY, UTAH, AS FOLLOWS:

*Section 1. Approval of Tax Certificate and Agreement.* The Tax Certificate and Agreement, in substantially the form attached hereto as *Exhibit A*, is hereby authorized and approved.

*Section 2. Authorized Officers; Final Changes and Dating.* The Participant's Representative and Alternate Representative to UAMPS (the "*Authorized Officers*") are each hereby authorized to execute and deliver the Tax Certificate and Agreement and to deliver the same to UAMPS on behalf of the Participant. Each of the Authorized Officers is hereby delegated

---

\* Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Power Sales Contracts and the Tax Certificate and Agreement.

authority to approve such changes to the Tax Certificate and Agreement as are necessary to complete the form thereof, together with any minor or non-substantive changes, and his or her execution of the Tax Certificate and Agreement shall be conclusive evidence of such approval. The Authorized Officers shall deliver an executed and undated copy of the Tax Certificate and Agreement on or prior to the date requested by UAMPS, and UAMPS is hereby be authorized to deliver the Tax Certificate and Agreement, dated the issue date of the Prepay Bonds, to SEA on behalf of the Participant.

*Section 3. Other Actions With Respect to the Tax Certificate and Agreement.* The Authorized Officers shall take all action necessary or reasonably required to carry out and give effect to the Tax Certificate and Agreement including adjusting the priority of the Participant's resources within the UAMPS Power Pool to ensure the Qualified Use of the electricity from the Participant's Entitlement Share in the Project.

*Section 4. Severability.* If any section, paragraph, clause, or provision of this resolution shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such section, paragraph, clause, or provision shall not affect any of the remaining provisions of this resolution.

*Section 5. Effective Date.* This resolution shall be effective immediately upon its approval and adoption.

ADOPTED AND APPROVED by the City Council of Hurricane City, Utah, this day,  
\_\_\_\_\_.

HURRICANE CITY

By \_\_\_\_\_  
Mayor

[SEAL]

ATTEST:

\_\_\_\_\_  
City Recorder

## EXHIBIT A

### TAX CERTIFICATE AND AGREEMENT

This Tax Certificate and Agreement is executed in connection with the Commodity Supply Contract (the “*Supply Contract*”) between Southeast Energy Authority, a Cooperative District (“*SEA*”) and Utah Associated Municipal Power Systems (“*UAMPS*”).

WHEREAS, \_\_\_\_\_ (the “*Participant*”) is a member of UAMPS and has entered into the Payson Power Project Power Sales Contract dated as of \_\_\_\_\_<sup>1</sup> (the “*Power Sales Contract*”) with UAMPS;

WHEREAS, the Participant understands that UAMPS has entered into the Supply Contract to obtain a supply of natural gas for use as fuel in the operation of the Payson Power Project, and that UAMPS will sell a portion of the electricity generated with such natural gas to the Participant in accordance with its Entitlement Share under (and as such term is defined in) the Power Sales Contract;

WHEREAS, the Participant further understands that SEA will issue bonds to finance a prepayment for the natural gas that it sells to UAMPS under the Supply Contract (the “*Prepay Bonds*”) with the intention that the interest on the Prepay Bonds will qualify for tax exemption under Section 103 of the Internal Revenue Code of 1986, as amended (the “*Code*”); and

WHEREAS, the Participant acknowledges that its use of the electricity it purchases from its Entitlement Share under the Power Sales Contract is subject to certain restrictions that are necessary to establish and maintain the tax-exempt status of interest on the Prepay Bonds;

ACCORDINGLY AND IN FURTHERANCE OF THE FOREGOING, THE PARTICIPANT HEREBY CERTIFIES AND AGREES AS FOLLOWS:

1. The Participant is a political subdivision of the State of \_\_\_\_\_,<sup>2</sup> and owns and operates a municipal utility system that provides electricity service to retail customers located in an established service area (the “*System*”).

2. The Participant will (a) use all of the electricity it acquires from its Entitlement Share under the Power Sales Contract in a Qualified Use (as defined below), (b) not take any action (or make any allocation) that is inconsistent with the Qualified Use of such electricity, (c) not take or omit to take any action which could adversely affect the tax-exempt or tax-advantaged status of interest on the Prepay Bonds or any refunding bonds issued by SEA, (d) take, and pay the costs of, such remedial actions as may be necessary to maintain the tax-exempt or tax-advantaged status

---

1 (a) “June 1, 2002” for Fairview, Monroe, Mt. Pleasant, Payson and Springville, (b) “June 1, 2002, as supplemented” for Ephraim, Hurricane, Hyrum, Kaysville, Lehi, Logan, Santa Clara, Spring City, SESD and Washington, and (c) “December 1, 2009” for TDPUD.

2 Utah for all Participants, except California for TDPUD.

of interest on the Prepay Bonds or any refunding bonds in the event of its failure to use such electricity in a Qualified Use, and (e) act in accordance with such reasonable written instructions as may be provided by SEA (through UAMPS) from time to time in order to maintain the tax exempt or tax-advantaged status of the Prepay Bonds.

3. “*Qualified Use*” means the sale of electricity to retail customers located within the “electricity service area” of a municipal utility pursuant to generally applicable and uniformly applied rate schedules or tariffs; *provided* that: (a) “Qualified Use” shall not include any sale of electricity that gives rise to “private business use” or a “private loan” within the meaning of Section 141 of the Code; and (b) “Qualified Use” shall include such additional uses of electricity as may be approved by SEA (through UAMPS) with a favorable opinion of bond counsel. For purposes of this definition: (i) “electricity service area” has the meaning assigned to such term in U.S. Treasury Regulation Section 1.148-1(e)(2)(iii); and (ii) a “municipal utility” is a state or local government unit that owns and operates an electric distribution utility.

4. In each of the five calendar years preceding 2024, the amount of electricity sold to retail customers in the Participant’s electricity service area has equaled or exceeded the amount of electricity attributable to its Entitlement Share under the Power Sales Contract (excluding the amount of electricity that the Participant was obligated to take under a long term agreement that was either (i) purchased pursuant to a long term prepaid agreement using the proceeds of tax-exempt or tax-advantaged obligations, or (ii) generated from gas that a person is obligated to take under a long term agreement that was purchased pursuant to a long term prepaid agreement using the proceeds of tax-exempt or tax-advantaged obligations), and it anticipates this to be the case in 2024.

5. References to the “Bonds” in Section 17(c) [Sale or Assignment of Electric System or Power Sales Contract] and Section 17(f) [Tax Status] of the Power Sales Contract shall be deemed to include the Prepay Bonds at all times while the Supply Contract is in effect.

6. The Participant expects to make the required payments under the Power Sales Contract solely from the current revenues of the System.

Dated: \_\_\_\_\_, 2024.

[NAME OF PARTICIPANT]

By: \_\_\_\_\_  
[Name]  
[Title]

# *PX & Scheduling Report* October 2023

## Pool Project

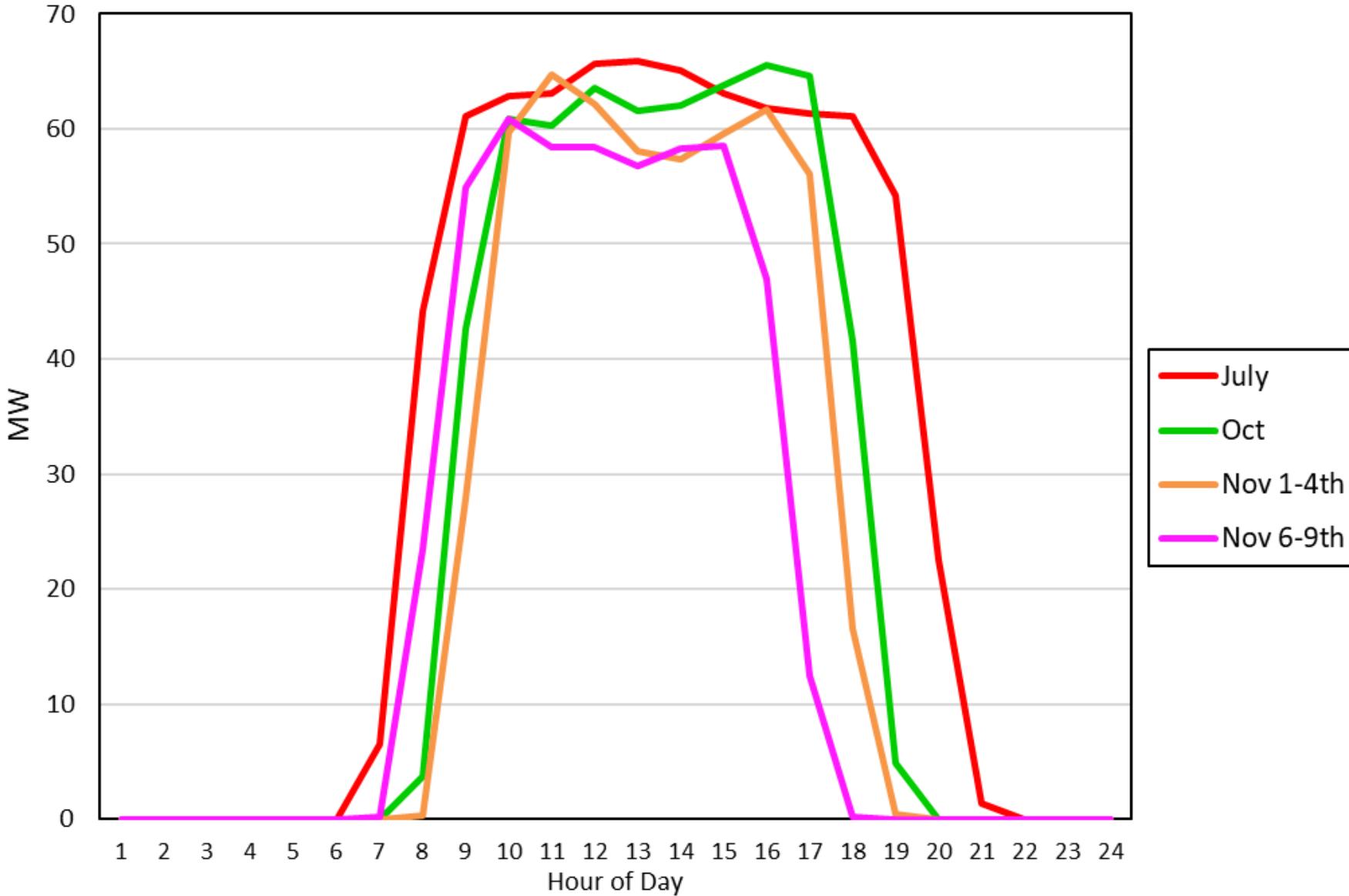


---

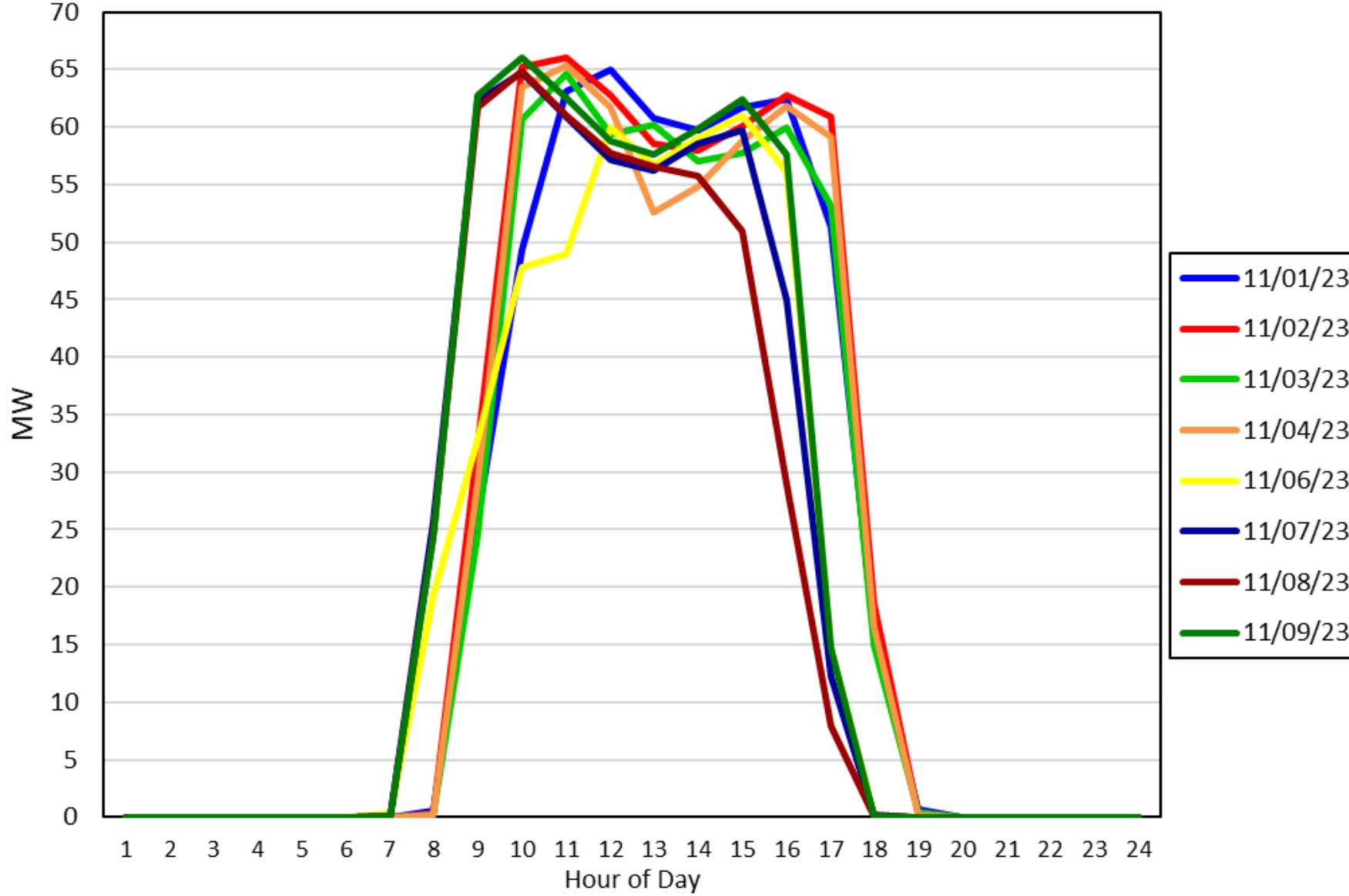
Kelton Andersen



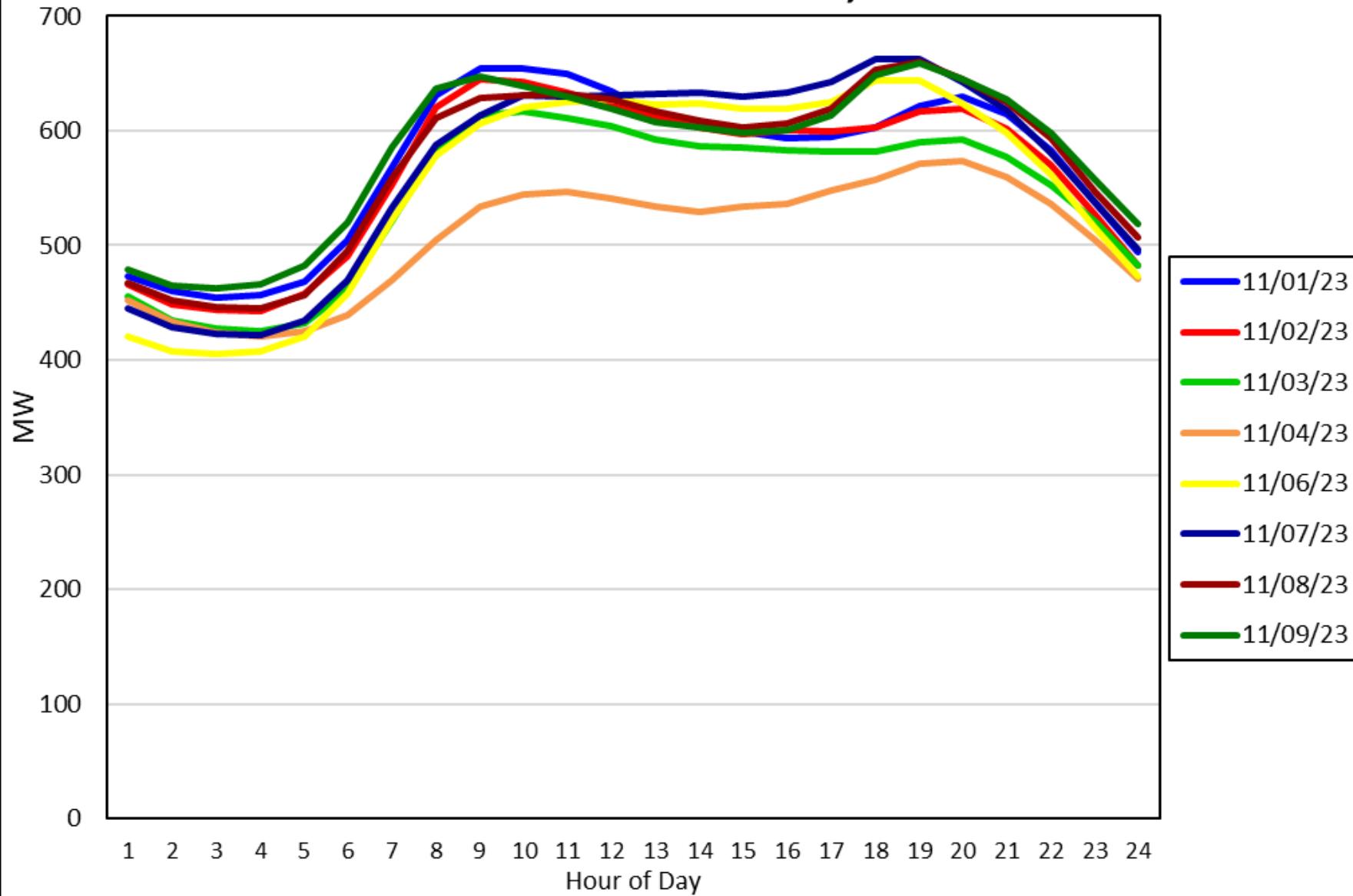
## Red Mesa Solar Generation: Average Days



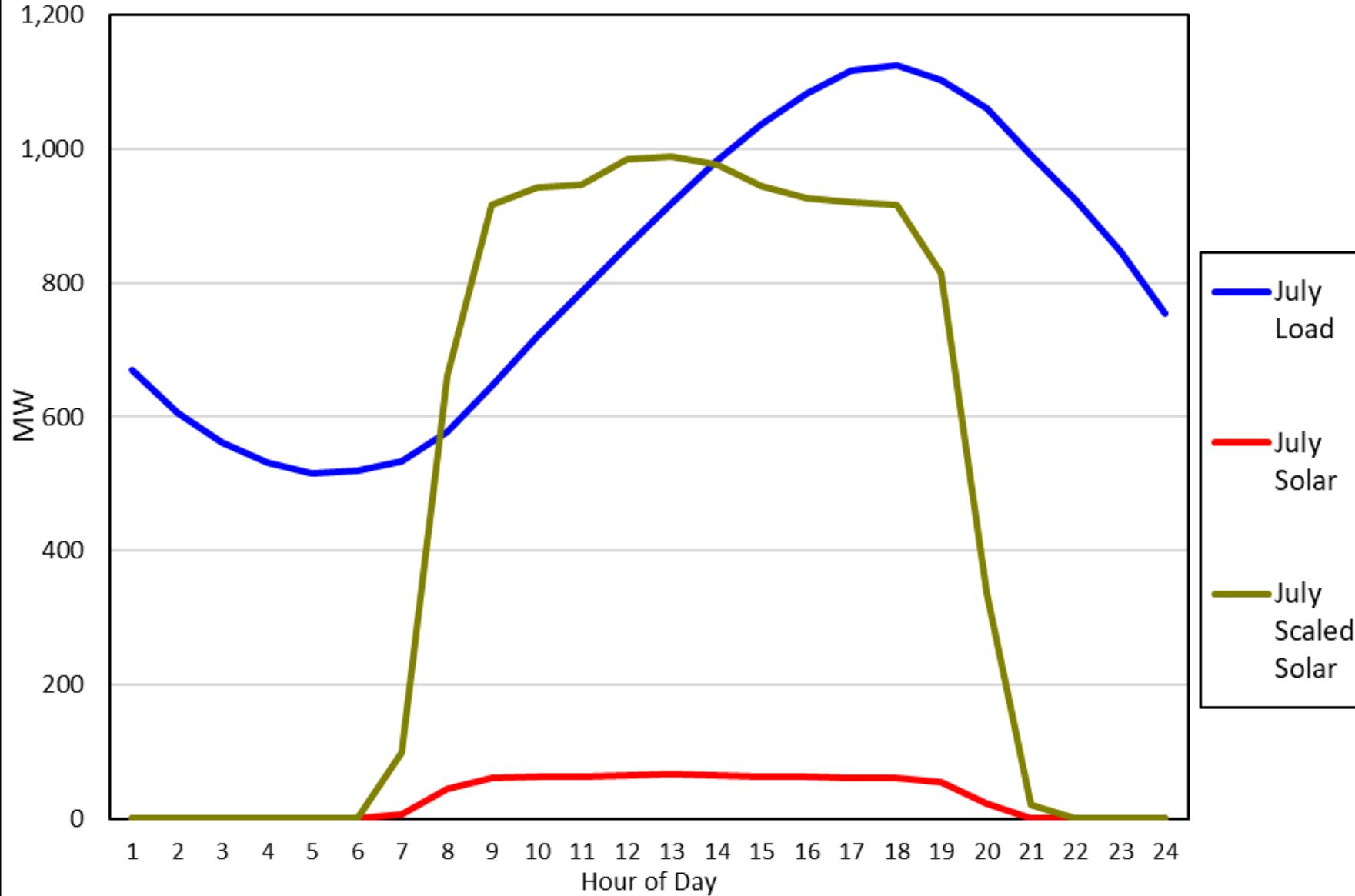
## Red Mesa Solar Generation: Nov 1-9, 2023



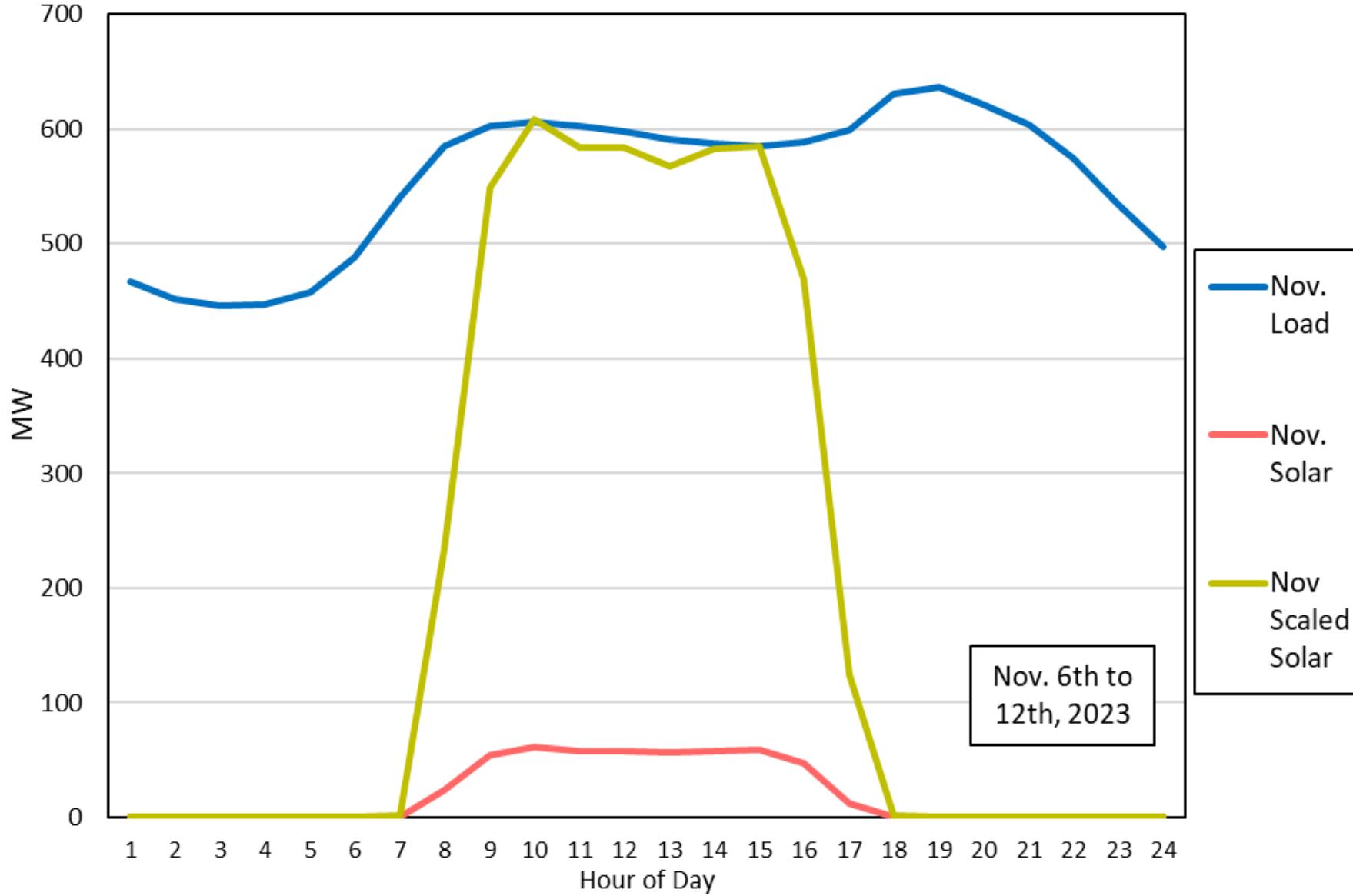
## UAMPS Load: Nov 1-9, 2023



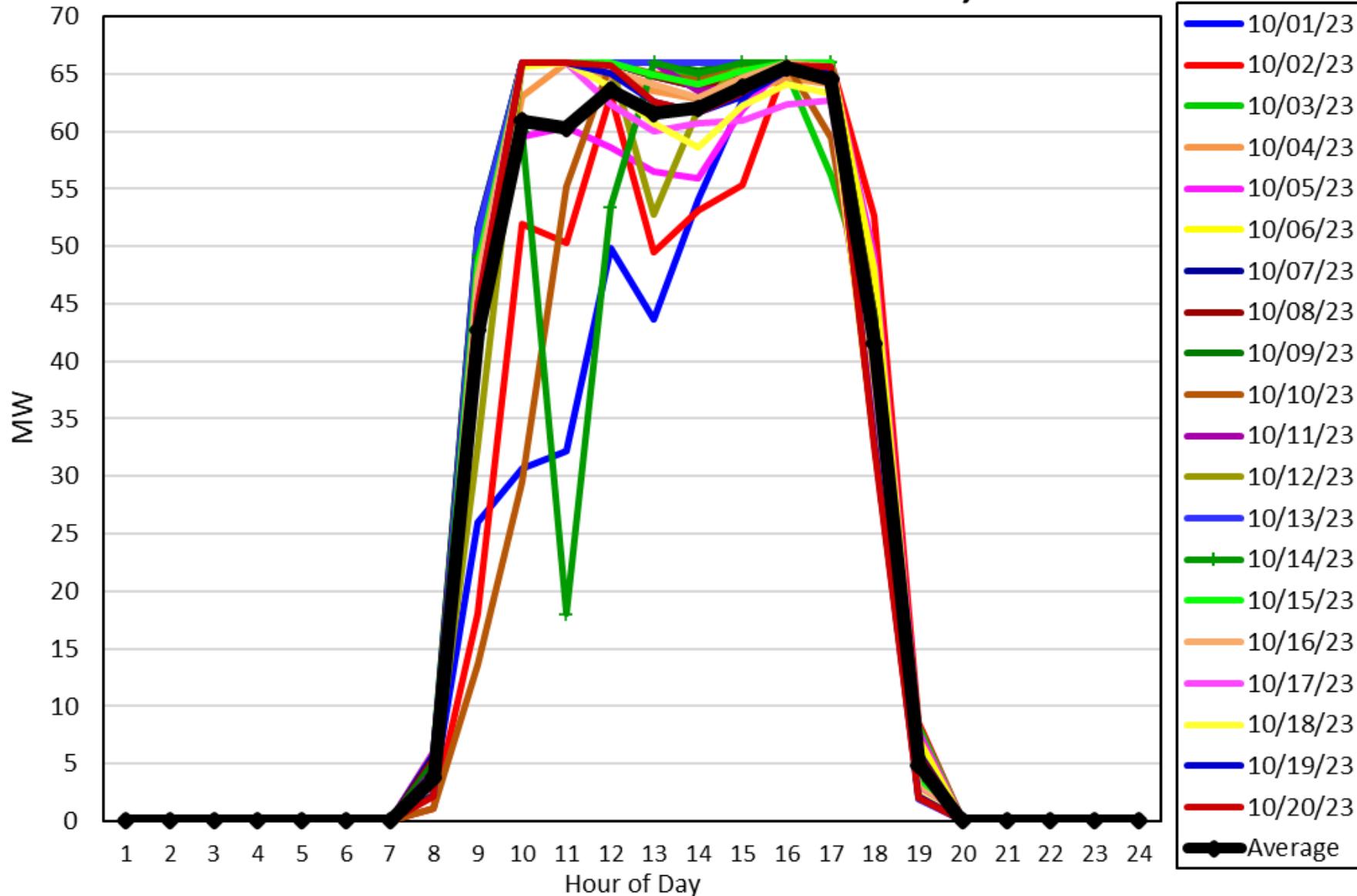
## Red Mesa Solar Compared to Load: Jul-2023



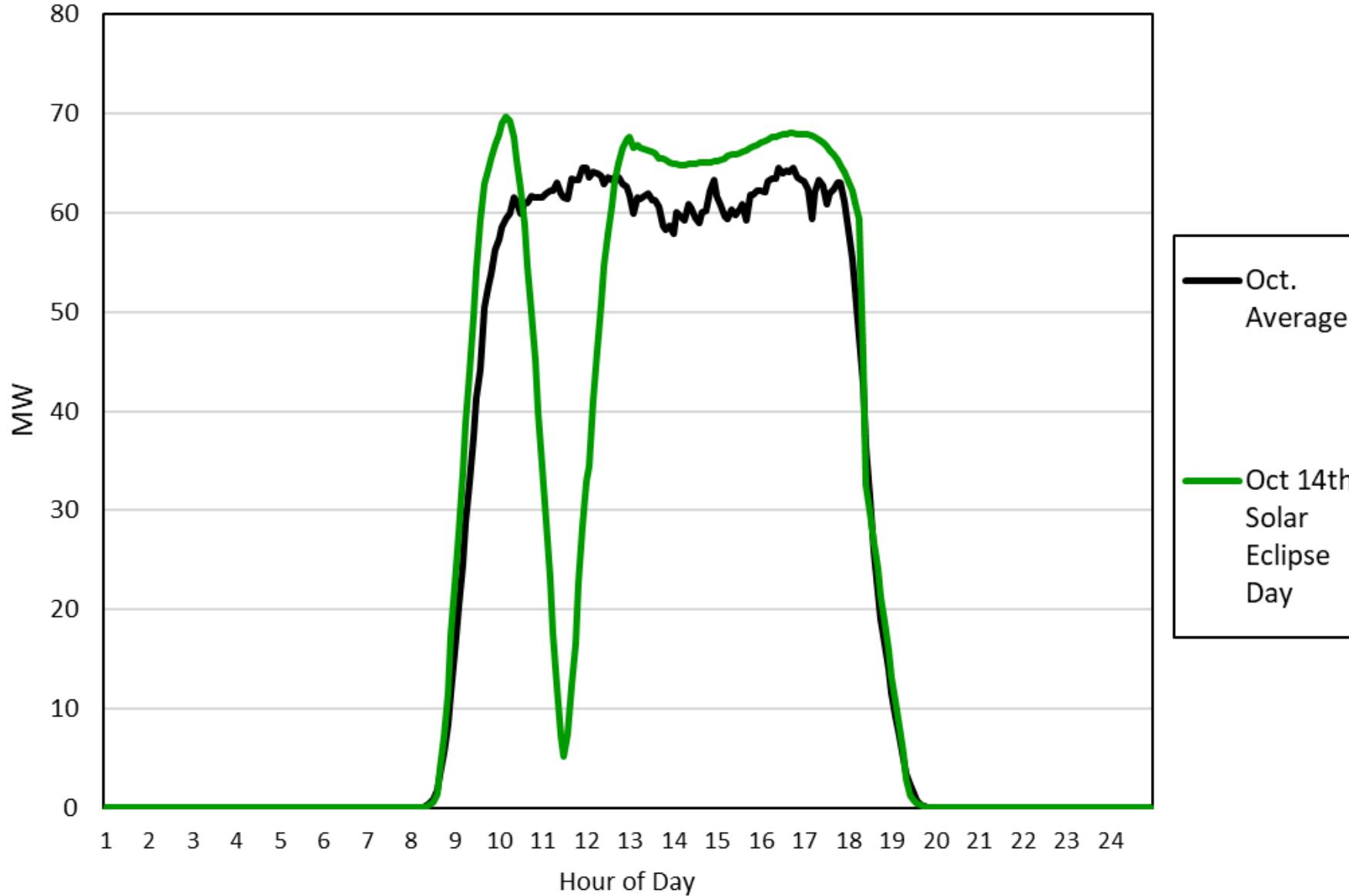
## Red Mesa Solar Compared to Load: Nov-2023



# Red Mesa Solar Generation: Oct 1-20, 2023



## Red Mesa Solar Generation (5-minute): Oct-2023



# Pool Project



---

Kelton Andersen

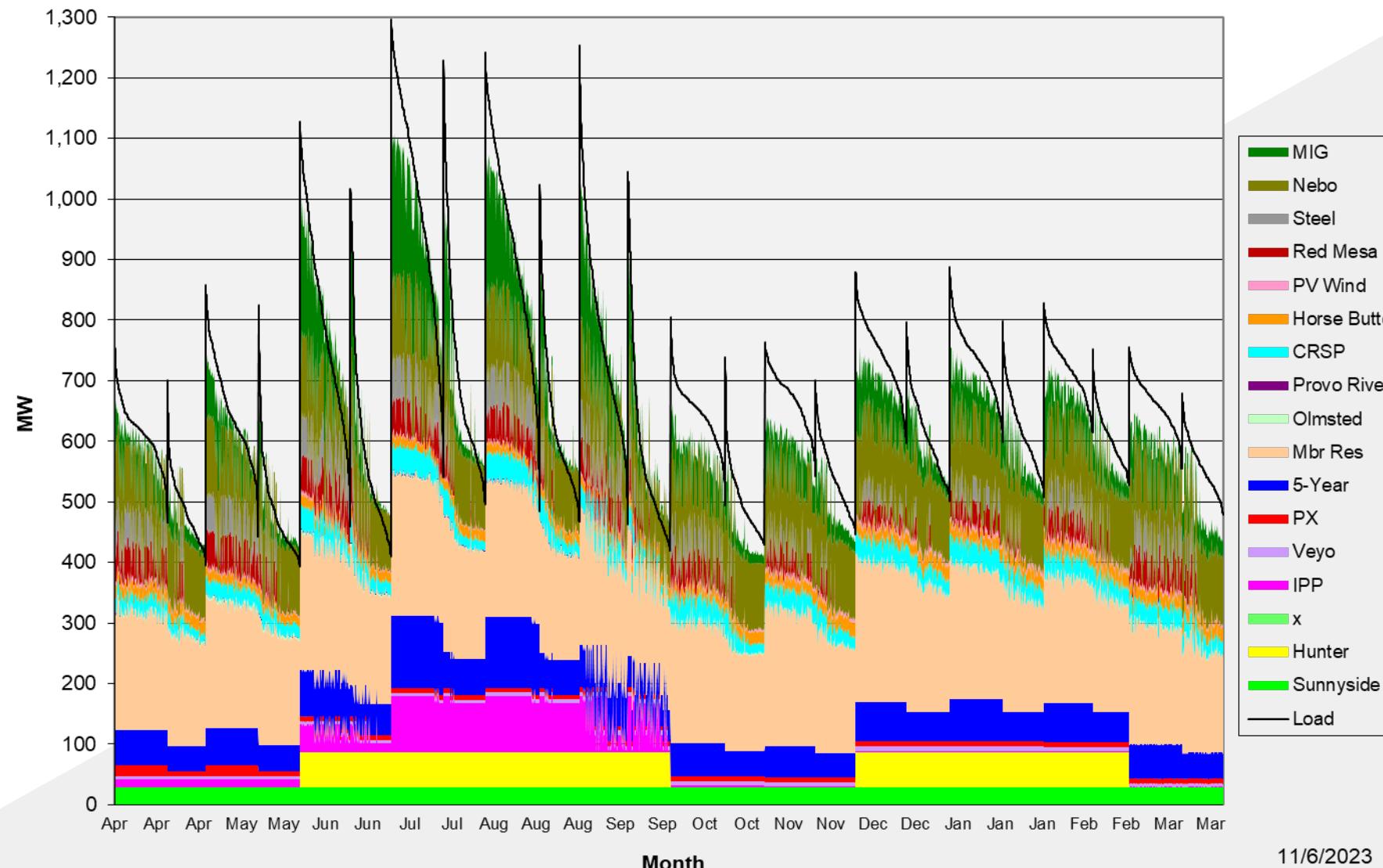
# Forecast

*(Apr-2024 to Mar-2025)*





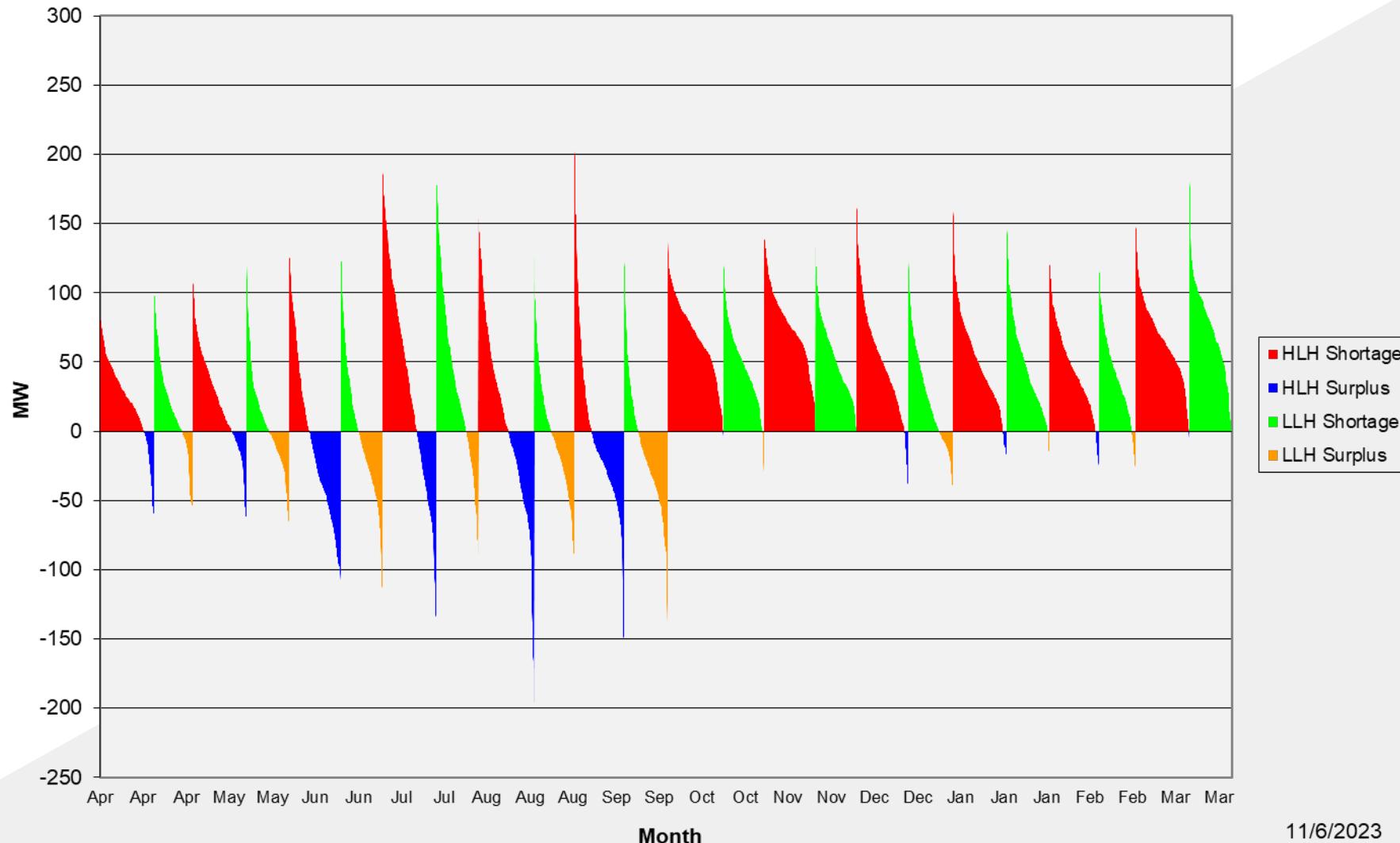
## UAMPS Total Forecasted Load and Resources, April 2024 - March 2025



11/6/2023



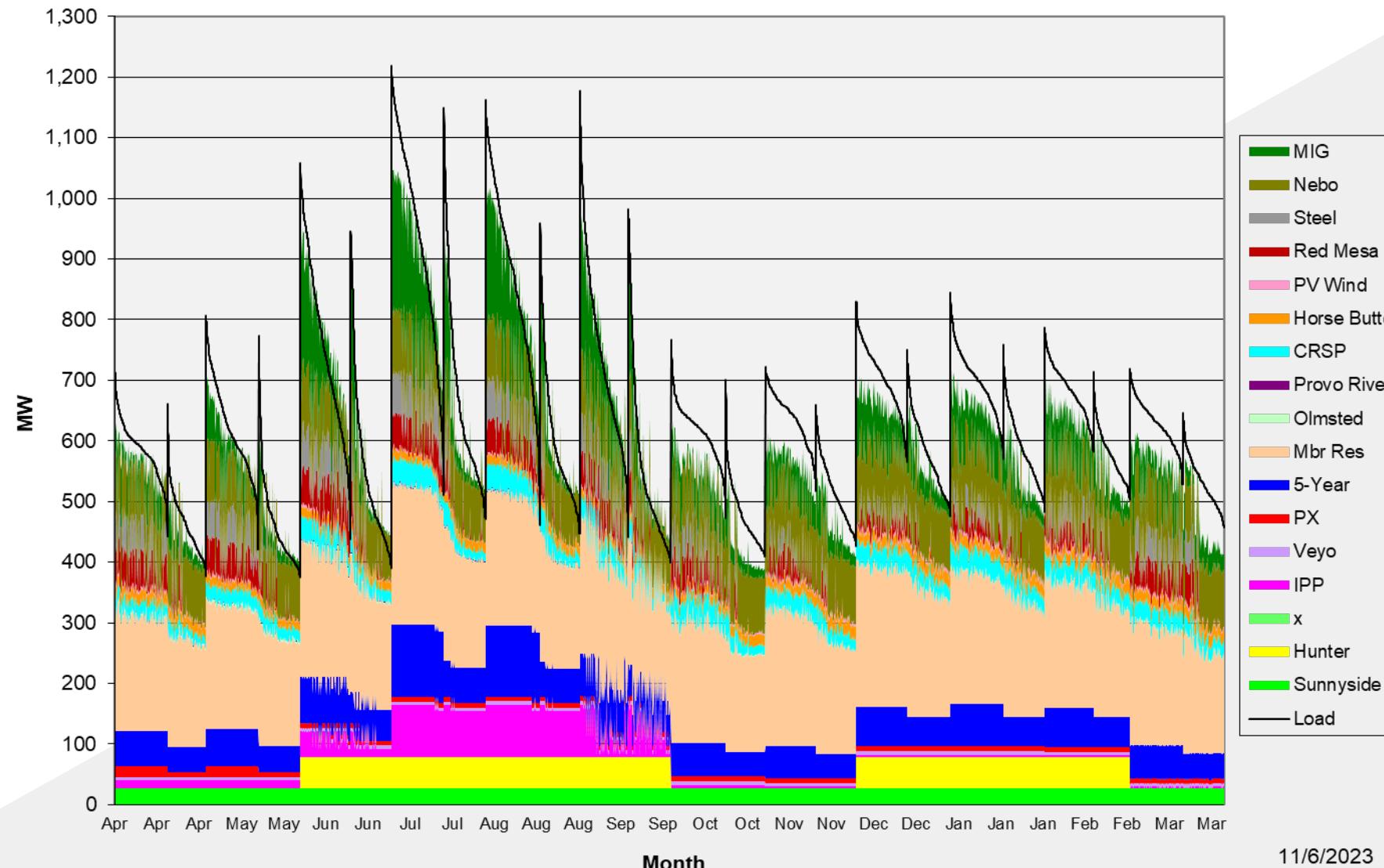
## UAMPS Total Forecasted Load Compared to Resources, April 2024 - March 2025



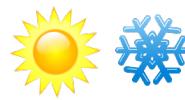
11/6/2023



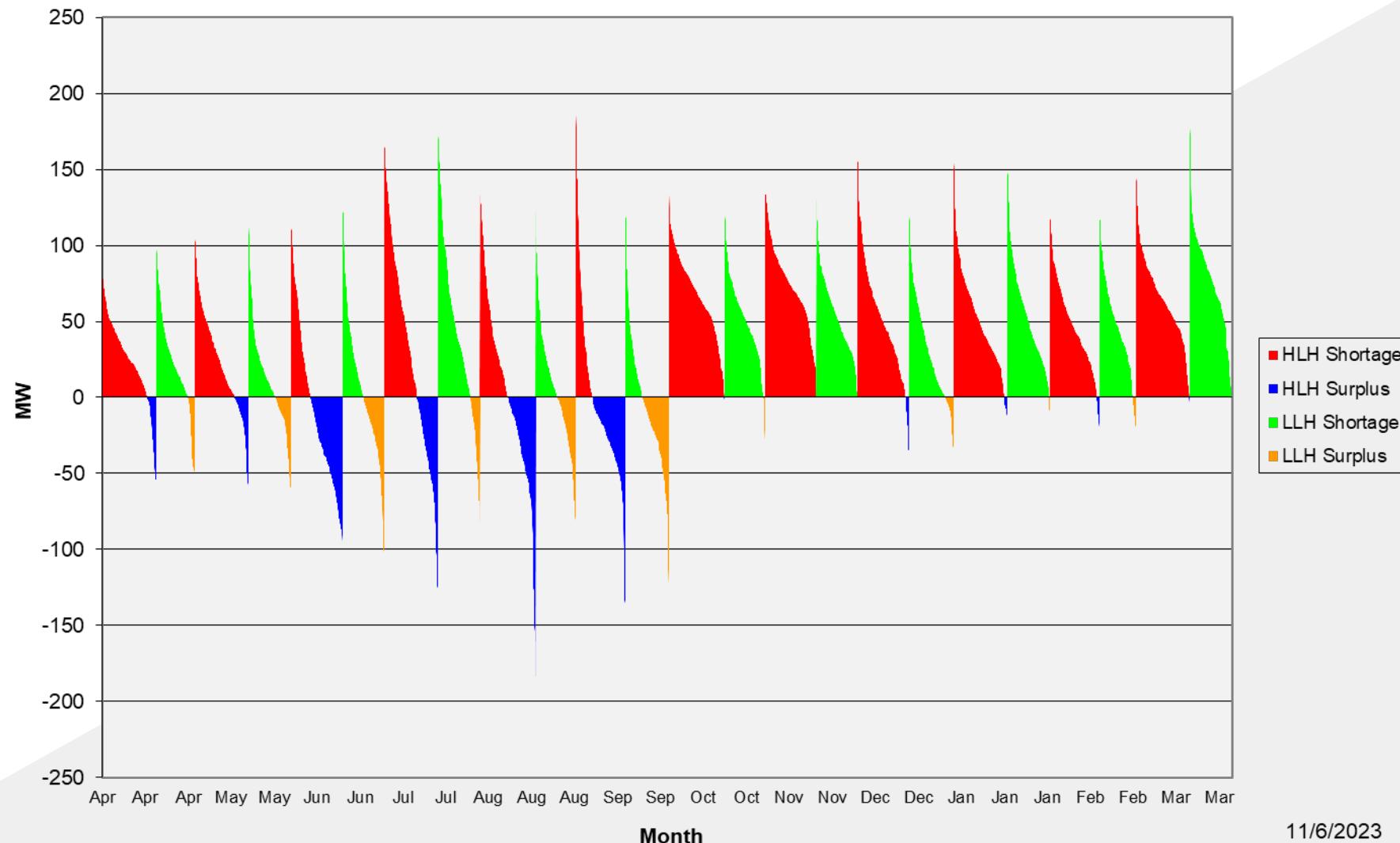
## PX Users Forecasted Load and Resources, April 2024 - March 2025



11/6/2023



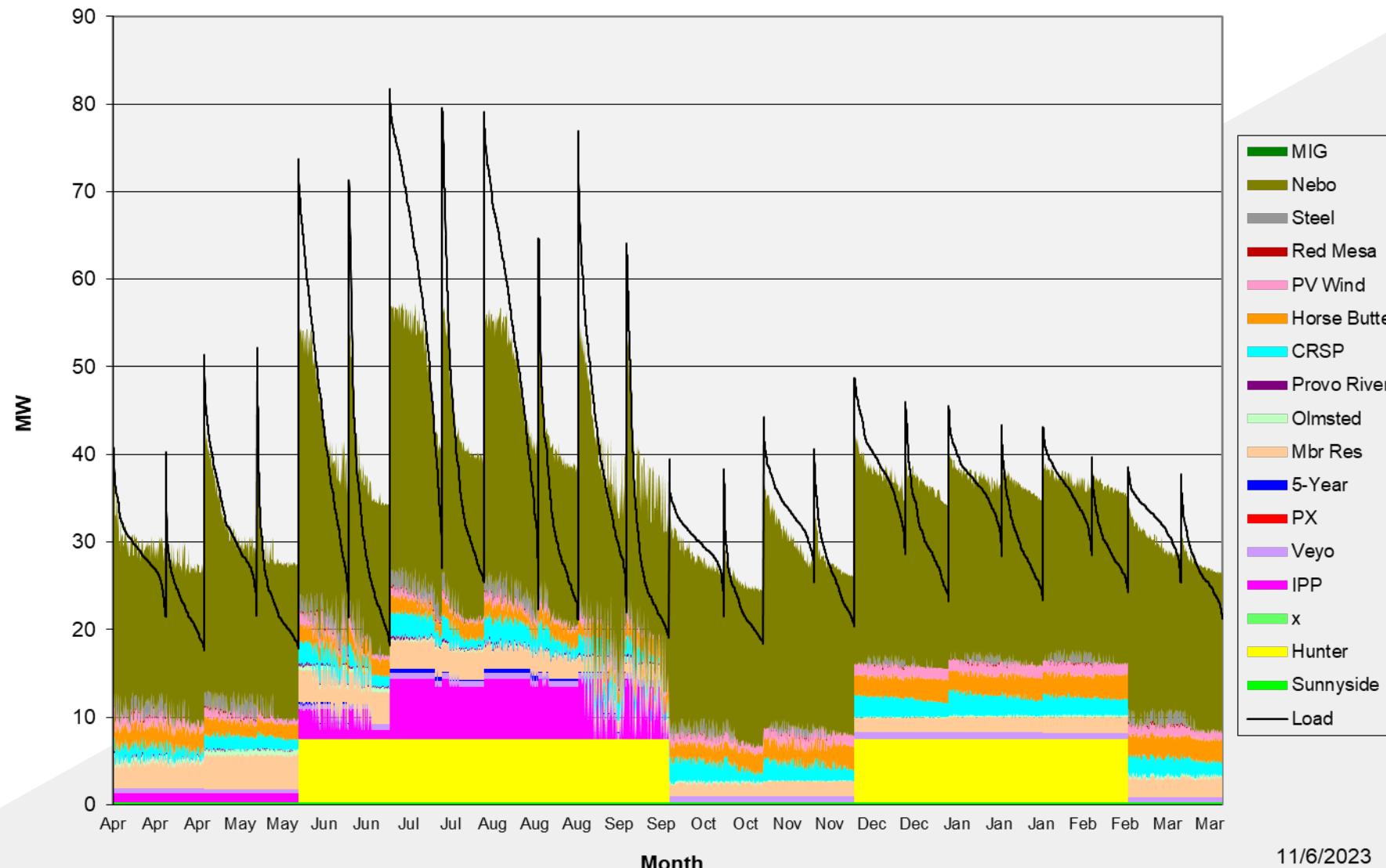
## PX Users Forecasted Load Compared to Resources, April 2024 - March 2025



11/6/2023



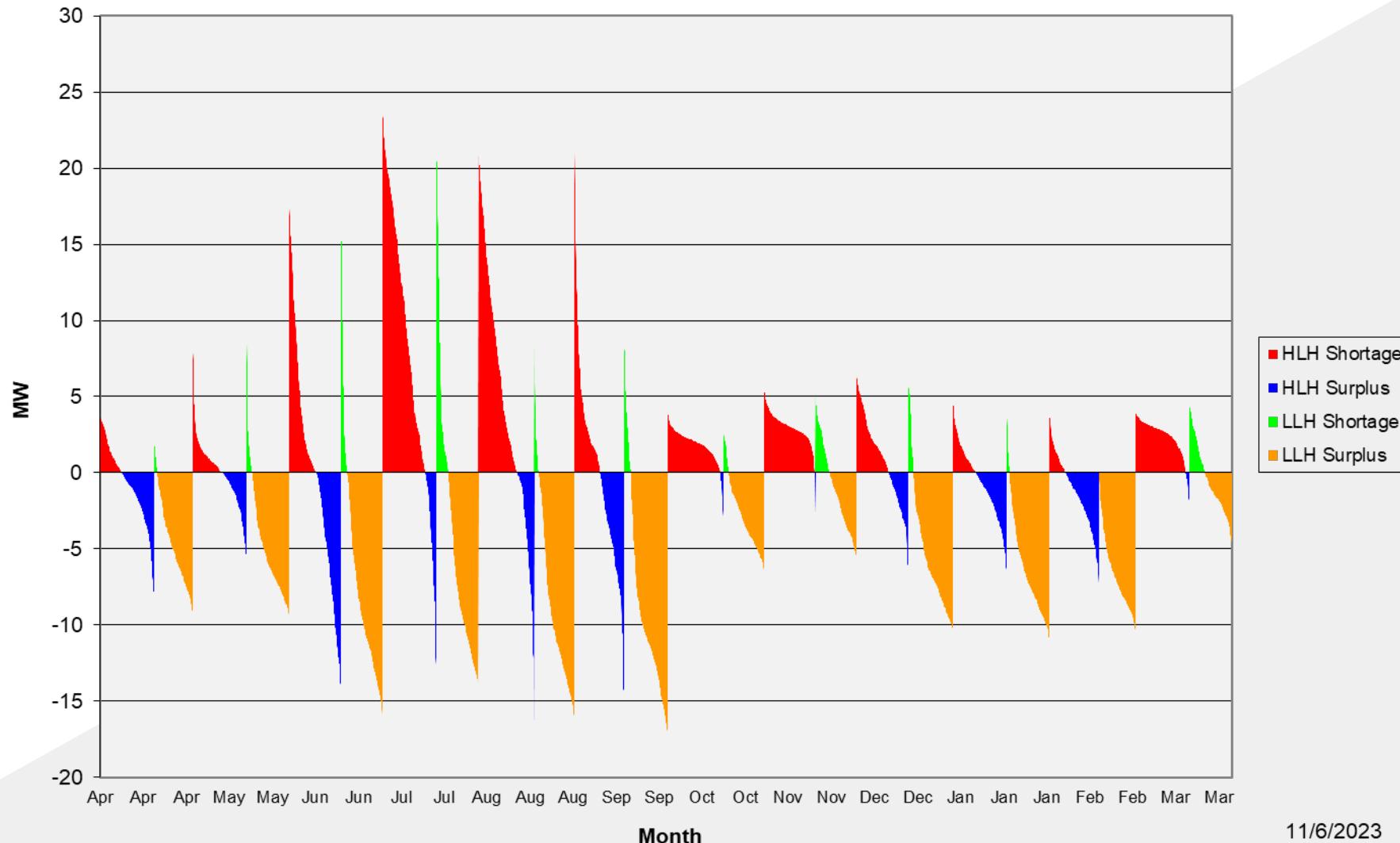
## All-In Pool Forecasted Load and Resources, April 2024 - March 2025



11/6/2023



## All-In Pool Forecasted Load Compared to Resources, April 2024 - March 2025

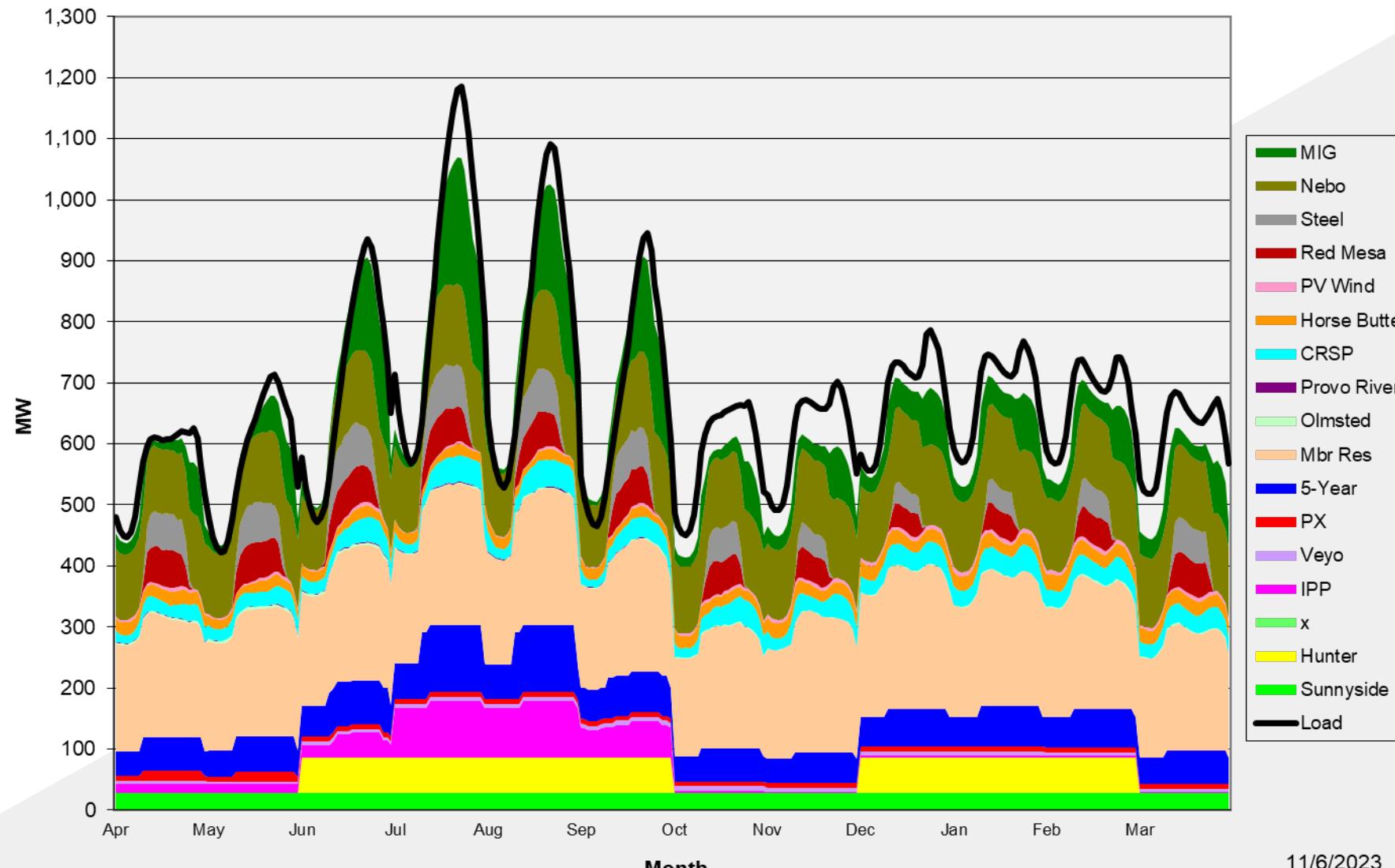


11/6/2023

# Average day per Month



## UAMPS Total Forecasted Load and Resources, April 2024 - March 2025

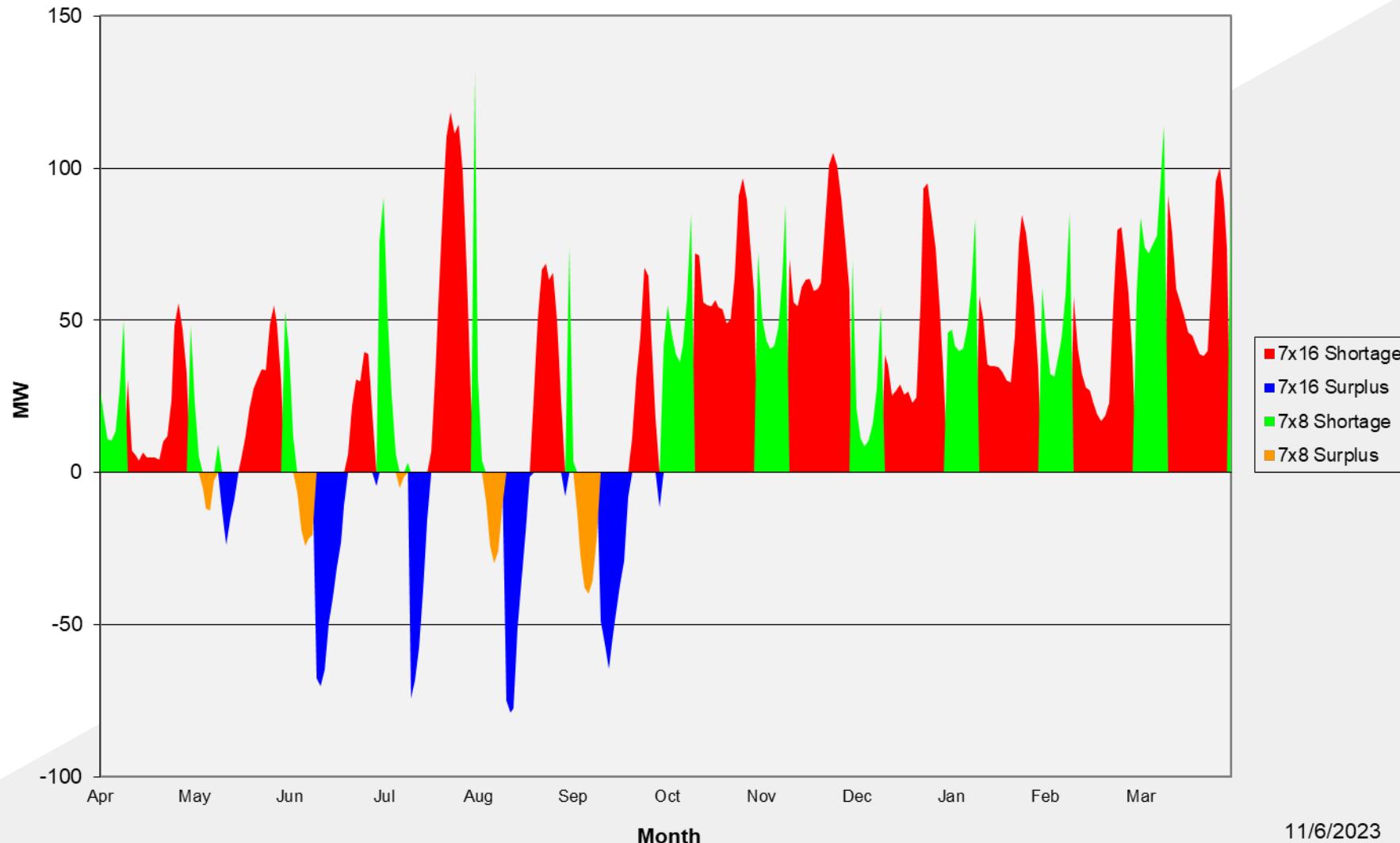


11/6/2023

# Average day per Month



## UAMPS Total Forecasted Load Compared to Resources, April 2024 - March 2025



**CRSP / CREDA Report**  
**November 2023**

# Colorado River Storage Project



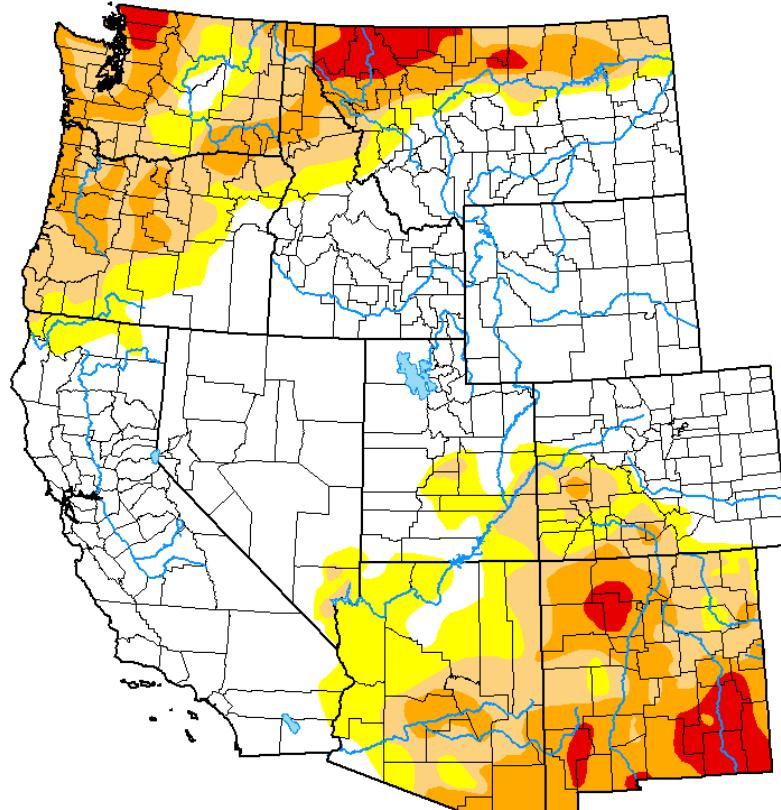
---

Kelton Andersen

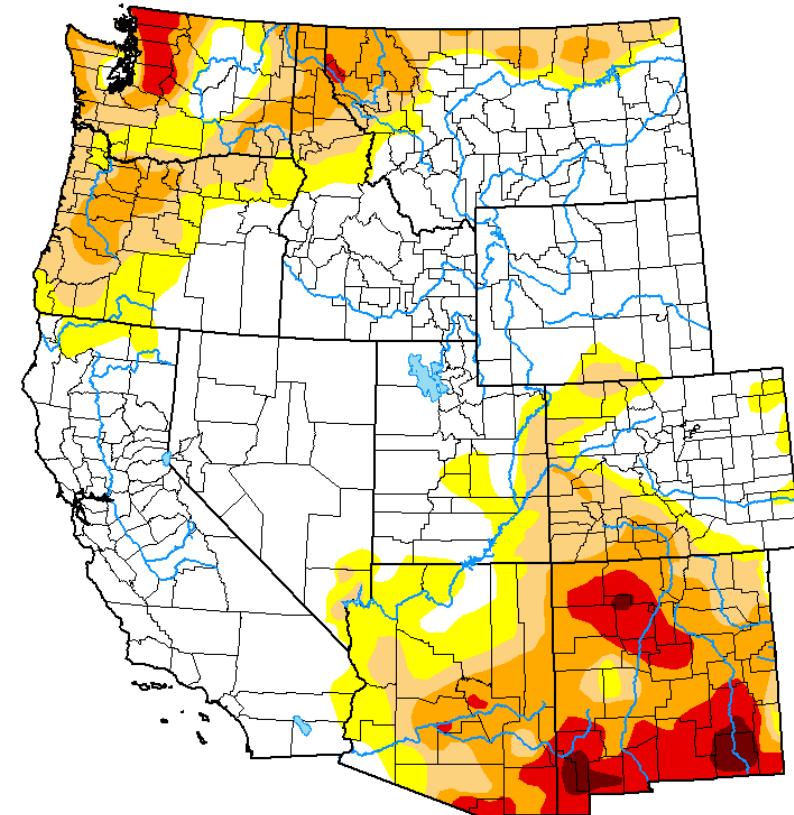


# Drought Monitor

September 2023

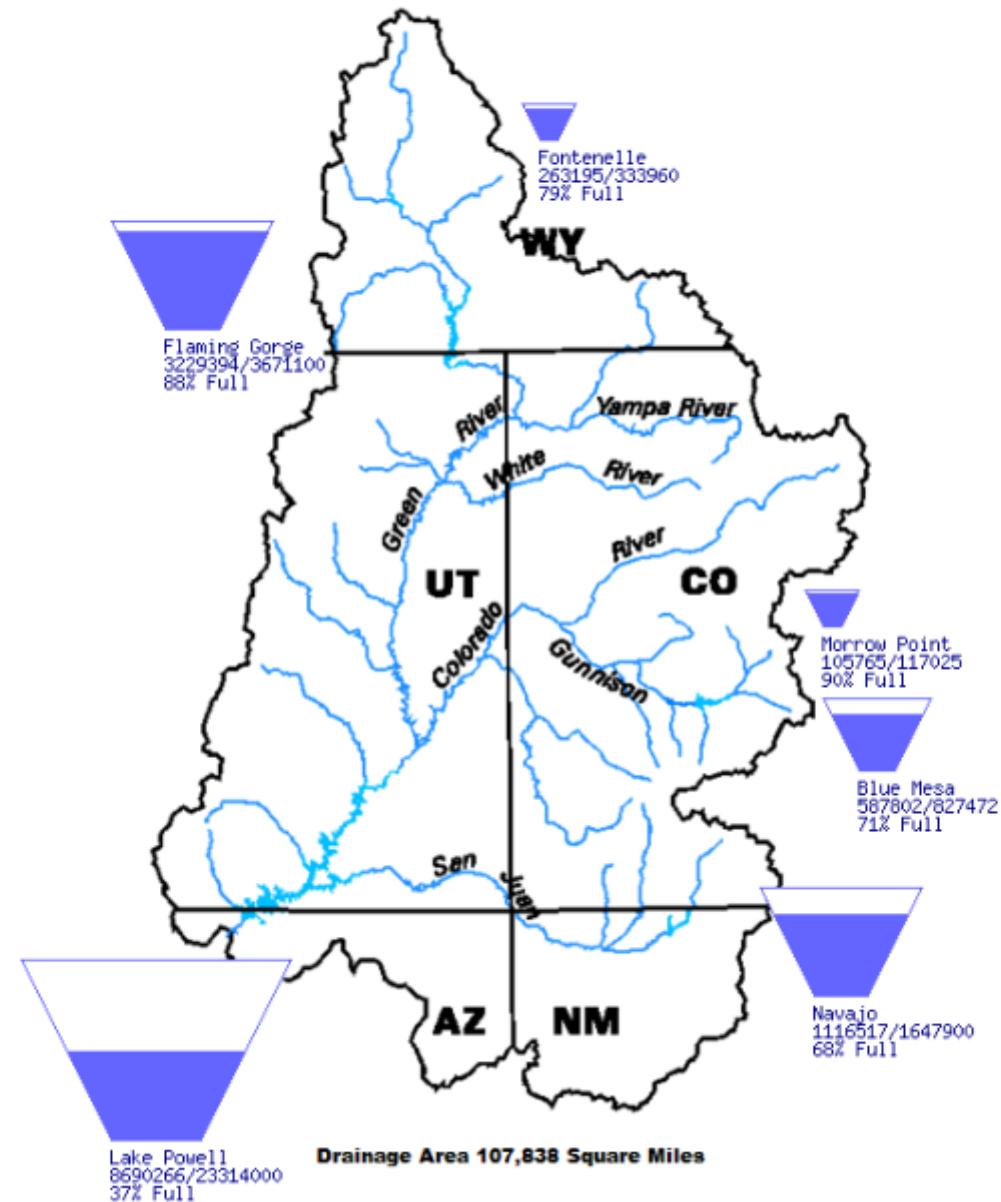


November 2023



Data Current as of:  
11/12/2023

## Upper Colorado River Drainage Basin

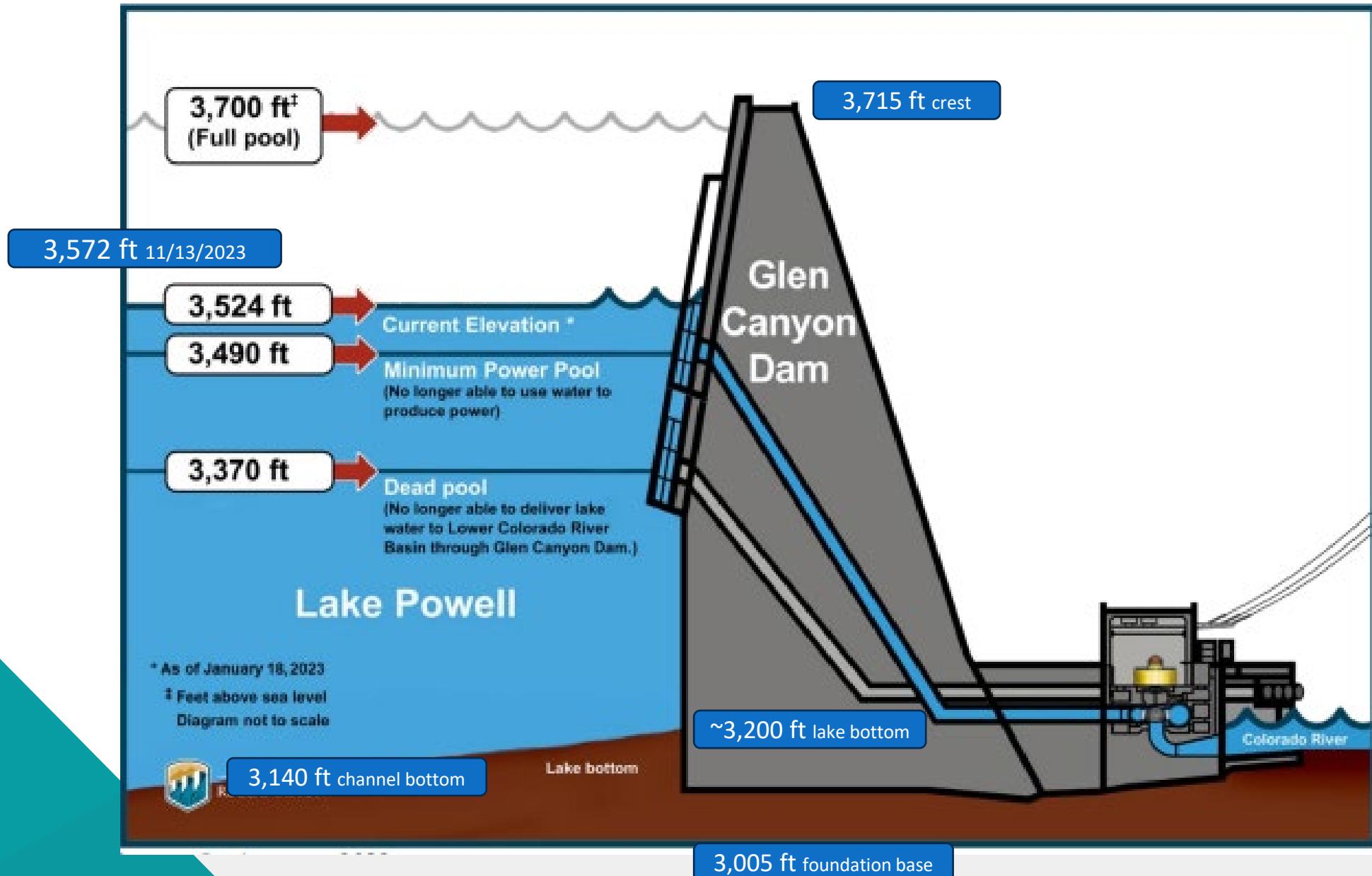


# *Lake Powell Conditions*

- Status of Lake Powell
  - Current lake elevation = 3,572 feet
    - = 128 feet below the spillway
    - = 82 feet above penstock intake level
  - Current storage is 8.7 million acre-feet
    - = 37% of reservoir capacity

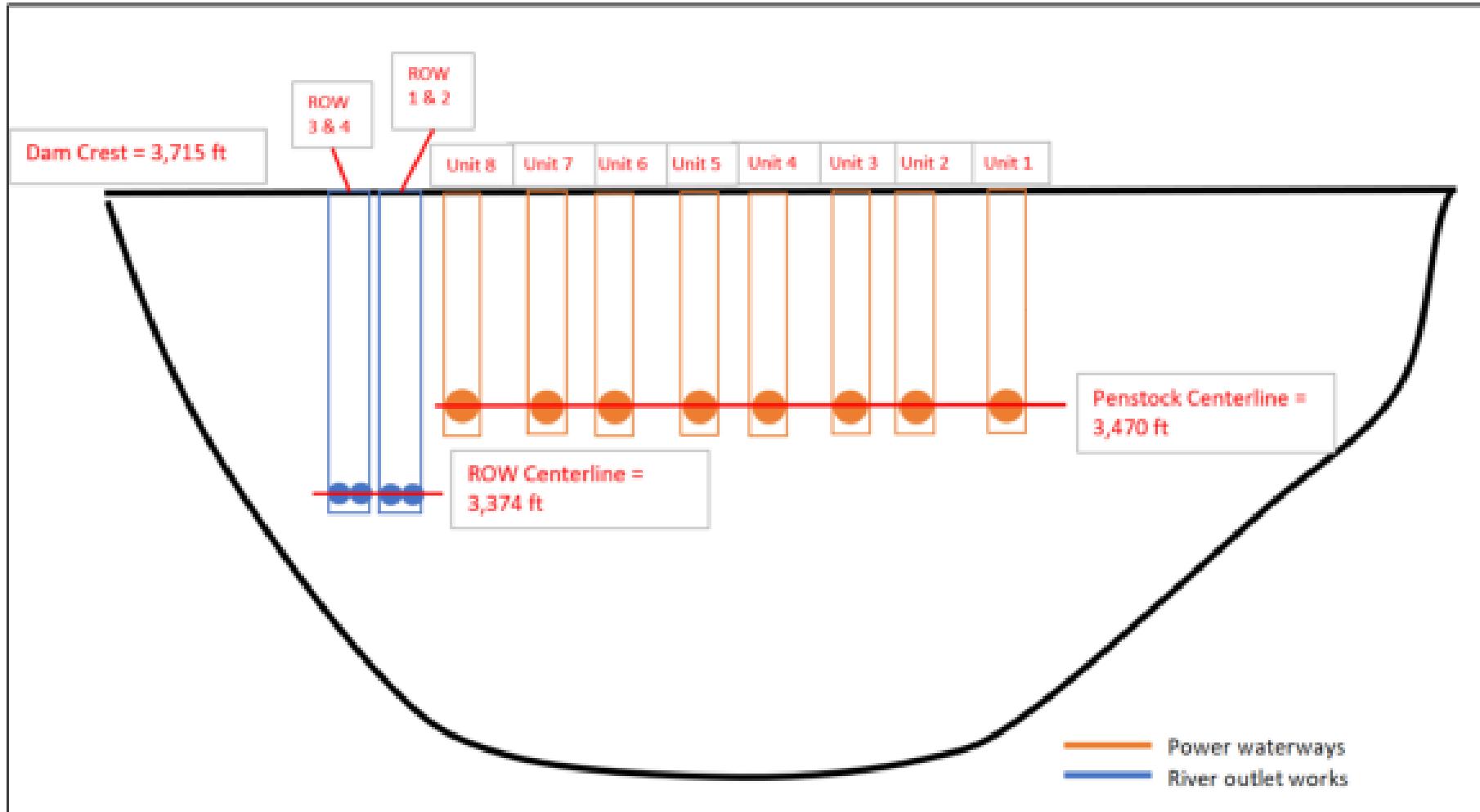


# Glen Canyon Dam



# Glen Canyon Dam

Figure 2. Glen Canyon Dam Outlet Elevations: Upstream View



# Lake Powell Inflow

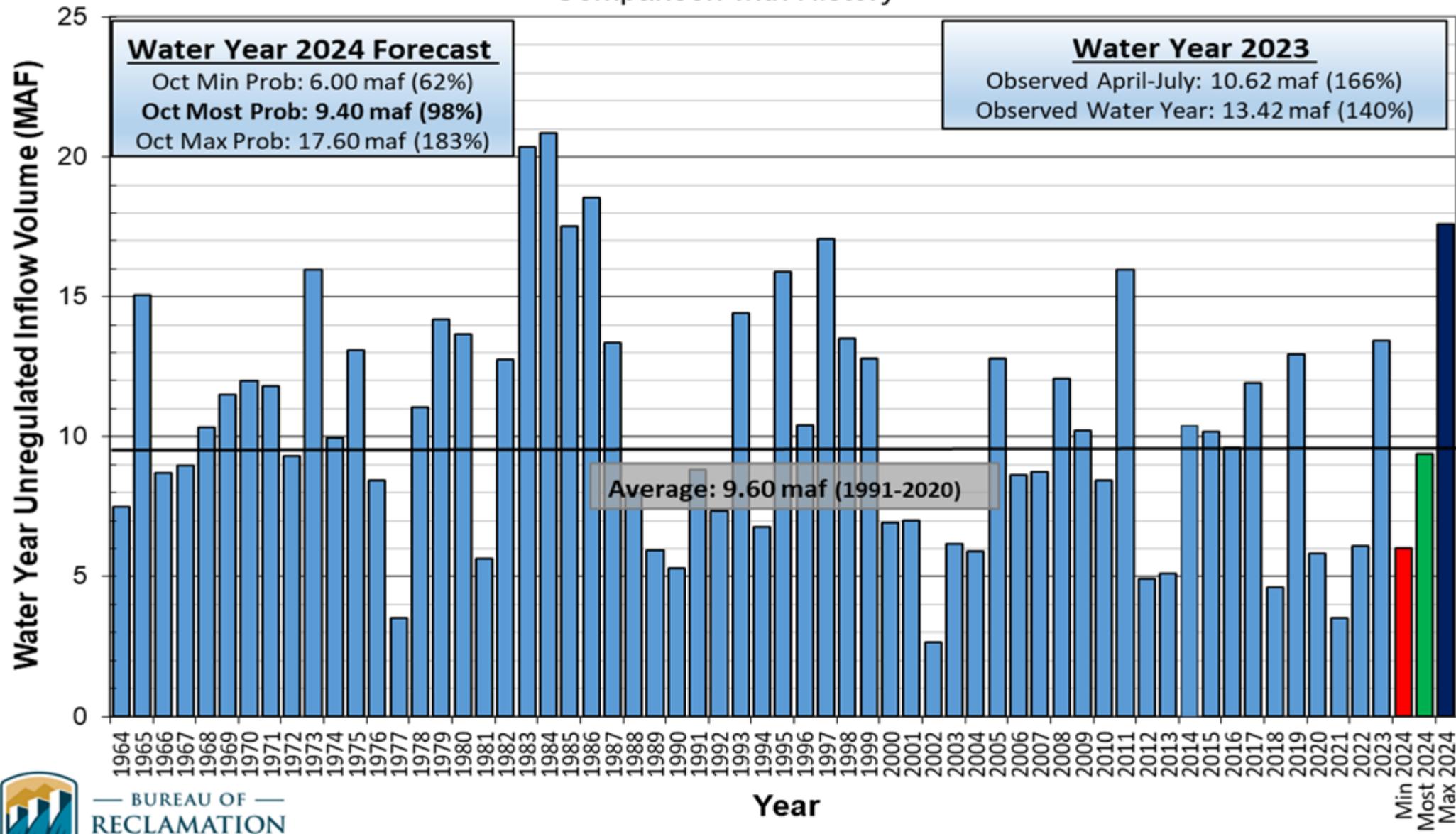


- Unregulated inflow by water-year
  - 2015 = 94% of average
  - 2016 = 89%
  - 2017 = 110%
  - 2018 = 43%
  - 2019 = 120%
  - 2020 = 54%
  - 2021 = 32%
  - 2022 = 63%
  - 2023 = 140% of avg.
  - 2024 = 98% of avg. forecasted (probable range of 62% to 183%)
- 2023 inflow:
  - Actual
    - Aug = 81%
    - Sep = 65%
    - Oct = 71%
  - Forecast
    - Nov = 86%
    - Dec = 100%
    - Jan = 101%

# Lake Powell Unregulated Inflow

## Water Year 2024 Forecast *(issued October 2)*

### Comparison with History

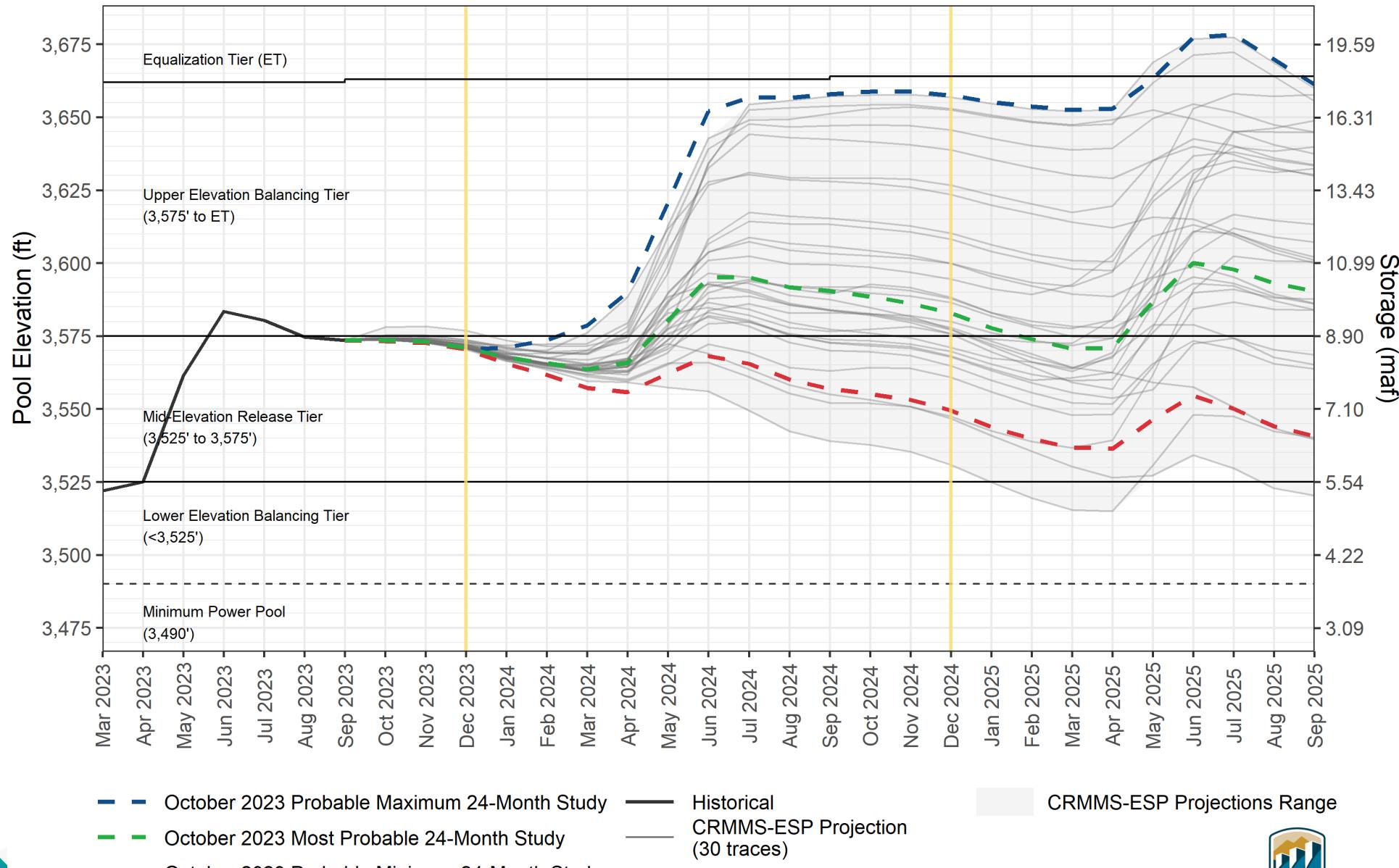


BUREAU OF  
RECLAMATION

ENERGY

# Lake Powell End-of-Month Elevations

## CRMMS Projections from October 2023



BUREAU OF  
RECLAMATION



# *Long-Term WRP*



- WAPA looking to find affordable and reliable resources to augment hydropower resources
- Request For Information resulted in mostly long term offers for wind and solar
- WAPA asking for interest which would include price and time frame
  - Would have to fall within CRSP CROD limit
  - UAMPS recommendation is that we would do any resources on our own and not through WAPA
  - Member direction ???



# Environmental Update

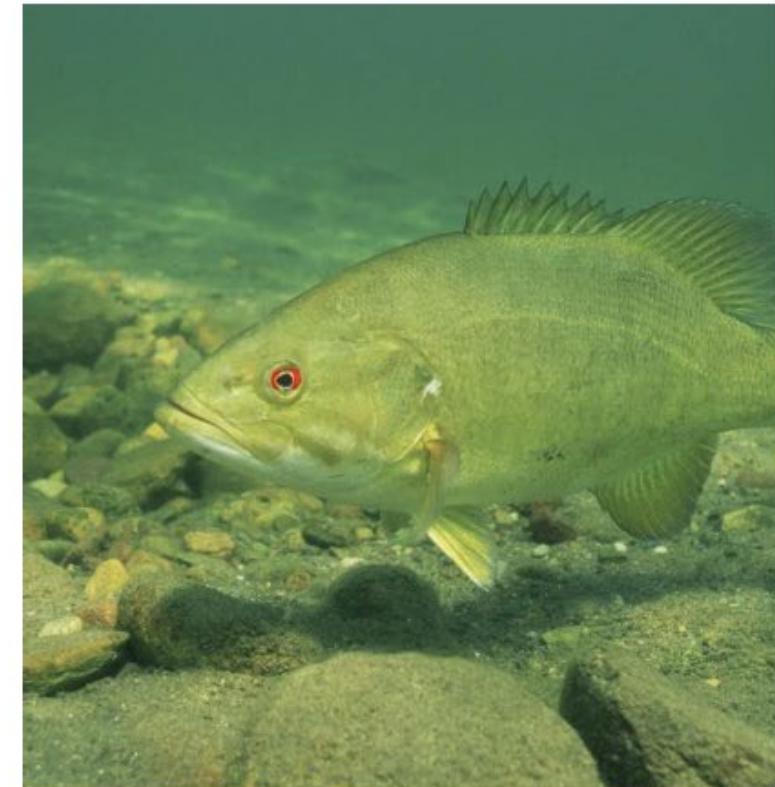
---

## SEIS to modify LTEMP ROD

Notice of Intent – Public Scoping Period (Due 11/3)

- What action should Reclamation consider for control of small mouth bass?
- Should it be only flow options, or should it be broad and programmatic looking at range of possible solutions to implement such as non-flow options?
- Cooperating Agency Review – 11/27 – 12/11
  - WAPA is a Cooperating Agency
- Draft SEIS - Dec. 29, 2023
  - Comments due Feb. 12, 2024
- Final EIS – Mar. 2024
- Record of Decision – July 2024

<https://www.federalregister.gov/documents/2023/10/04/2023-22077/notice-of-intent-to-prepare-a-supplemental-environmental-impact-statement-for-the-december-2016>



Smallmouth bass USFWS Photo/Eric Engbretson

# **LTEMP ROD SEIS**

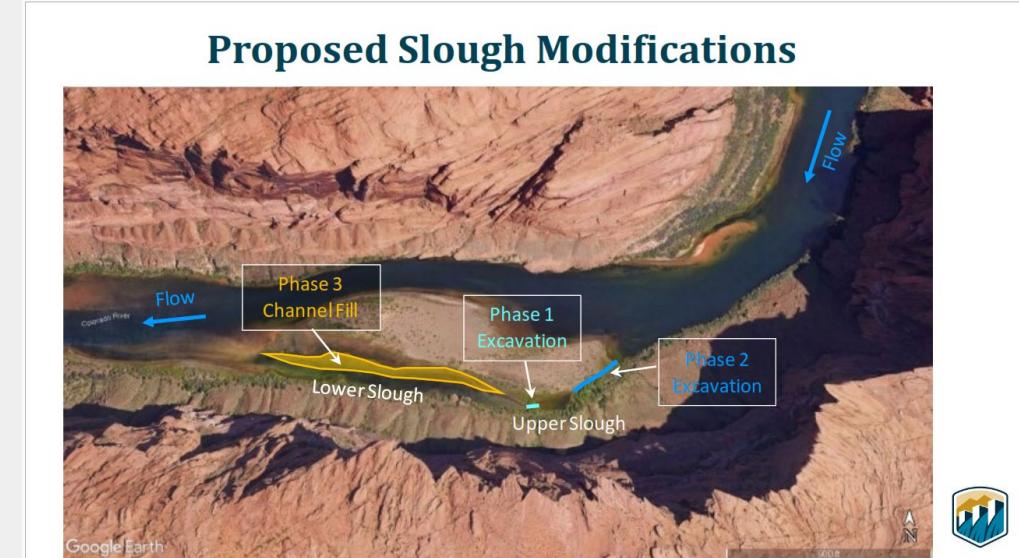


- LTEMP = Long-Term Experimental and Management Plan
- SEIS = Supplemental Environmental Impact Statement
- ROD = Record of Decision
- BOR = Bureau of Reclamation
- SMB = Smallmouth Bass
  
- UAMPS to participate as Cooperating Agency

# LTEMP ROD SEIS



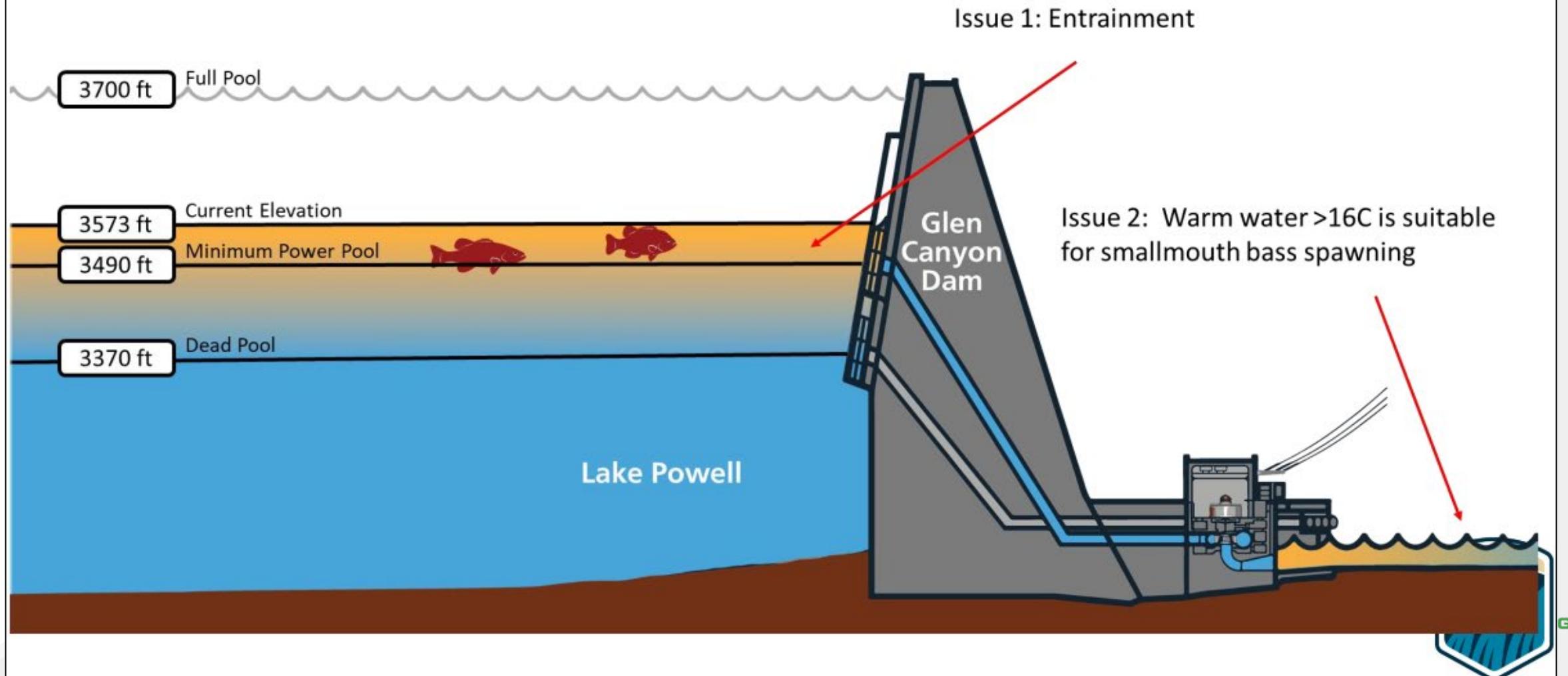
- Concern about Smallmouth Bass getting established below the dam
- CREDA & members prefer non-flow options
- Possible alternatives
  - Bypass flows
  - Slough dredging
  - Etc.





# LTEMP ROD SEIS

## Invasive Threat to Native Fish





October  
2023

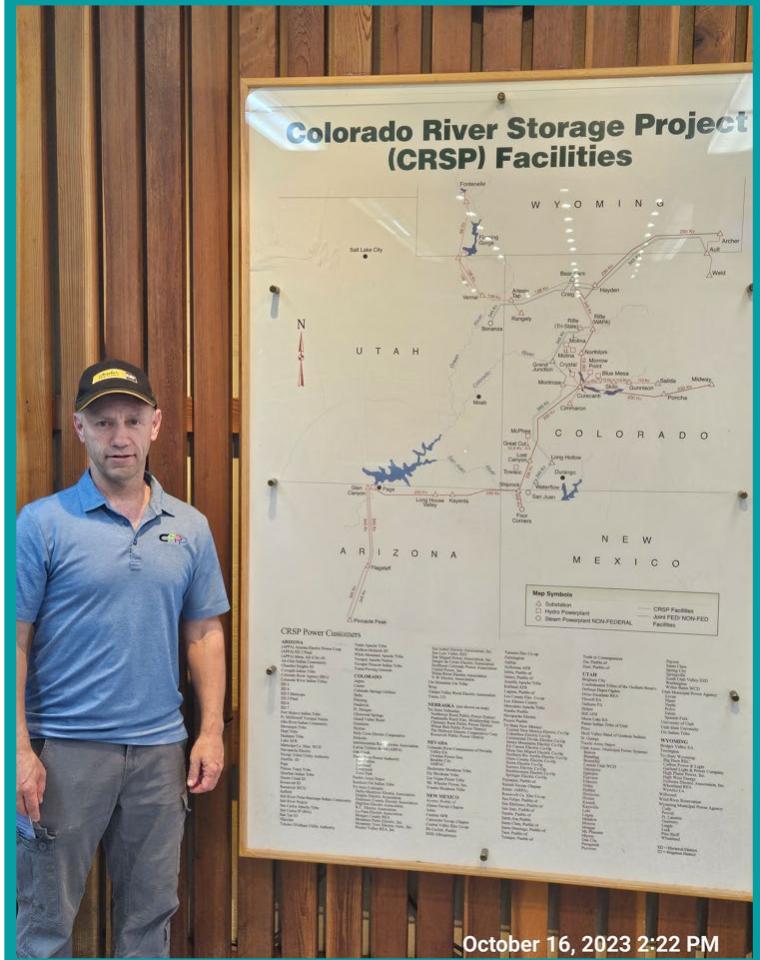


# UAMPS Board Retreat Tour of Glen Canyon Dam





*Casey Anderson  
please confirm, it was really tall*



# Payson Project



---

Jordan

*EIM Participation*



# ***EIM Participation***

- UAMPS is conducting an in-depth study into Nebo's participation in the EIM
- UAMPS investigation will lay out
  - Cost Estimate for Participation
  - Cost Estimate of Savings
  - Work Scope pre and post entry in the EIM
- UAMPS is working with two outside parties for this analysis
  - Emerson
  - The Energy Authority (TEA)

# *Process*

- IT/Metering
  - Cost Estimate and scope to complete communications and controls
  - Completed by Emerson
- Operations
  - Cost for PAC and CAISO to have a Participating resource
  - Investigation of Software for CAISO Bid-In and Shadow settlements
  - Training for Staff
  - Completed by The Energy Authority (TEA)
- Resources
  - Analysis of gas supply contracts and limitations

# *Analysis from The Energy Authority*

- UAMPS has requested a cost analysis from TEA
  - The study will cover:
    - Analysis is to give UAMPS an understanding of what could be gained or lost from participating in the EIM
    - Energy and Ancillaries, although Ancillaries will follow
    - Compare bi-lateral activities to EIM performance for one year of Historical data
  - Qualitatively
    - Impacts to Natural Gas Supply
    - Identify Software and other implementation costs
    - Value of gaining experience Operating in an organized market
    - WEIM interactions with future market changes (EDAM)

# *Gas Supply*

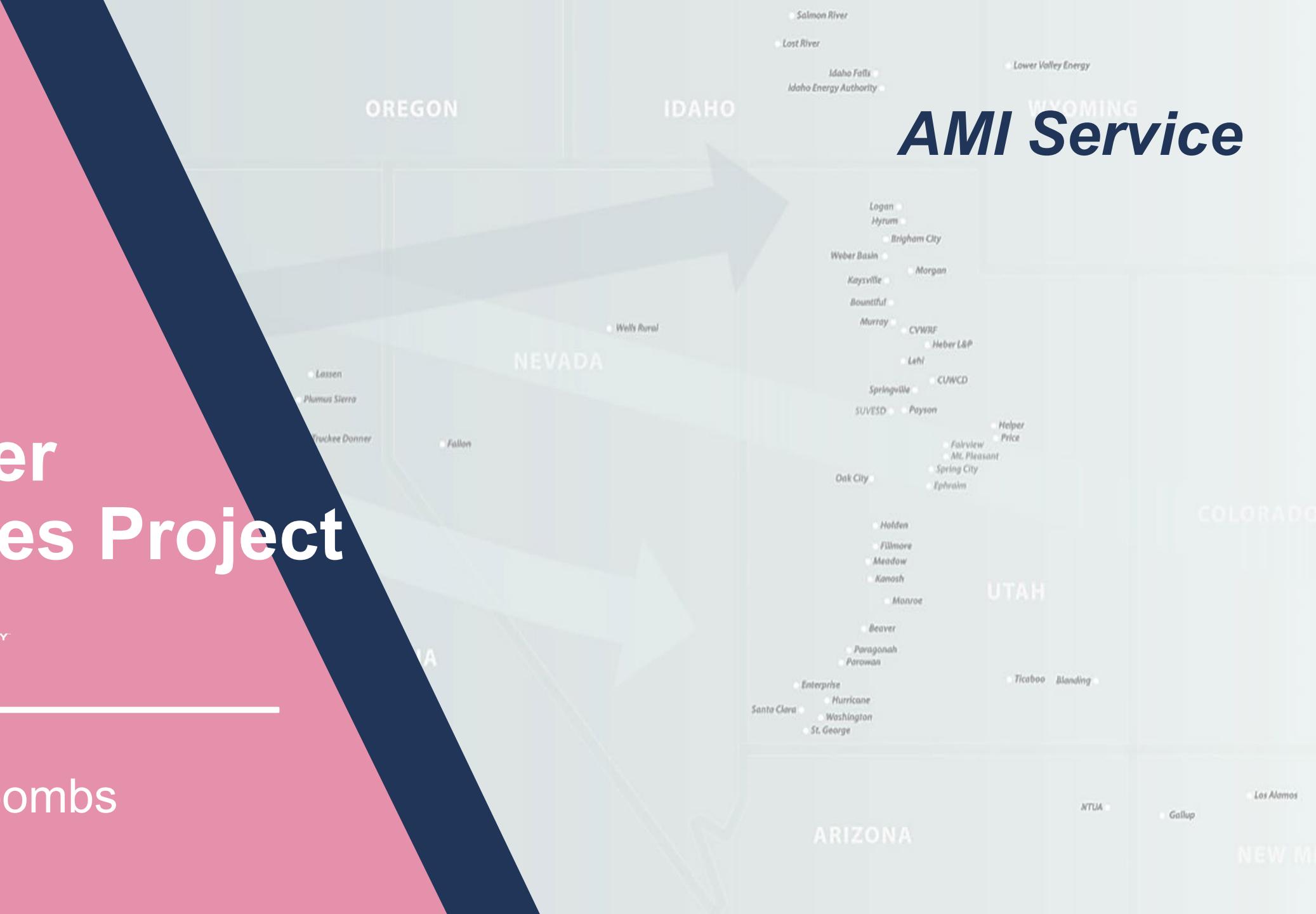
- Managing gas supply is key in market participation
- UAMPS is investigating savings from market participation compared to savings from the pre-pay gas supply contract
  - Market Participation may justify not participating in the pre-pay supply contract
  - The pre-pay deal has many restrictions. There is a risk staying in compliance should Nebo not be dispatched.

# Member Services Project



# Jackie Coombs

# AMI Service



## ***AMI Service***

- Staff issued a SurveyMonkey
  - 14 Members do not have AMI installed or AMI that has past its useful life
  - 25 Members currently have AMI installed
    - Variety of technologies Cooper Eaton, Itron, Landis-Gyr, Sensus, Tantulas, Honeywell/Elster, Aclara, Vision LoRA System, TWACS, Verison Grid-Wide

# *Proposal*

- Send solicitation of interest to participants for an AMI Service
- Put together a technical committee to review and analyze technologies; e.g., pros and cons, economy of scale, etc.
- Evaluate costs based on participation level
  - UAMPS staff to purchase, install and collect/analyze data
  - Amortization over a 10-year period

# *UAMPS Smart Energy Programs*

## Resource Project



---

Mackenzie Monthey



## *Topic Discussions*

- Smart Energy Audit
- Smart Energy Rebate Program Adjustments
- See “Ya” Later Refrigerator Program Adjustments
- Heat Pump Programs
- EV Programs

# ***SMART ENERGY AUDIT***

- GDS & Associates
  - KWHs savings audit of each product
    - Found that kWh's saving amounts need to be adjusted.
      - Evaporative Coolers (lower)
      - Central Air Conditioners (lower)
      - Refrigerators (lower)
      - Ductless Heat Pumps (lower)
      - Smart Thermostats (higher)
      - Heat Pumps (higher)
      - Gas Furnaces (higher)

# HES PROGRAM kWh SAVINGS

*(April 1, 2023 – November 10, 2023)*

Participant	Clothes Washer	Refrigerator	Freezer	Dishwasher	Room A/C	Port. Evap.	Lighting Fixtures	Water Heater	Lighting Sensor	Smart Switch	Total kW Savings
	254 kWh	63 kWh	116 kWh	37 kWh	34 kWh	76 kWh	12 kWh	68 kWh	34 kWh	34 kWh	
Blanding											0
Brigham			1								116
Enterprise											0
Ephraim											0
Fairview											0
Fillmore											0
Holden											0
Hurricane											0
Hyrum				1							37
Kanosh											0
Kaysville	2	1		3							682
Lehi	3	2		4	1						1,033
Monore											0
Morgan											0
Mt. Pleasant		1		3							174
Oak City											0
Payson											0
Price											0
Santa Clara					1						34
Springville				1							37
SUVESD											0
Washington				4							148
<b>TOTAL</b>	5	4	1	16	2	0	0	1	0	0	2,261 kWh

# COOL CASH PROGRAM kWh SAVINGS

*(April 1, 2023 – November 10, 2023)*

Participant	15+ Seer	17+ Seer	20+ Seer	A/C Properly Sized	A/C Properly Installed	Evap. 1st Install	Evap. Replacement	Evap. Premium	Evap. Premium Ducted	Total kW Savings
	163 kWh	296 kWh	428 kWh	0 kWh	0 kWh	315 kWh	350 kWh	333 kWh	333kWh	
Blanding										0
Brigham										0
Enterprise										0
Fairview										0
Fillmore										0
Holden										0
Hurricane										0
Hyrum										0
Kanosh										0
Kaysville	1									163
Lehi	2				1					326
Morgan										0
Mt. Pleasant										0
Oak City										0
Payson		1			1					296
Price										0
Santa Clara										0
Springville		1	1		2					724
Washington	2				2					326
<b>Total</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,835 kWh</b>

# COOL CASH PROGRAM kWh SAVINGS (cont.)

*(April 1, 2023 – November 10, 2023)*

Participant	Single Head Ductless	Multi Head Ductless	Heat Pump (15 SEER)	Heat Pump (16 SEER)	Gas Furnace	Smart Thermostat	Total kW Savings
	1,369 kWh	2,739 kWh	884 kWh	1,392 kWh	720 kWh	765 kWh	
Blanding							0
Brigham						2	1,530
Enterprise							0
Fairview							0
Fillmore							0
Holden							0
Hurricane						1	765
Hyrum						2	1,530
Kanosh							0
Kaysville			2	3		10	13,594
Lehi						31	23,715
Morgan							0
Mt. Pleasant						3	2,295
Oak City							0
Payson							0
Price							0
Santa Clara							0
Springville							0
Washington						8	6,120
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>57</b>	<b>49,549 kWh</b>

# **SEE “Ya” LATER REFRIGERATOR PROGRAM**

**(April 1, 2023 – November 10, 2023)**

Participant	# of Refrigerators	Total kW Savings
	901 kWh	
Blanding		0
Brigham City		0
Ephraim	3	2,703
Fairview	2	1,802
Fallon		0
Fillmore		0
Holden		0
Hyrum		0
Kanosh		0
Kaysville	5	4,505
Lehi	3	2,703
Morgan	1	901
Mt. Pleasant	23	20,723
Payson		0
Price		0
Springville	6	5,406
Washington		0
<b>Total</b>	<b>43</b>	<b>38,743 kW</b>

# ***SMART ENERGY AUDIT***

- Recommend rebate changes to the following items:
  - Evaporative Coolers
    - \$400 rebate to \$200 rebate
  - Washers
    - \$50 rebate to \$25 rebate
  - Freezers
    - \$50 rebate to \$25 rebate
  - Refrigerator
    - \$100 rebate to \$25 rebate

# ***SMART ENERGY AUDIT***

- Recommend discontinuing rebates for:
  - Portable Evaporative Coolers
  - Lighting Fixtures
  - Proper installation/sizing on Central Air Conditioner and Gas Furnace
  - Supplemental Ductless Heat Pumps (nonstationary)

# ***SMART ENERGY AUDIT***

- Recommend only offering incentives on the following Lighting Fixtures
  - LED Recessed Downlight
  - Outdoor Area & Roadways
  - Parking Garage
  - High & Low Bay

# ***SMART ENERGY AUDIT***

- Recommend additional programs
  - Commercial
    - Refrigeration
    - Compressed Air
    - HVAC
    - Hot Water
  - Residential
    - EV's
    - Smart Power Strips
    - Room Air Cleaners

## ***SEE “Ya” Later Refrigerator Program***

- 1-800-GOT-JUNK
  - Increase in costs from \$70 to \$90 for a single door refrigerator pick-up and to \$120 for a french door refrigerator pickup
  - Currently rebate: \$70 paid to vendor, \$30 paid to customer
  - Kaysville, Lehi, Morgan, Payson and Springville will be affected by the increase

# ***DUCTLESS/HEAT PUMPS***

- Benefits of Ductless/Heat pumps
  - Greater year-round heating/cooling flexibility.
  - Increased energy efficiency
  - Lower long-term costs for customers
  - Improve indoor air quality
  - Environmentally friendly
  - Reduce energy demand while bring in additional revenue into the utility system

## ***DUCTLESS HEAT PUMPS***

- Single-head ductless heat pump (9.0 HSPF, 16 Seer)
  - Customer incentive - \$1,000, Trade Alley incentive - \$300
- Multi-head ductless heat pump (9.0 HSPF, 16 Seer)
  - Customer incentive - \$1,300, Trade Alley incentive - \$500

# **HEAT PUMPS**

- Incentives:
  - Heat Pump installation tier 1 (9.0 HSPF, 15 Seer)
    - Customer incentive - \$200, Trade Alley incentive - \$50
  - Heat Pump installation tier 2 (9.5 HSPF, 16 Seer)
    - Customer incentive - \$400, Trade Alley incentive - \$200

# ***RESIDENTIAL EV REBATE PROGRAM***

- **INCENTIVE**
  - Level 2 (240v) EV charging station - \$200 rebate
- **QUALIFICATIONS**
  - Must be a residential customer
  - Must have a signed time of use rate contract with the City with a two-year commitment (whole house not just EV)
  - Must be a level 2 EV charging station (240v) and on the approved charger list
  - Customers must provide a copy of DMV registration
  - Installation must be completed by a licensed electrician
  - Must provide a receipt for proof of purchase

# **SUMMARY**

- Recommend discontinuing rebates on portable evaporative cooler, lighting fixtures, proper installation of central air conditioners and gas furnaces, and supplemental ductless heat pumps, and reducing rebate amount on evaporative coolers, washers, freezers and refrigerators.
- Recommend moving forward with signing a new contract with 1-800-GOT-JUNK as discussed.
- Recommend re-soliciting participation in all energy efficiency programs.

# *Overall Operations Report*

## Board of Directors



---

Rachel Stanford

# *Topic Discussions*

- Natural Gas
  - Storage
  - Residential Costs
  - New Gas-Fired Plants
- Industry News
  - WEIM Benefits
  - Current Participants
  - EDAM
- Seasonal Outlook
  - November Daily Forecast
  - Seasonal Outlook
- Transmission
  - CAISO Congestion & Curtailments
  - CAISO SWIP Partnership

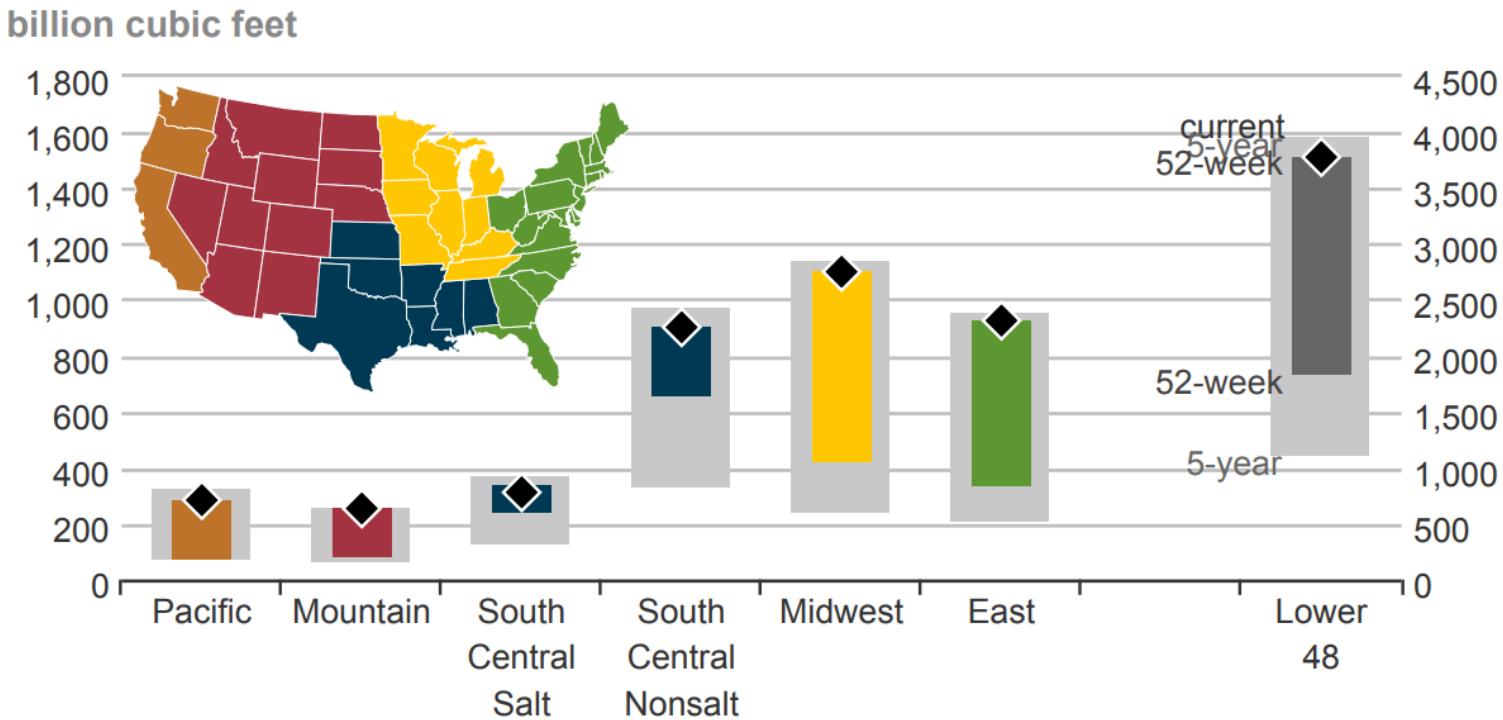


# Natural Gas

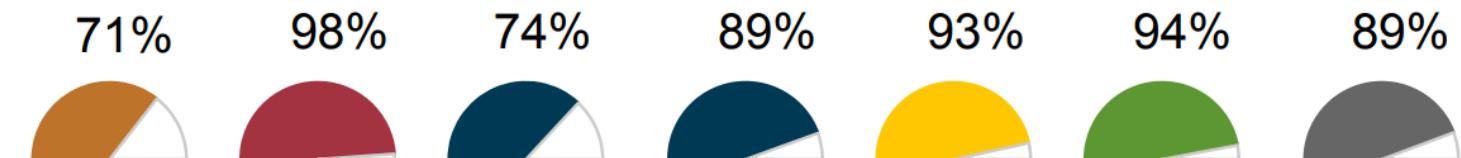
# National Gas Storage

- ❖ Pacific region saw 6% increase & Mountain region saw 12% increase from the previous month's reporting

## Underground working natural gas storage summary as of October 27, 2023



## Underground storage capacity utilization



## Mountain region weekly working gas in underground storage

billion cubic feet

300

200

100

0

— 2023 — 2022 — 2018-2022 average — 2018-2022 range



# Mountain Region

## Pacific Region

### Pacific region weekly working gas in underground storage

billion cubic feet

400

300

200

100

0

— 2023 — 2022 — 2018-2022 average — 2018-2022 range

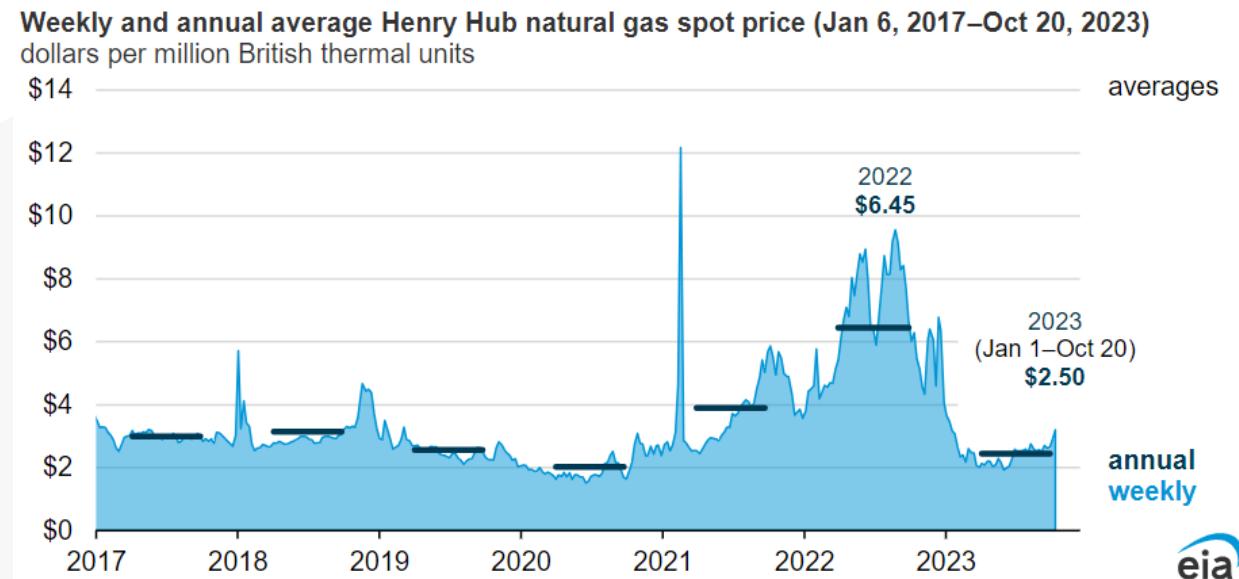
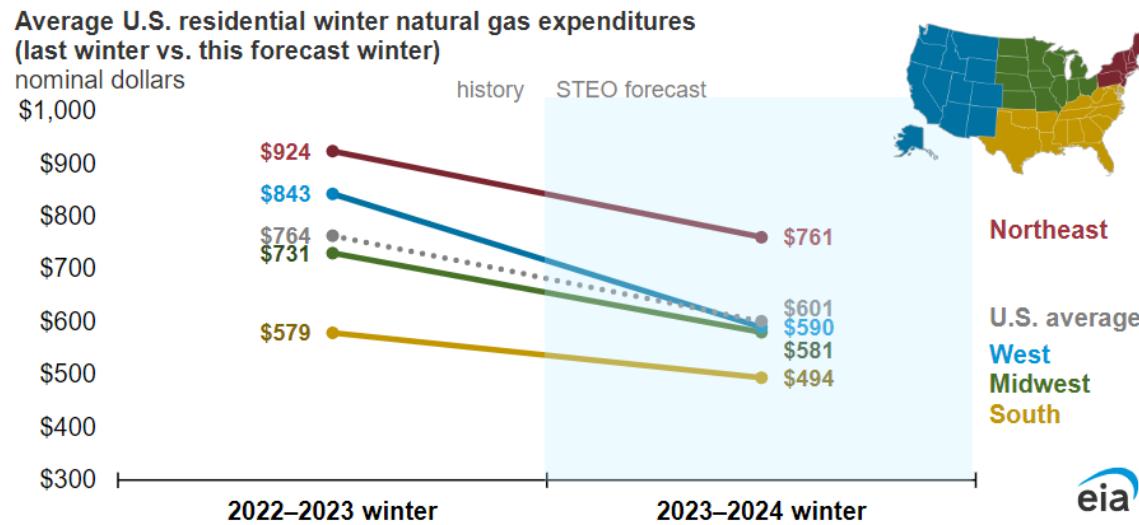


UAMPS

SMARTENERGY

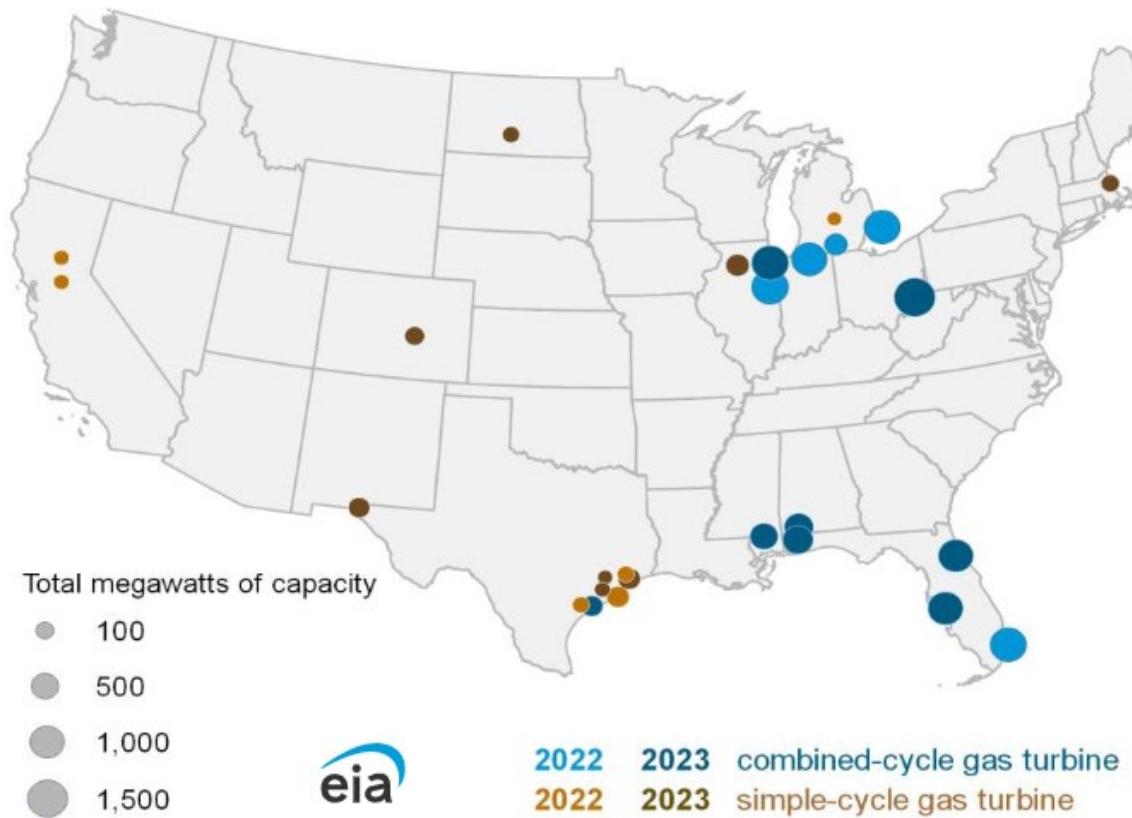
# Average Residential Gas Bills Expected to Decrease

In the west, unseasonably cold weather drove up residential usage for the 2022-2023 winter along with extreme weather events across the nation which drove the Henry Hub pricing to record highs, averaging \$5.66/Mcf. Prices dropped throughout 2023 and going into the 2023-2024 winter season prices are expected to stay low with a forecasted average of \$3.16/Mcf.



# US Natural Gas-Fired Generator Additions

U.S. natural gas-fired electric generation capacity additions, simple-cycle and combined-cycle gas turbines (2022–2023)



- 10 new gas-fired power plants online in 2023 – 6.8 GW
- By 2023 YE expect an additional 6 plants online – 1.8 GW
- Forecasted additions of 20 new plants in 2024-2025 with total capacity of 7.7 GW
- Largely focused in the Appalachia and Gulf Coast production regions due to healthy pipeline infrastructure

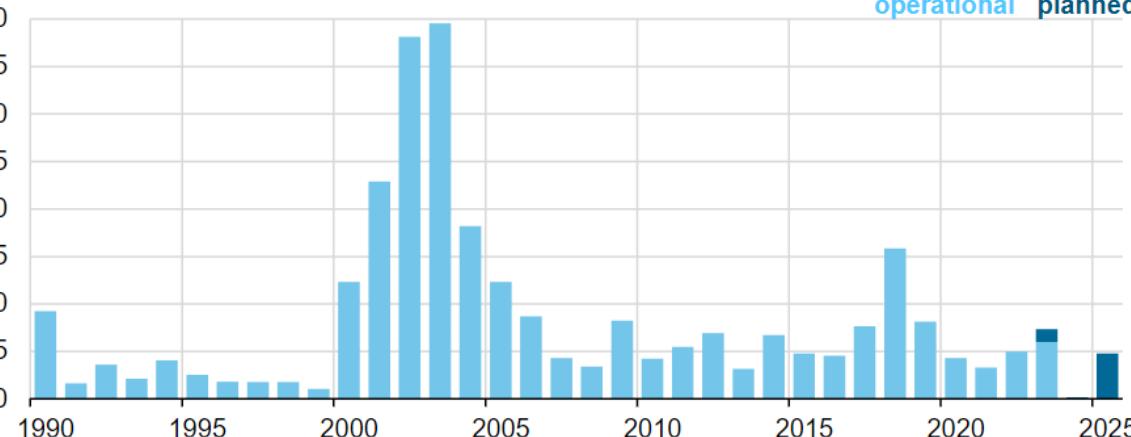
# Natural Gas Capacity Additions

Annual U.S. combined-cycle gas turbine electric generation capacity additions  
(1990–2025)

gigawatts

bia

operational planned

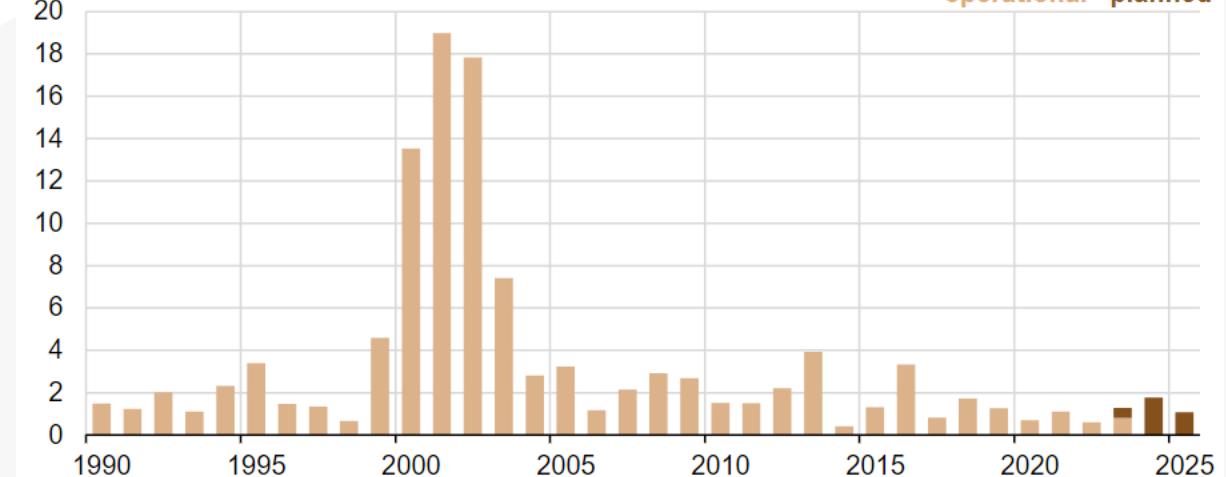


Annual U.S. simple-cycle gas electric generation capacity additions (1990–2025)

gigawatts

bia

operational planned



# Industry News



# CAISO WEIM Q3-2023 Results

## Q3 2023 Gross Benefits by Participant

	(millions \$)
Arizona Public Service	\$19.90
AVANGRID	\$4.80
Avista	\$5.19
Balancing Authority of Northern California	\$22.17
Bonneville Power Administration	\$6.38
California ISO	\$34.88
El Paso Electric	\$5.96
Idaho Power Company	\$8.62
Los Angeles Dept. of Water & Power	\$64.78
NV Energy	\$60.30
NorthWestern Energy	\$6.34
PacifiCorp	\$37.37
Portland General Electric	\$16.92
Public Service Company New Mexico	\$8.53
Puget Sound Energy	\$10.06
Powerex	\$83.72
Seattle City Light	\$4.61
Salt River Project	\$19.10
Tacoma Power	\$8.19
Tucson Electric Power	\$7.17
Turlock Irrigation District	\$1.00
WAPA Desert Southwest Region	\$26.06
<b>Total</b>	<b>\$462.05</b>

## 2023 Q3 BENEFITS

### ECONOMICAL

**\$462.05 M**

Gross benefits realized due to more efficient inter-and intra-regional dispatch in the Fifteen-Minute Market (FMM) and Real-Time Dispatch (RTD)\*

### ENVIRONMENTAL

**25,728**

Metric tons of CO<sub>2</sub>\*\* avoided curtailments

### OPERATIONAL

**59%**

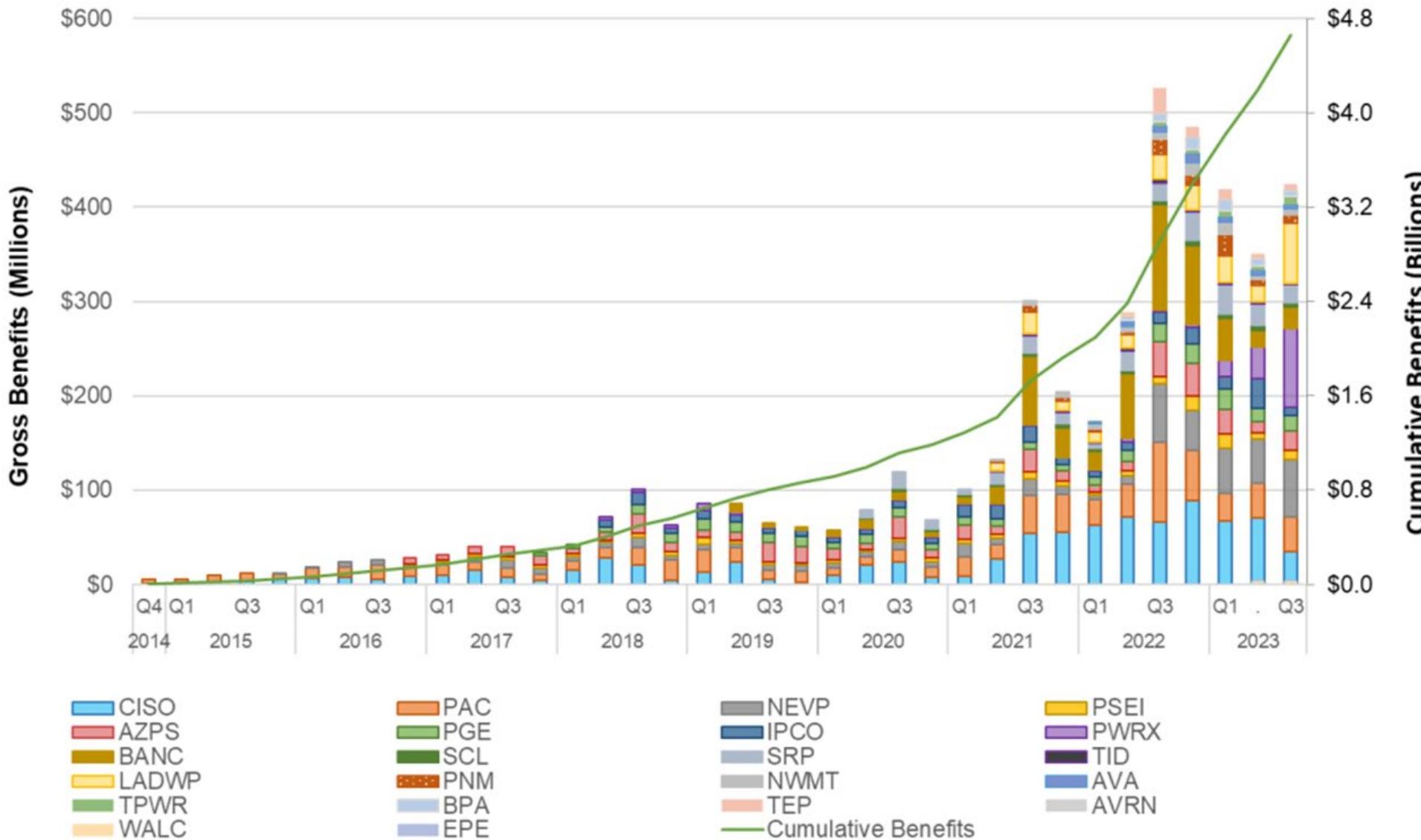
Average reduction in flexibility reserves across the footprint

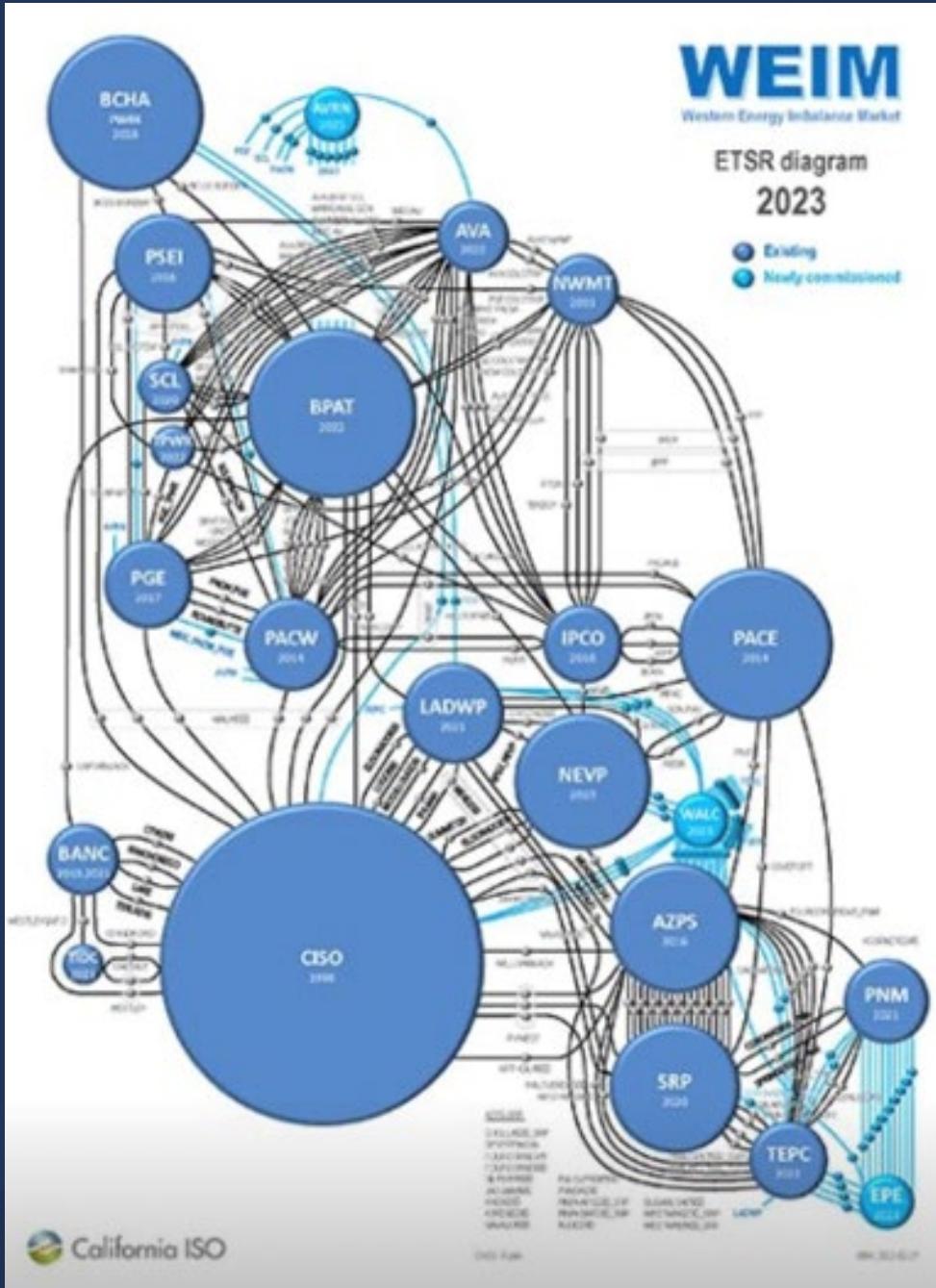
Gross benefits from WEIM since November 2014

**\$4.66 billion**



# CAISO WEIM Q3-2023 Benefits





Today, with 22 participants, the Western EIM footprint includes portions of Arizona, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming, Texas and extends to the border with Canada.

Awaiting FERC  
approval/comment

CAISO requested  
December 21  
response

PacifiCorp waiting  
for FERC response  
before announcing  
Stakeholder  
Process in 2024

New proposed  
implementation  
Q3-2026

**EDAM**  
EXTENDED DAY-AHEAD MARKET



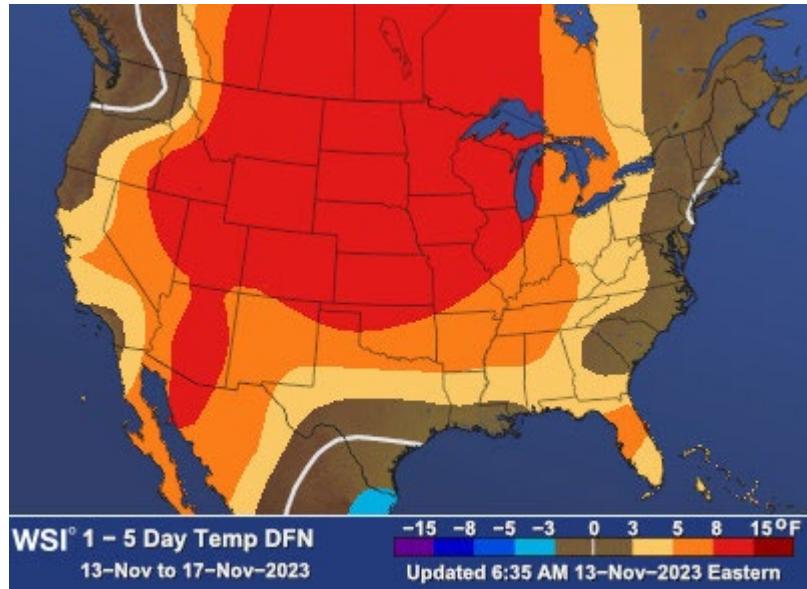
# Seasonal Outlook



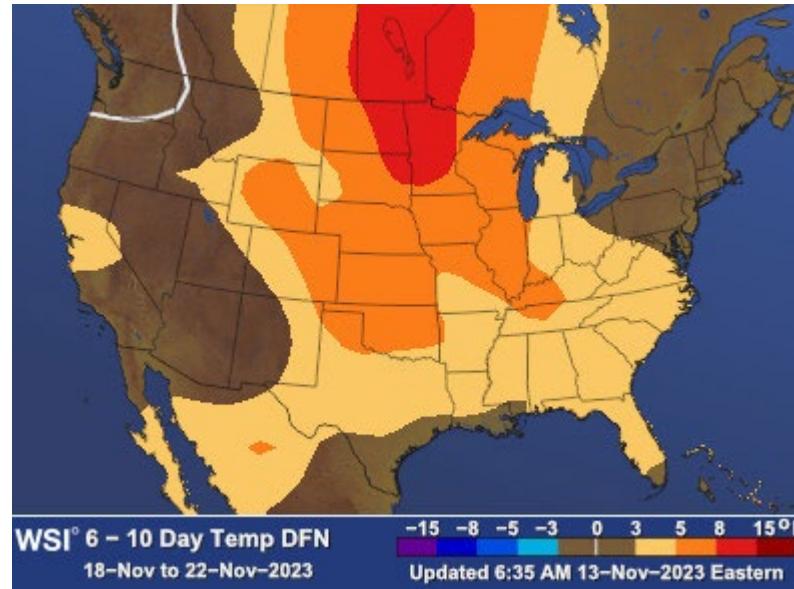
UAMPS

SMARTENERGY

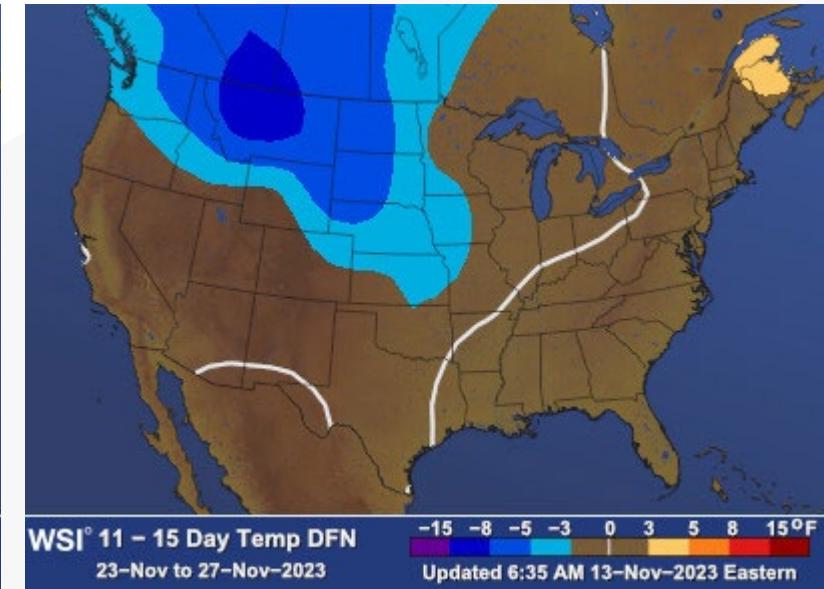
# November Forecast



1-5 Day Forecast



6-10 Day Forecast



11-15 Day Forecast

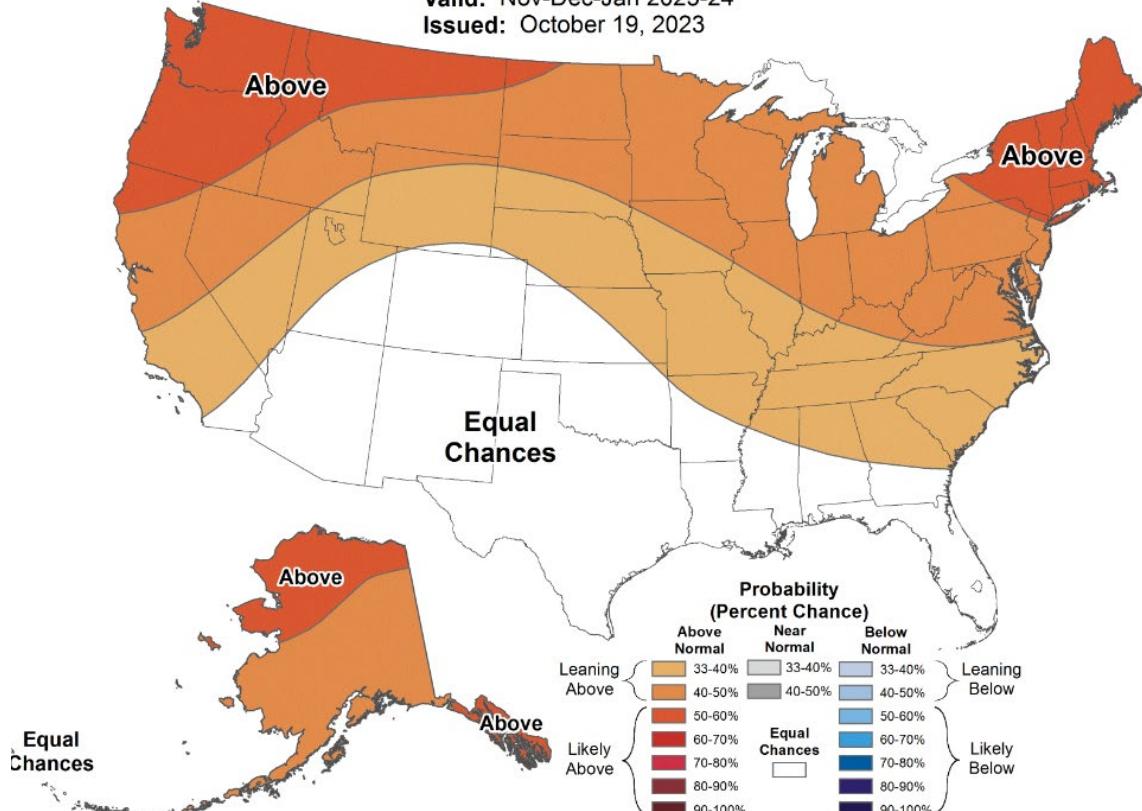
# Seasonal Outlook From Prior Month



## Seasonal Temperature Outlook



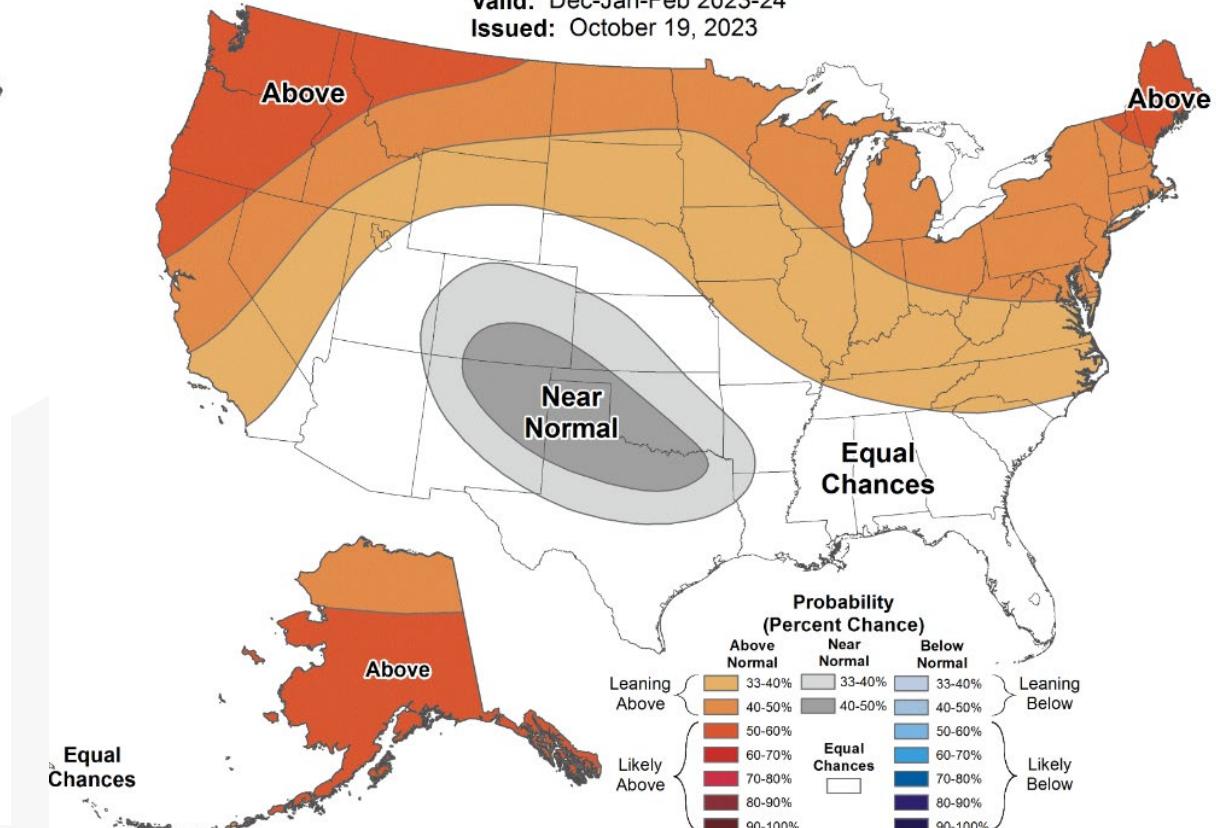
Valid: Nov-Dec-Jan 2023-24  
Issued: October 19, 2023



## Seasonal Temperature Outlook



Valid: Dec-Jan-Feb 2023-24  
Issued: October 19, 2023

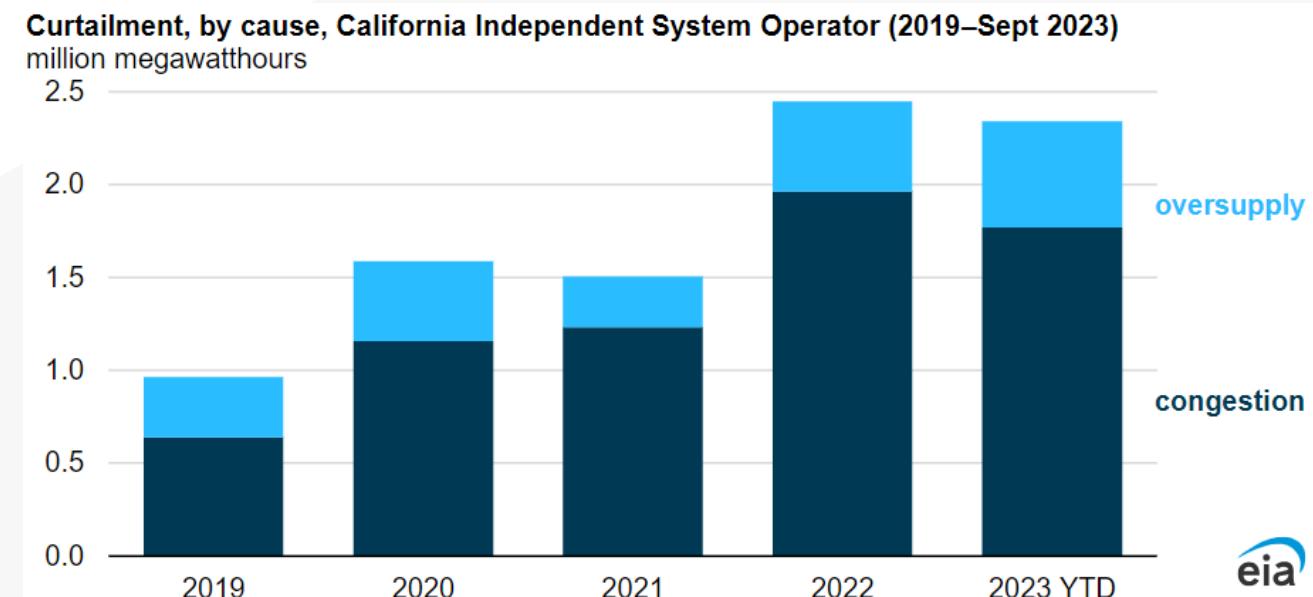
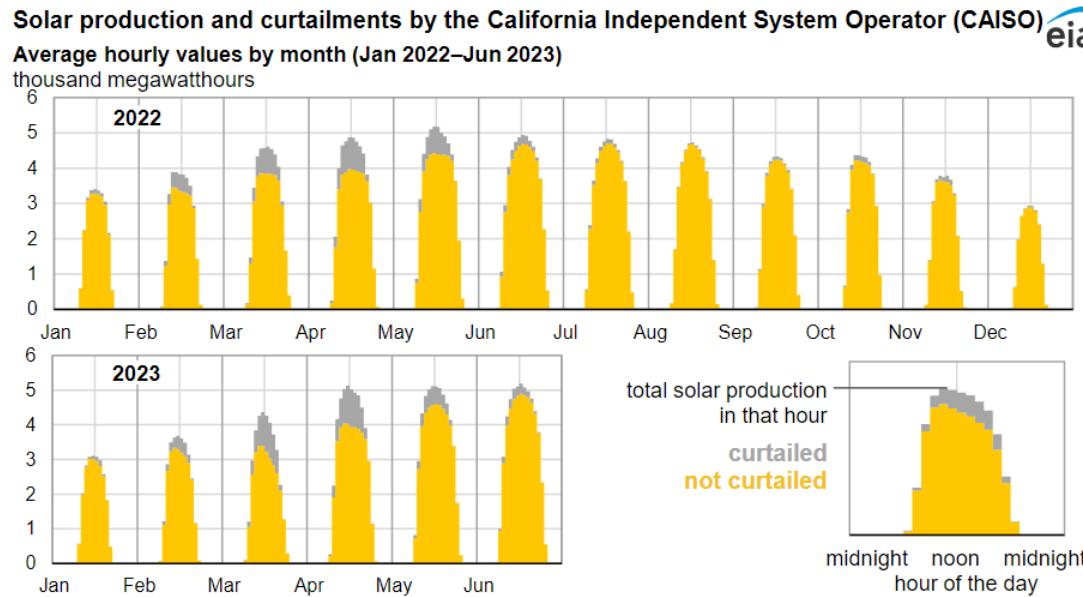


# *Transmission*



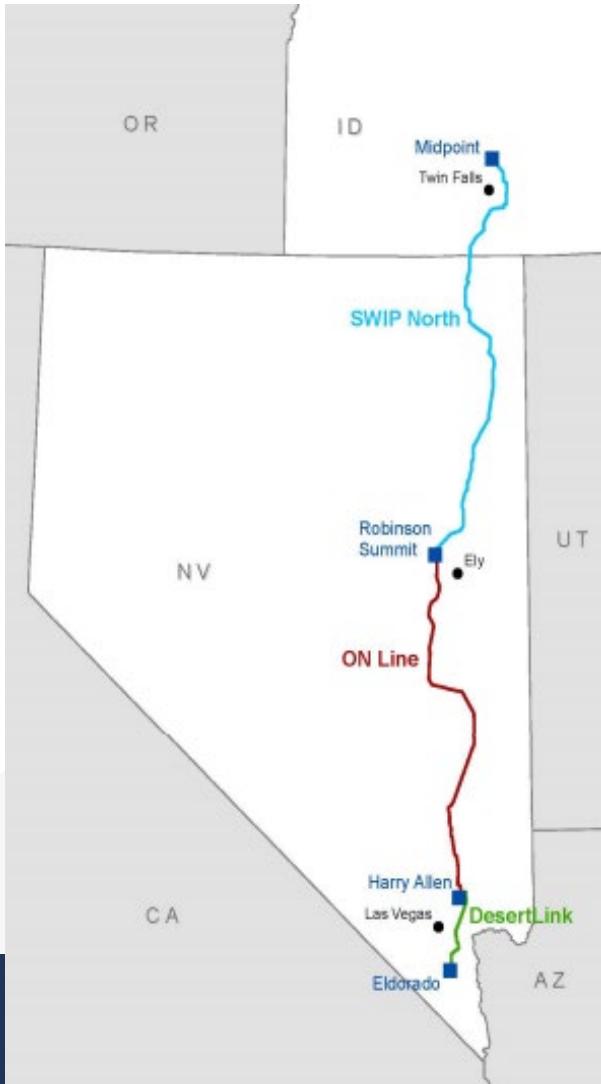
# CAISO Transmission Congestion

- Day Ahead Market should prevent unknowns of Real Time curtailments
- 45 Projects to expand transmission infrastructure & capacity
  - FERC Order 1000 Interregional Transmission Planning - 7 applications submitted, all but one rejected
- Adding 7.6 GW of dispatchable flexible resources (battery) by 2024 YE



# Southwest Intertie Project (SWIP)

July 31, 2023  
WECC granted  
SWIP Phase 3  
status



- Phase I – ON Line (Robinson to Harry Allen)
  - 231 mile 500 kV line
  - ISD January 2014
  - Joint Ownership: NVE 25%, LS Power 75%
  - 2300 MW transfer capacity (1200 MW NVE)
- Phase II – DesertLink (Harry Allen to Eldorado)
  - 60 mile 500 kV line
  - ISD August 2020
  - Joint Ownership: NVE 20%, LS Power 80%
  - 3500 MW transfer capability controlled by CAISO
- Phase III – SWIP North (Midpoint to Robinson)
  - 285 mile 500 kV line
  - Permitted, construction planned 2023, ISD 2025
  - 2100 MW transfer capacity
  - 100% LS Power Ownership
  - Upon completion of SWIP North, 2300 MW of transfer capacity will be available and triggers capacity swap such that NVE receives 1200 MW & LS Power receives 1100 MW from Midpoint to Harry Allen

# CAISO SWIP Partnership

- CAISO is seeking to acquire enough entitlements on the SWIP-N to import 1,000 MW of Idaho wind
- Proposal for a transmission use and capacity exchange agreement (TUA) between NV Energy and Great Basin Transmission (GBT, LS Power subsidiary) that would allow the ISO to acquire most of GBT's entitlements on the SWIP-N line and ON line rather than building a new 500-mile transmission line to reach Idaho's resources
- Idaho Power approached CAISO with the proposal, presenting it as a "joint regional policy-driven project" and would acquire 500 MW of south-to-north capacity to support winter RA needs
- Under the plan, CAISO and Idaho Power would share the \$1+ billion cost for the line with CAISO funding 77.2% of the project and Idaho Power with the remainder