HURRICANE CITY
UTAH

Mayor
Nanette Billings

City Manager
Kaden C. DeMille

Power Board
Mac J. Hall, Chair
Dave Imlay, Vice Chair
David Hirschi
Tony Certonio
Colt Stratton
Kerry Prince

Power Board Meeting Agenda

1/8/2025

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 December 2024

STAFF REPORTS

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

BUDGET

OLD BUSINESS

NEW BUSINESS

1. Discussion and possible recommendation to the City Council regarding a **Solar Policy variance –** Kimberly and Clark Sevy
2. Year End Power Department Report – Scott Hughes
3. UAMPS Updates – Scott Hughes
4. **Closed Meeting pursuant to Utah Code Section 52-4-205, upon request**

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

Mayor
Nanette Billings

City Manager
Kaden C. DeMille

Power Board
Mac J. Hall, Chair
Dave Imlay, Vice Chair
Joseph Prete
Tony Certonio
Colt Stratton
Kerry Prince

The Hurricane City Power Board met on December 4, 2024, at 3:00 p.m. at the Clifton Wilson Substation located at 526 W 600 N.

In attendance were Mac Hall, Dave Imlay, Joseph Prete, Colt Stratton, Kerry Prince, Scott Hughes, Brian Anderson, Jared Ross, Nanette Billings, Fred Resch, Dayton Hall, Bruce & Linda Zimmerman, Mitch Weis, Rett Beazer, Brady Pearce, Rick Meyer, and Crystal Wright.

Mac Hall welcomed everyone to the meeting. Dave Imlay led the Pledge of Allegiance and Scott Hughes offered the prayer. Dave Imlay motioned to approve minutes from the November 2024 meeting after a couple modifications. Kerry Prince seconded the motion. Motion passed unanimously.

Scott Hughes: Scott Hughes reported that we do still have a Journeyman Lineman position open. Riley Steglich, our Apprentice Lineman, is getting ready to take his Apprentice Step Test to go from step 1 to step 2. He provided a report from the IPA Annual Meeting. IPP Renewed is still moving forward. It is scheduled to complete construction and be in operation Fall 2025. Dave Imlay asked if they are still planning to run the coal plant until 2027. Scott Hughes stated that it is scheduled for decommissioning Summer 2025.

Brian Anderson: Brian Anderson reported on the 2800 West Canyon Villas temporary feed where a pole was installed to provide power. We're still waiting for engineering to be received before installing the permanent line down 2800 West. He reported on the installation of Christmas decorations, street crossings, and the large Christmas tree at the Community Center. Then he talked about work being done for the Capacity 2.0 project along 920 West.

Jared Ross: Jared Ross reported on the work being done to Generator #6. They have been working on rebuilding that generator. It's a large project and it's going well. We hope to start putting everything back together and have it completed sometime around Christmas. Scott Hughes stated that we are lucky to have Jared Ross, and his skill set, to complete this work. It is invaluable and saves a lot of money compared to having an outside company complete this large job.

Discussion and possible recommendation to the City Council on a Power Line Extension request for Hawk Ridge: Mitch Weis with Perry Homes described this project. It is located on the north side of 600 North around 2800 West and is west of the Sky Mountain Golf Course. This project will be a mix of entry level single-family homes, mid-range single-family homes, and premium high-end homes, combined with multi-family housing. Dave Imlay asked if the power capacity issue has been addressed on that line. Brian Anderson explained what will be required to provide the power capacity needs for this project. Dave Imlay motioned to recommend approval to the City Council for this project. Colt Stratton seconded the motion. Motion passed unanimously.

Discussion and possible recommendation to the City Council on a Power Line Extension request for Silver Wood: Rhett Beazer with Alpha Engineering presented the information for this project. The project is located on the very northern end of Old Hwy 91 for an industrial project. They have met with Power Department staff and know that

DRAFT

there are limitations with existing capacity. Brian Anderson provided details on what will be needed for their power needs. Scott Hughes talked about the pros and cons of installing overhead line in that area. Mac Hall suggested looking into the language for the development agreement made at the time. He thinks there may be language in there stating when underground line was installed the overhead lines would be removed. Dave Imlay motioned to recommend approval to the City Council for this project. Joseph Prete seconded the motion. Motion passed unanimously.

SouthWest Utah Technical Task Force (SWUTTF) Post Peak Report: Scott Hughes provided the slides from the report that was given. The Washington County Area load peaked on July 11th at 640.5MW. He showed a graph of the daily max temperature in Washington County. We had 49 consecutive days of being over 100 degrees. He passed out an explanation of Cooling Degree days. He discussed projects the group is looking to complete to address some issues that have been identified. Mac Hall stated that even though this group is sometimes difficult with many entities trying to work together, there have been a lot of good things that have come out of the creation of the working group.

UAMPS Updates: Scott Hughes provided the updates in the packet. We will not review them if there aren't any questions. Dave Imlay said he looked through the documents and stated it looked like the prepay agreement went through. Scott Hughes discussed the Mercuria swap example and stated we're looking at doing the same thing with our Renewable Energy Credits (REC's).

Scott Hughes went over a few budget slides. He reported that our reserve fund is recovering. He showed in graphs where we stopped spending impact money on capital projects to help our fund recover, but that cannot continue because we also must put money back into maintenance on our system. Joseph Prete asked if there's any future projections on the future of energy costs. Scott Hughes stated there have been a couple reports at UAMPS talking about some stabilization of energy costs, but things can change quickly.

Meeting adjourned at 4:16 p.m. The next Power Board meeting is scheduled for January 8, 2025, at 3:00 p.m.

DRAFT

HURRICANE CITY
UTAH

Mayor
Nanette Billings

City Manager
Kaden C. DeMille

Power Board
Mac J. Hall, Chair
Dave Imlay, Vice Chair
Joseph Prete
Tony Certonio
Colt Stratton
Kerry Prince

DECEMBER 4, 2024 – 3:00 pm

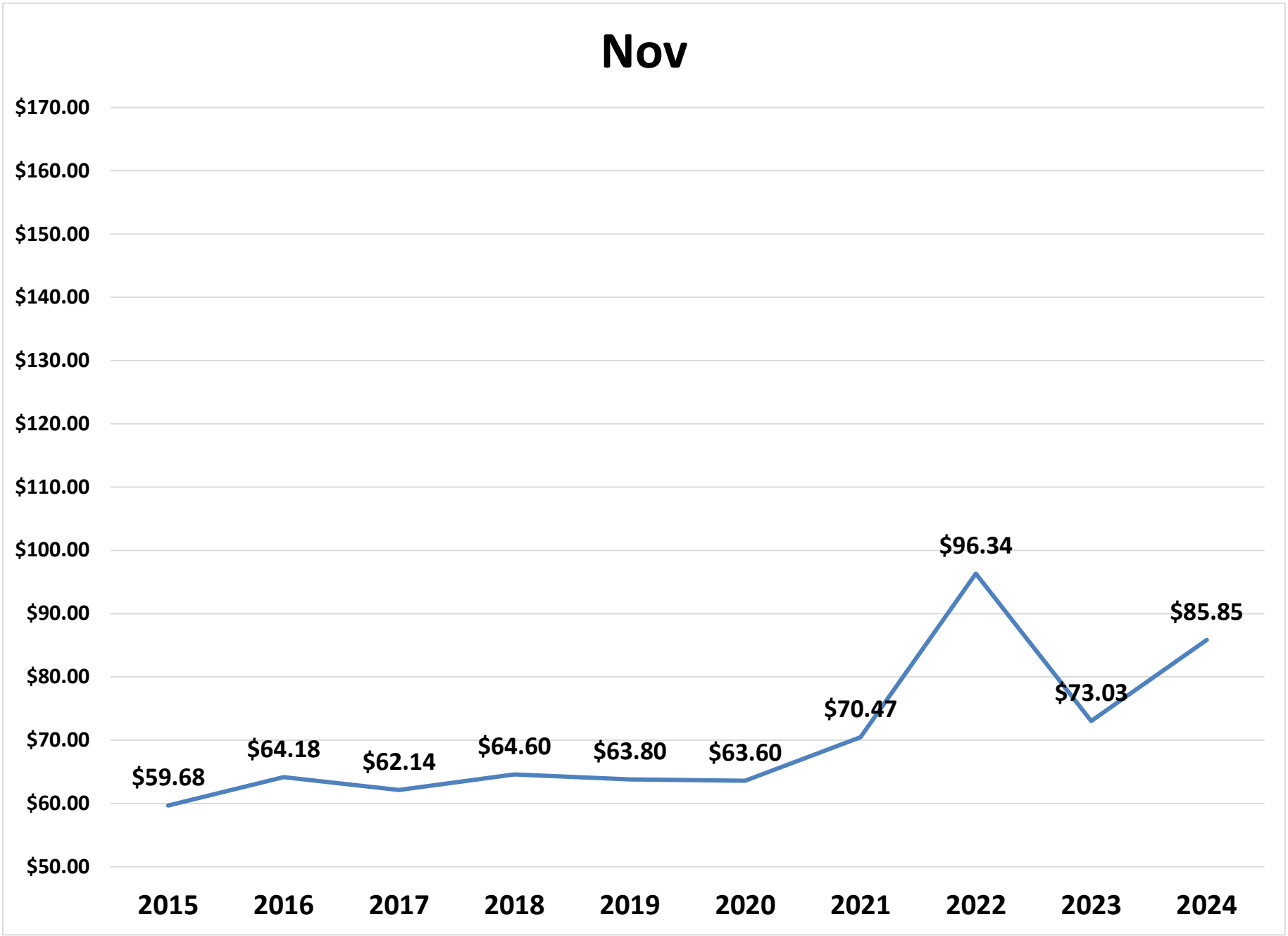
POWER BOARD SIGN-IN SHEET

Please PRINT

First and Last Name	Company (if applicable)
Mitch Weis	Perry Development
Zimmerman	
Rhett Beazer	Alpha Engineering
BRADY PEARCE	PERRY DEVELOPMENT
Rick Mayer	Bush & Gudgell

526 West 600 North • Hurricane, Utah • 84737
Phone (435) 635-5536 • Fax (435) 635-4127 • www.cityofhurricane.com

BUDGET


Nov
$170.00
$160.00
$150.00
$140.00
$130.00
$120.00
$110.00
$100.00
$90.00
$80.00
$70.00
$60.00
$50.00
$59.68
$64.18
$62.14
$64.60
$63.80
$63.60
$70.47
$96.34
$73.03
$85.85
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024

AVERAGE YEARLY POWER PRICES

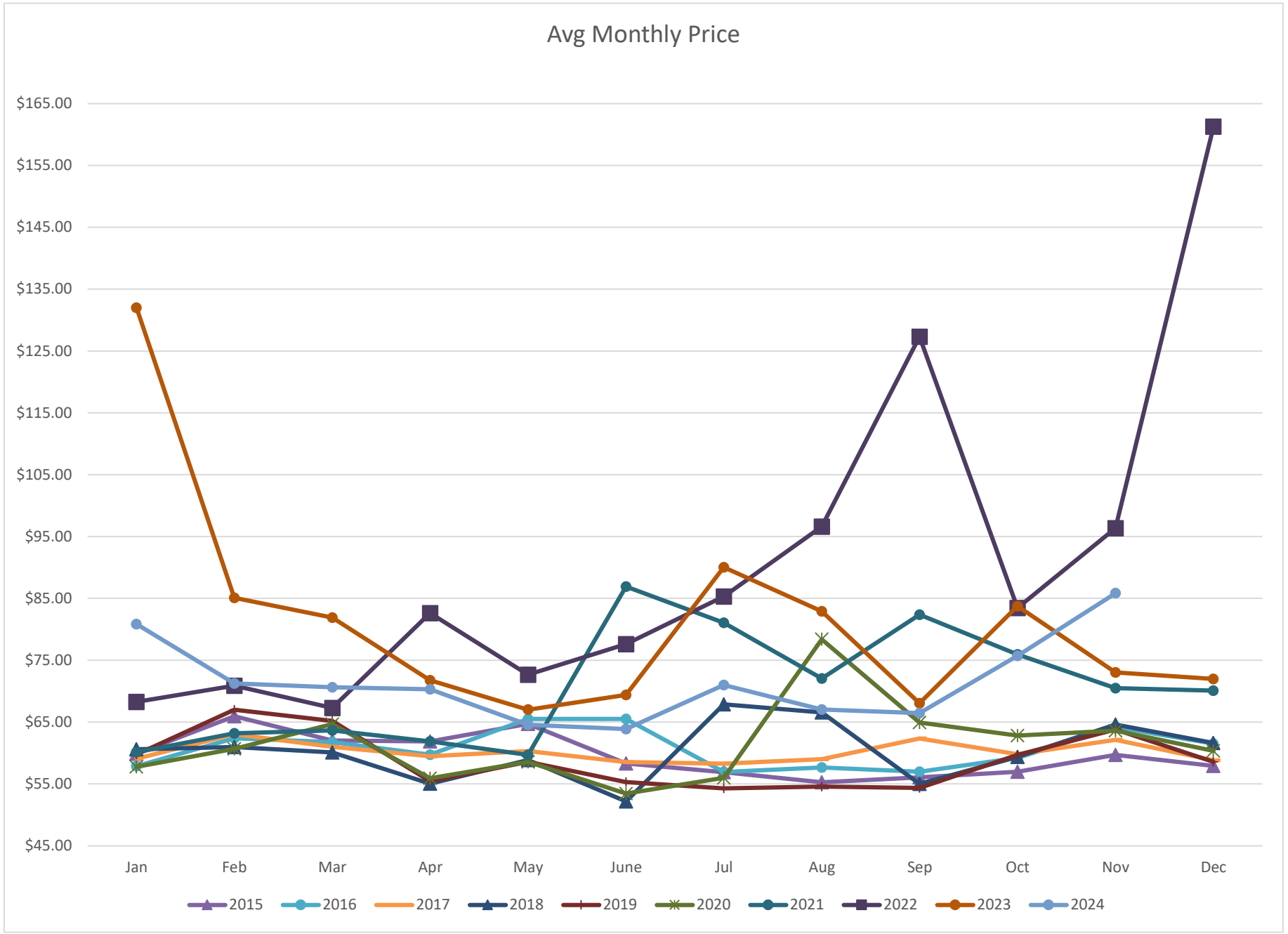
24-25 bdgt amount (thru Oct 2024) **$69.51**

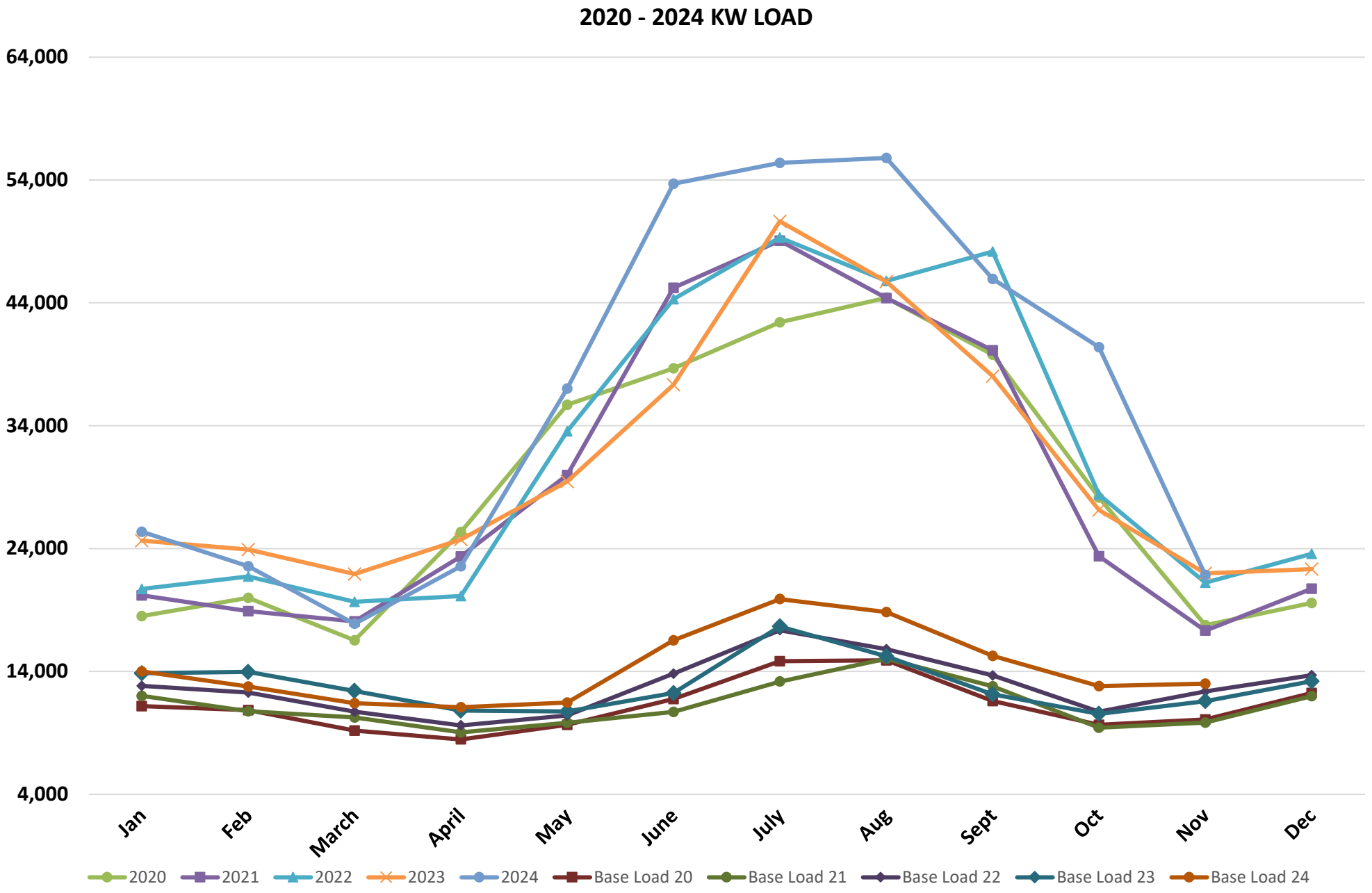
BDGT Year to Date **$71.77**

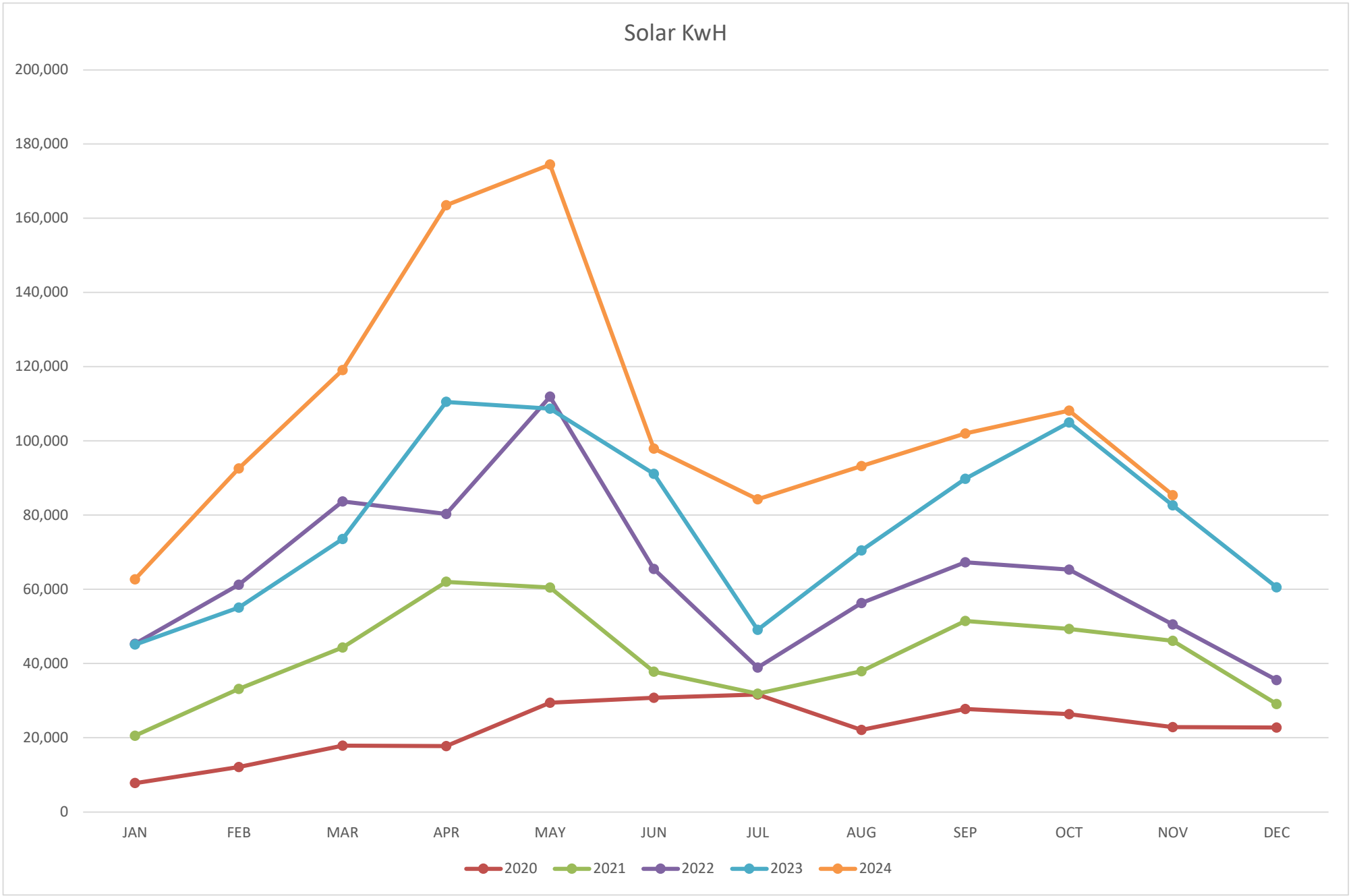
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Jan	$59.86	$57.87	$59.07	$60.62	$59.75	$57.76	$60.14	$68.25	$132.00	$80.85
Feb	$65.94	$62.38	$63.04	$60.96	$67.00	$60.67	$63.19	$70.88	$85.08	$71.23
Mar	$62.03	$61.77	$60.99	$60.09	$65.17	$64.67	$63.64	$67.28	$81.89	$70.62
Apr	$61.88	$59.71	$59.49	$55.02	$55.44	$55.92	$61.86	$82.63	$71.74	$70.32
May	$64.71	$65.51	$60.32	$58.86	$58.55	$58.55	$59.69	$72.66	$67.01	$64.54
June	$58.30	$65.51	$58.54	$52.17	$55.30	$53.44	$86.91	$77.60	$69.40	$63.88
Jul	$56.91	$56.95	$58.29	$67.87	$54.29	$55.98	$81.04	$85.31	$90.02	$70.98
Aug	$55.27	$57.67	$59.00	$66.55	$54.58	$78.40	$72.03	$96.60	$82.90	$67.05
Sep	$56.06	$56.97	$62.36	$55.00	$54.34	$64.93	$82.38	$127.29	$68.06	$66.46
Oct	$56.97	$59.23	$59.79	$59.36	$59.70	$62.82	$75.92	$83.45	$83.76	$75.70
Nov	$59.68	$64.18	$62.14	$64.60	$63.80	$63.60	$70.47	$96.34	$73.03	$85.85
Dec	$57.90	$61.51	$58.80	$61.61	$58.55	$60.33	$70.07	$161.27	$71.99	
Yr Avg	$59.63	$60.64	$60.15	$60.23	$58.87	$61.42	$70.61	$90.80	$81.41	$71.59
Weighted Avg	$58.99	$59.55	$59.90	$60.56	$58.11	$61.98	$72.46	$92.09	$81.92	$70.70

Cy to Date

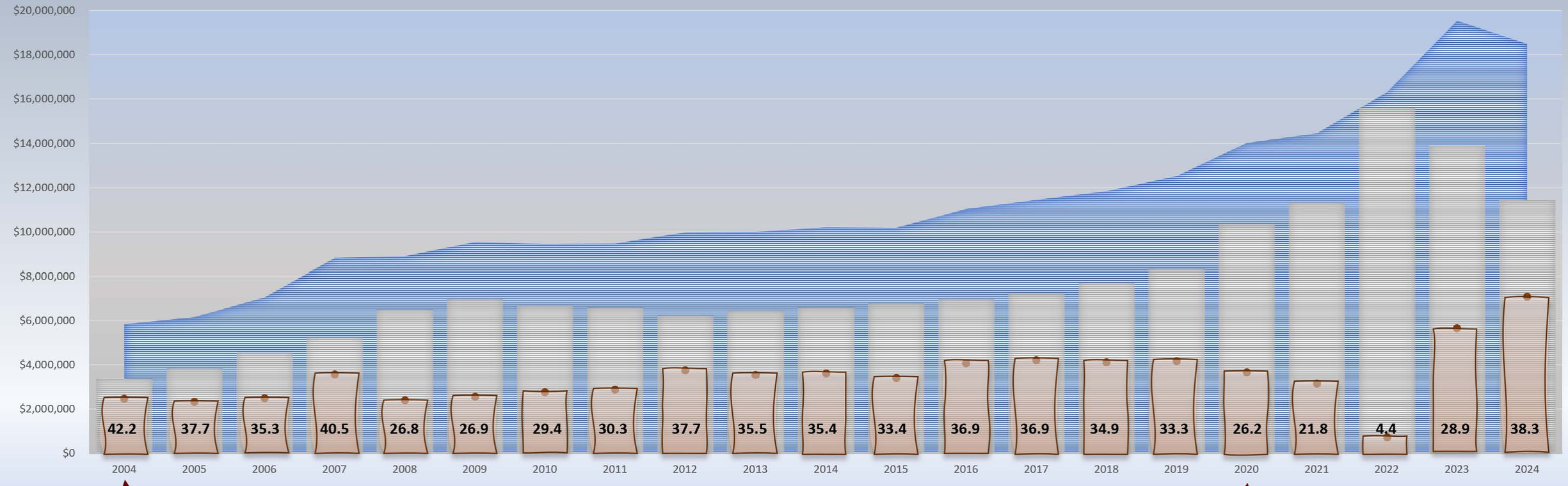
These figures capture the total cost of power to the power department. The power department uses costs only associated with the purchasing and generation of power and includes debt payments and interest associated with power resources.


Avg Monthly Price
$165.00
$155.00
$145.00
$135.00
$125.00
$115.00
$105.00
$95.00
$85.00
$75.00
$65.00
$55.00
$45.00
Jan
Feb
Mar
Apr
May
June
Jul
Aug
Sep
Oct
Nov
Dec
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024


2020 - 2024 KW LOAD
64,000
54,000
44,000
34,000
24,000
14,000
4,000
Jan
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
2020
2021
2022
2023
2024
Base Load 20
Base Load 21
Base Load 22
Base Load 23
Base Load 24

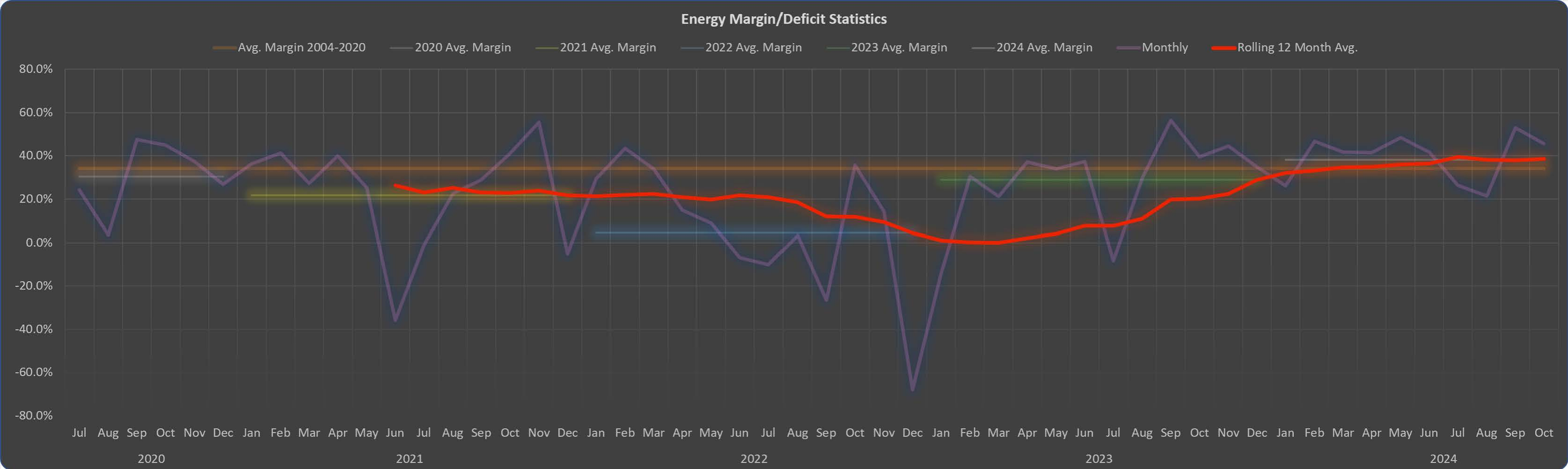

Solar KwH
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
2020
2021
2022
2023
2024

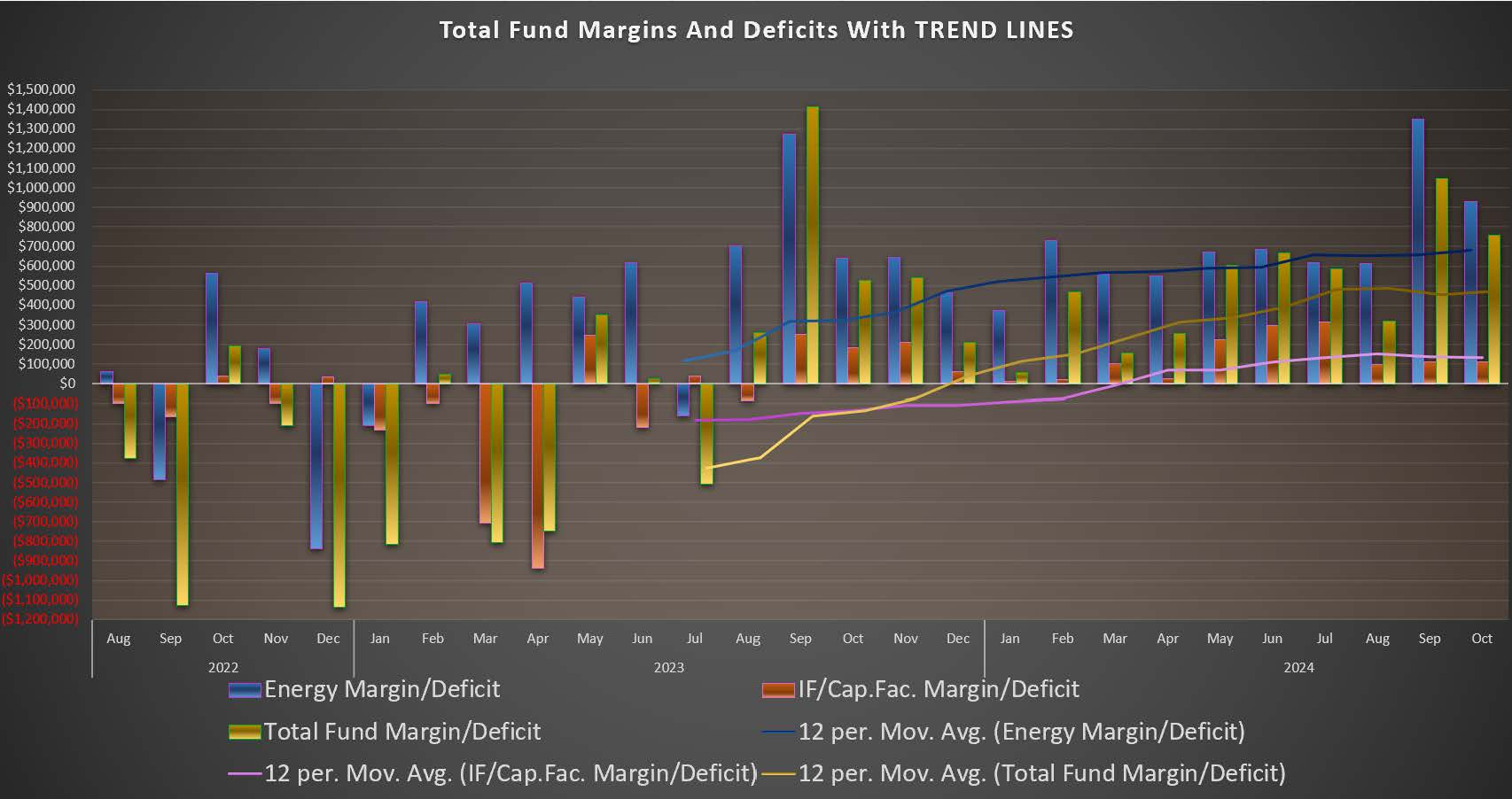
ENERGY REVENUE MARGINS AND DEFICITS BY YEARS

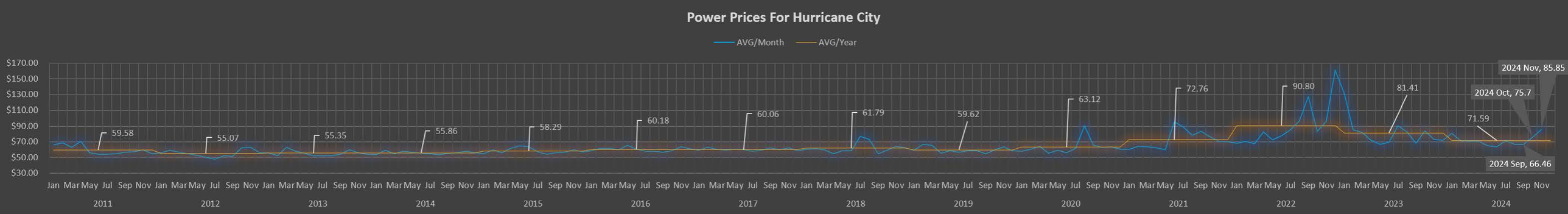


Average Energy Margin 2004 Thru 2020 = **34.1%**

Energy Revenue Cost of Sales • Energy Margin/Deficit $


Energy Margin/Deficit Statistics
Avg. Margin 2004-2020
2020 Avg. Margin
2021 Avg. Margin
2022 Avg. Margin
2023 Avg. Margin
2024 Avg. Margin
Monthly
Rolling 12 Month Avg.
80.0%
60.0%
40.0%
20.0%
0.0%
-20.0%
-40.0%
-60.0%
-80.0%
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct
2020
2021
2022
2023
2024


Total Fund Margins And Deficits With TREND LINES
$1,500,000
$1,400,000
$1,300,000
$1,200,000
$1,100,000
$1,000,000
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
($100,000)
($200,000)
($300,000)
($400,000)
($500,000)
($600,000)
($700,000)
($800,000)
($900,000)
($1,000,000)
($1,100,000)
($1,200,000)
Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct
2022
2023
2024
Energy Margin/Deficit
IF/Cap.Fac. Margin/Deficit
Total Fund Margin/Deficit
12 per. Mov. Avg. (Energy Margin/Deficit)
12 per. Mov. Avg. (IF/Cap.Fac. Margin/Deficit)
12 per. Mov. Avg. (Total Fund Margin/Deficit)


Power Prices For Hurricane City
AVG/Month
AVG/Year
$170.00
$150.00
$130.00
$110.00
$90.00
$70.00
$50.00
$30.00
59.58
55.07
55.35
55.86
58.29
60.18
60.06
61.79
59.62
63.12
72.76
90.80
81.41
71.59
2024 Nov, 85.85
2024 Oct, 75.7
2024 Sep, 66.46
Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024

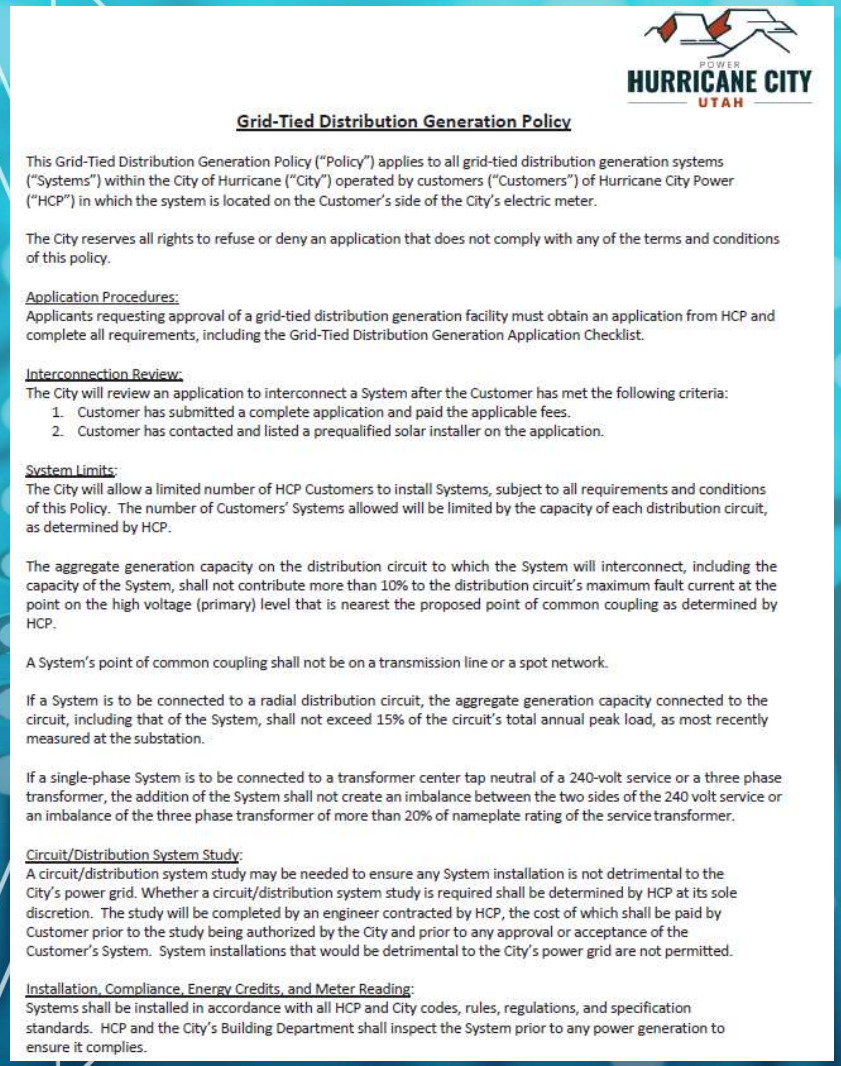
STAFF COMMENTS

Staff and the Power Board approved the “Ineligible Properties” paragraph that exists in the current Solar Policy in February 2023. This change was highlighted during a discussion in the January 2023 Power Board meeting regarding a major issue that had come up with a property owner of one side of a multi-unit building that had attempted to obtain solar. They started installing equipment and ran into problems with access through the roof and attaching to the meter which was located on their adjoining neighbor’s side of the multi-unit building. We discussed multi-resident housing buildings that are increasing in number in Hurricane. Buildings as large as the apartment complex at The Retreat at Sky Mountain as well as townhome units where a resident doesn’t own the entire building were included. Approval was given by both the Power Board and City Council to disallow multi-unit buildings to be consistent in decision making. We had to create a line we could use to make decisions about eligibility to be as fair as possible and consistent.

Part of the Solar Orientation process for solar sales companies to become prequalified to sell solar in Hurricane City requires them to go through the solar policy with us in person so they are aware of our solar policies, and we highlight the ineligible properties section during that orientation. The orientation slides are included in the packet. The solar company who submitted the Sevy application, Intermountain Wind and Solar, has completed that orientation training with us and was made aware during that orientation that a multi-unit property like the Sevy’s is ineligible. We have followed up with an email notifying them of the issue that has come up with the Sevy application and reminded them of that stipulation within the solar policy and reminding them they are not to sell to multi-unit residences. The solar policy the Sevy’s signed also highlights the ineligibility of their property. Due to the reasons stated above, staff is recommending a denial of the request for a variance.

SOLAR INSTALLATION ORIENTATION

HURRICANE CITY POWER DEPARTMENT



POWER
HURRICANE CITY
UTAH

Grid-Tied Distribution Generation Policy

This Grid-Tied Distribution Generation Policy ("Policy") applies to all grid-tied distribution generation systems ("Systems") within the City of Hurricane ("City") operated by customers ("Customers") of Hurricane City Power ("HCP") in which the system is located on the Customer's side of the City's electric meter.

The City reserves all rights to refuse or deny an application that does not comply with any of the terms and conditions of this policy.

Application Procedures:
Applicants requesting approval of a grid-tied distribution generation facility must obtain an application from HCP and complete all requirements, including the Grid-Tied Distribution Generation Application Checklist.

Interconnection Review:
The City will review an application to interconnect a System after the Customer has met the following criteria:

1. Customer has submitted a complete application and paid the applicable fees.
2. Customer has contacted and listed a prequalified solar installer on the application.

System Limits:
The City will allow a limited number of HCP Customers to install Systems, subject to all requirements and conditions of this Policy. The number of Customers' Systems allowed will be limited by the capacity of each distribution circuit, as determined by HCP.

The aggregate generation capacity on the distribution circuit to which the System will interconnect, including the capacity of the System, shall not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level that is nearest the proposed point of common coupling as determined by HCP.

A System's point of common coupling shall not be on a transmission line or a spot network.

If a System is to be connected to a radial distribution circuit, the aggregate generation capacity connected to the circuit, including that of the System, shall not exceed 15% of the circuit's total annual peak load, as most recently measured at the substation.

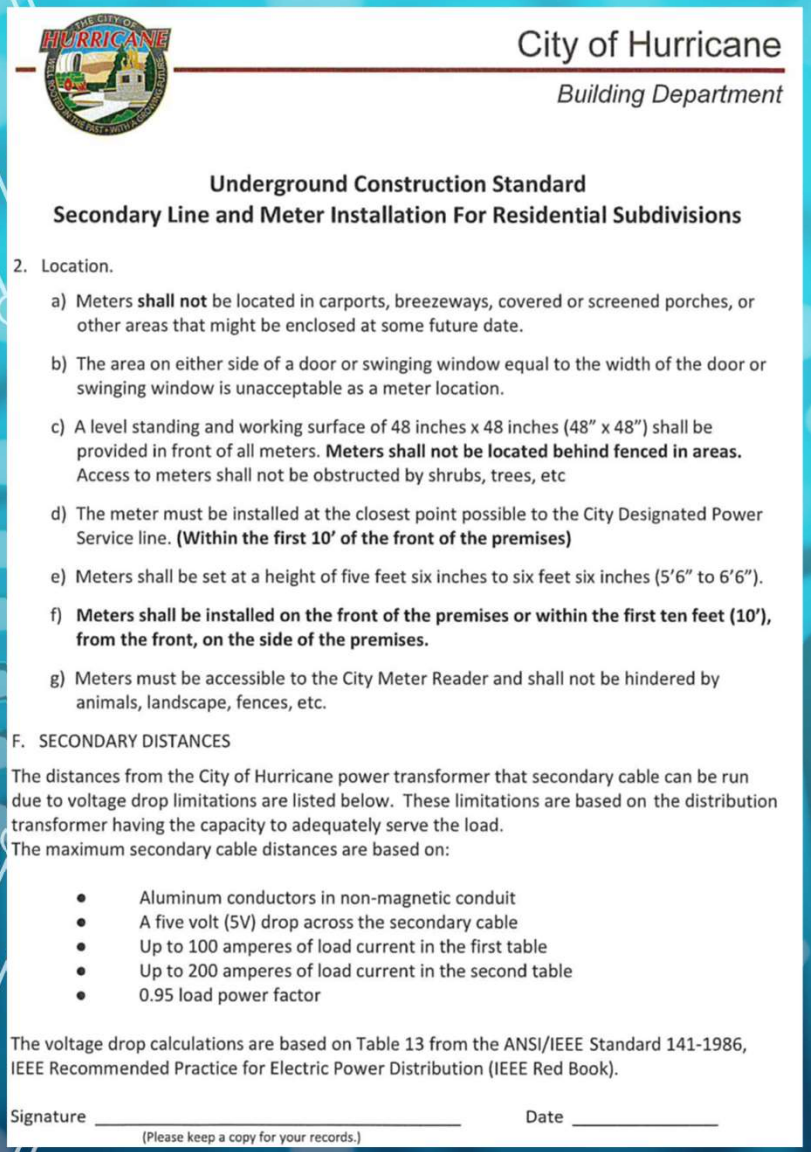
If a single-phase System is to be connected to a transformer center tap neutral of a 240-volt service or a three phase transformer, the addition of the System shall not create an imbalance between the two sides of the 240 volt service or an imbalance of the three phase transformer of more than 20% of nameplate rating of the service transformer.

Circuit/Distribution System Study:
A circuit/distribution system study may be needed to ensure any System installation is not detrimental to the City's power grid. Whether a circuit/distribution system study is required shall be determined by HCP at its sole discretion. The study will be completed by an engineer contracted by HCP, the cost of which shall be paid by Customer prior to the study being authorized by the City and prior to any approval or acceptance of the Customer's System. System installations that would be detrimental to the City's power grid are not permitted.

Installation, Compliance, Energy Credits, and Meter Reading:
Systems shall be installed in accordance with all HCP and City codes, rules, regulations, and specification standards. HCP and the City's Building Department shall inspect the System prior to any power generation to ensure it complies.

POLICY

- Different sizes of systems
- When is a modbus/export limiter required?
  - Proof of export limitation programming required
- Ineligible Properties



City of Hurricane

Building Department

Underground Construction Standard
Secondary Line and Meter Installation For Residential Subdivisions

2. Location.

a) Meters **shall not** be located in carports, breezeways, covered or screened porches, or other areas that might be enclosed at some future date.

b) The area on either side of a door or swinging window equal to the width of the door or swinging window is unacceptable as a meter location.

c) A level standing and working surface of 48 inches x 48 inches (48" x 48") shall be provided in front of all meters. **Meters shall not be located behind fenced in areas.** Access to meters shall not be obstructed by shrubs, trees, etc

d) The meter must be installed at the closest point possible to the City Designated Power Service line. **(Within the first 10' of the front of the premises)**

e) Meters shall be set at a height of five feet six inches to six feet six inches (5'6" to 6'6").

f) **Meters shall be installed on the front of the premises or within the first ten feet (10'), from the front, on the side of the premises.**

g) Meters must be accessible to the City Meter Reader and shall not be hindered by animals, landscape, fences, etc.

F. SECONDARY DISTANCES

The distances from the City of Hurricane power transformer that secondary cable can be run due to voltage drop limitations are listed below. These limitations are based on the distribution transformer having the capacity to adequately serve the load.
The maximum secondary cable distances are based on:

- Aluminum conductors in non-magnetic conduit
- A five volt (5V) drop across the secondary cable
- Up to 100 amperes of load current in the first table
- Up to 200 amperes of load current in the second table
- 0.95 load power factor

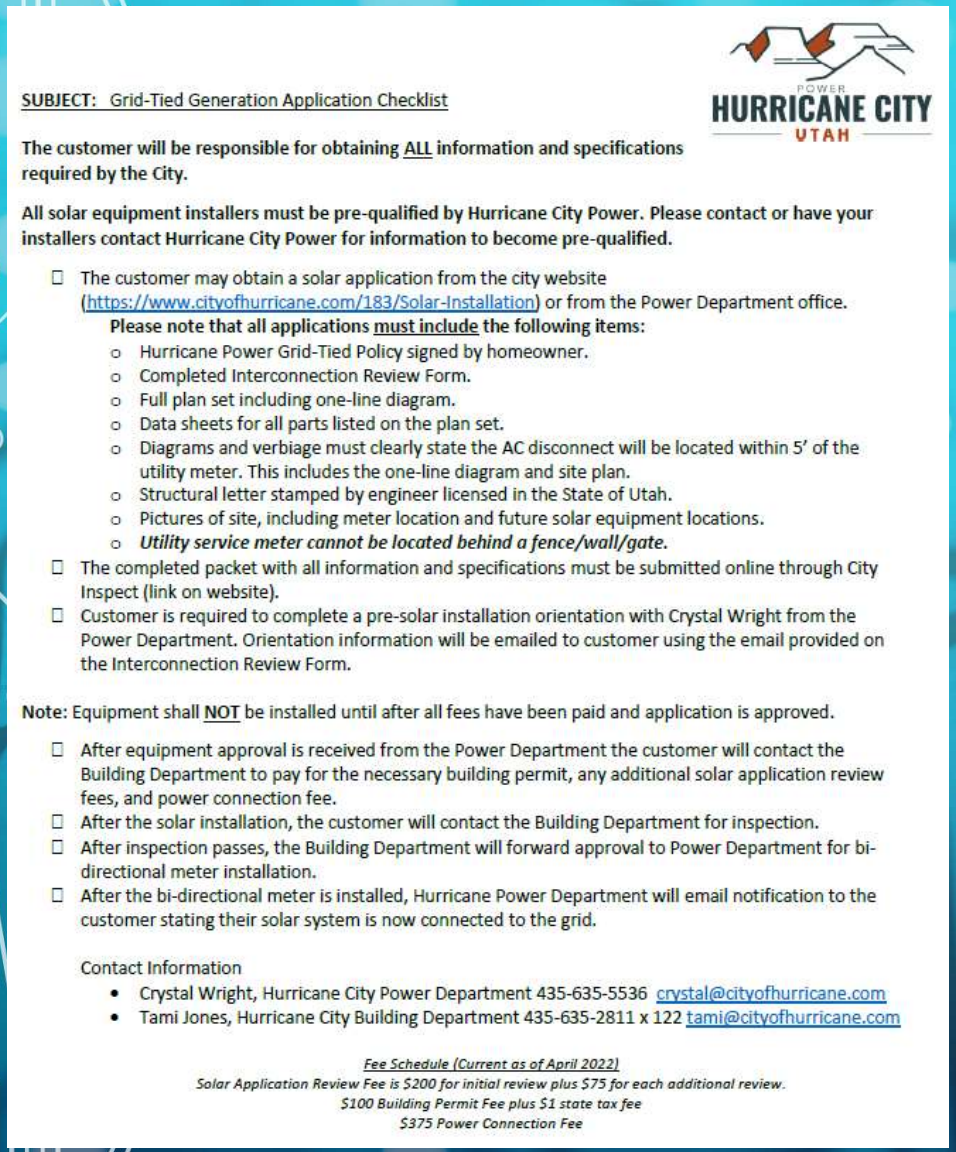
The voltage drop calculations are based on Table 13 from the ANSI/IEEE Standard 141-1986, IEEE Recommended Practice for Electric Power Distribution (IEEE Red Book).

Signature _____ Date _____

(Please keep a copy for your records.)

COMMONLY MISSED ITEMS OR REOCCURRING PROBLEMS

- AC Disconnect MUST be listed on plan set within 5' of meter **AND** installed in that location
- Plan set matches site
- Meter location behind Gate/Fences/Under Carports
  - Hurricane City Code Section 8-4-4.F (Reasonable Access) - https://library.municode.com/ut/hurricane/codes/code_of_ordinances?nodeId=TIT8UT_CH4MUPO_S8-4-4RACHPO
- Meter location not up to current standard



SUBJECT: Grid-Tied Generation Application Checklist

HURRICANE CITY POWER UTAH

The customer will be responsible for obtaining ALL information and specifications required by the City.

All solar equipment installers must be pre-qualified by Hurricane City Power. Please contact or have your installers contact Hurricane City Power for information to become pre-qualified.

- ☐ The customer may obtain a solar application from the city website (https://www.cityofhurricane.com/183/Solar-Installation) or from the Power Department office.
  Please note that all applications must include the following items:
  - Hurricane Power Grid-Tied Policy signed by homeowner.
  - Completed Interconnection Review Form.
  - Full plan set including one-line diagram.
  - Data sheets for all parts listed on the plan set.
  - Diagrams and verbiage must clearly state the AC disconnect will be located within 5' of the utility meter. This includes the one-line diagram and site plan.
  - Structural letter stamped by engineer licensed in the State of Utah.
  - Pictures of site, including meter location and future solar equipment locations.
  - ***Utility service meter cannot be located behind a fence/wall/gate.***
- ☐ The completed packet with all information and specifications must be submitted online through City Inspect (link on website).
- ☐ Customer is required to complete a pre-solar installation orientation with Crystal Wright from the Power Department. Orientation information will be emailed to customer using the email provided on the Interconnection Review Form.

Note: Equipment shall **NOT** be installed until after all fees have been paid and application is approved.

- ☐ After equipment approval is received from the Power Department the customer will contact the Building Department to pay for the necessary building permit, any additional solar application review fees, and power connection fee.
- ☐ After the solar installation, the customer will contact the Building Department for inspection.
- ☐ After inspection passes, the Building Department will forward approval to Power Department for bi-directional meter installation.
- ☐ After the bi-directional meter is installed, Hurricane Power Department will email notification to the customer stating their solar system is now connected to the grid.

Contact Information

- Crystal Wright, Hurricane City Power Department 435-635-5536 crystal@cityofhurricane.com
- Tami Jones, Hurricane City Building Department 435-635-2811 x 122 tami@cityofhurricane.com

Fee Schedule (Current as of April 2022)
Solar Application Review Fee is $200 for initial review plus $75 for each additional review.
$100 Building Permit Fee plus $1 state tax fee
$375 Power Connection Fee

INSTALLATION PROCESS

1. Packet submitted through City Inspect with all necessary items
2. Power Department plan and site review and Customer Orientation
3. Equipment approval email
4. Contact Building Department to pay fees
5. Install approved Solar Equipment
6. Call Building Department for inspection. Once inspection is passed, approval given to Power Department by the Building Department
7. Power Department installs bi-directional meter
8. Permission to Operate letter/email is sent

HELPFUL LINKS

- APPLICATION/INSTALLATION PROCEDURE - HTTPS://WWW.CITYOFHURRICANE.COM/DOCUMENTCENTER/VIEW/231/SOLAR-INSTALLATION-APPLICATION-PROCEDURE
- GRID-TIED POLICY AND STANDARDS & SPECIFICATIONS- HTTPS://WWW.CITYOFHURRICANE.COM/DOCUMENTCENTER/VIEW/1335/SOLAR-POLICY

QUESTIONS OR CONCERNS?

Docusign Envelope ID: A5D4A8F3-09FE-4CEF-B25D-C6ADCF72D6DB

Grid-Tied Distribution Generation Policy

This Grid-Tied Distribution Generation Policy ("Policy") applies to all grid-tied distribution generation systems ("Systems") within the City of Hurricane ("City") operated by customers ("Customers") of Hurricane City Power ("HCP") in which the system is located on the Customer's side of the City's electric meter.

The City reserves all rights to refuse or deny an application that does not comply with any of the terms and conditions of this policy.

Application Procedures:
Applicants requesting approval of a grid-tied distribution generation facility must obtain an application from HCP and complete all requirements, including the Grid-Tied Distribution Generation Application Checklist.

Interconnection Review:
The City will review an application to interconnect a System after the Customer has met the following criteria:

1. Customer has submitted a complete application and paid the applicable fees.
2. Customer has contacted and listed a prequalified solar installer on the application.

System Limits:
The City will allow a limited number of HCP Customers to install Systems, subject to all requirements and conditions of this Policy. The number of Customers' Systems allowed will be limited by the capacity of each distribution circuit, as determined by HCP.

The aggregate generation capacity on the distribution circuit to which the System will interconnect, including the capacity of the System, shall not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level that is nearest the proposed point of common coupling as determined by HCP.

A System's point of common coupling shall not be on a transmission line or a spot network.

If a System is to be connected to a radial distribution circuit, the aggregate generation capacity connected to the circuit, including that of the System, shall not exceed 15% of the circuit's total annual peak load, as most recently measured at the substation.

If a single-phase System is to be connected to a transformer center tap neutral of a 240-volt service or a three phase transformer, the addition of the System shall not create an imbalance between the two sides of the 240 volt service or an imbalance of the three phase transformer of more than 20% of nameplate rating of the service transformer.

Circuit/Distribution System Study:
A circuit/distribution system study may be needed to ensure any System installation is not detrimental to the City's power grid. Whether a circuit/distribution system study is required shall be determined by HCP at its sole discretion. The study will be completed by an engineer contracted by HCP, the cost of which shall be paid by Customer prior to the study being authorized by the City and prior to any approval or acceptance of the Customer's System. System installations that would be detrimental to the City's power grid are not permitted.

Installation, Compliance, Energy Credits, and Meter Reading:
Systems shall be installed in accordance with all HCP and City codes, rules, regulations, and specification standards. HCP and the City's Building Department shall inspect the System prior to any power generation to ensure it complies.

Docusign Envelope ID: A5D4A8F3-09FE-4CEF-B25D-C6ADCF72D6DB

The City will be the owner of the renewable attributes also known as Renewable Energy Credits (REC) of the electricity that are generated on or after the Customer-generating facility is installed and working.

HCP shall replace its normal metering equipment with bi-directional metering equipment on the meter base at the cost of the Customer. The bi-directional meter will measure energy that flows from the City's power grid to the Customer as well as the energy that flows from the Customer to the City's power grid. HCP will read the Customer's meter on the City's normal meter reading schedule.

HCP will apply a credit to the Customer's monthly bill for energy the customer delivers to the City's power grid during that billing cycle. The rate at which HCP will credit the energy delivered by the Customer is $.04/kWh. *See* HCP Rate Schedule. This rate schedule may be eliminated or adjusted at any time by the Hurricane City Council. Credits accrued each month are not eligible to be applied to the electric base rate or any other utility/City rates or fees. Monthly credits may only be applied to electric kWh usage. Credits may roll over month to month until July 1 of each year, at this time all credits will be reset to zero.

Meters must be accessible to HCP and the City Meter Reader and shall not be hindered by animals, landscape, fences, or other obstacles or potential obstacles. HCP may, at its discretion, regularly inspect the System and shall be given unlimited access by the Customer to all Customer-owned generation and metering equipment.

Ground-Mounted Solar Arrays:
Ground-mounted solar arrays on residential lots shall be located behind the front setback line or behind the front plane of the home, whichever is furthest from the fronting public roadway.

The solar array shall not infringe on any easement or sight distance requirements and shall not violate any City Ordinance. Customers are responsible to ensure that the System is in compliance with any subdivision CC&R's or similar deed restrictions or covenants.

Maximum height for a solar array, measured from ground level to the highest point on the array, shall not exceed fifteen (15) feet.

Solar arrays shall be limited as set forth below in Chart A in the paragraph labeled "System Size Limitations – Base Rates".

The following size limits shall also apply:

Lot Size:	**Maximum array surface area:**
Less than 1 acre	200 square feet
1 - 2.5acres	400 square feet
Greater than 2.5 acres	1200 square feet

Solar arrays shall be located to maximize unobstructed line of sight.

System Size* Limitations - Base Rates:
The City limits Systems and charges base rates for Grid-Tied Distribution Generation as described in the following chart:

Docusign Envelope ID: A5D4A8F3-09FE-4CEF-B25D-C6ADCF72D6DB

Chart A

System Type	Photovoltaic (PV) System Size*	Maximum Power Export Setting	Export Credit Rate	Monthly Base Rate
1 Phase System				
1P BASIC System	Up to 8.1 kW DC / 6 kW AC	6 kW AC	$.04/kWh	$30
1P LARGE System	Up to 16 kW DC / 12 kW AC	6 kW AC	$.04/kWh	$40
3 Phase System				
3P BASIC System (400A and below)	Up to 16 kW DC / 12 kW AC	12 kW AC	$.04kwh	$90
3P LARGE System (Over 400A)	Determined by Study	Determined by Study	**PPA	**PPA

*"System Size" is defined as the largest nameplate rating of any of the components, total panel array, total micro-inverter array, export limiter, or inverter.
**"PPA" is defined as Power Purchase Agreement.

1P Systems capable of more than 16 KW DC /12 KW of AC output with a 6 KW AC limiter will be considered by HCP staff on a case-by-case basis. If approved, a monthly incremental base rate increase will replace the 1P BASIC System base rate.

3P Systems will be required to conduct a study by an electrical engineer chosen by HCP for the connected circuit. The designs will be reviewed and approved by said electrical engineer. All costs will be at the expense of the applicant. 3 Phase systems under 400A (3P BASIC) means the main service size to the building is 400 amps or less. 3 Phase system over 400A (3P LARGE) means the main service size to the building is 400 amps or larger and is CT metered.

Export rates, base rates, and fees are subject to change upon approval of Hurricane City Council at any given time.

Ineligible Properties:
Properties with meters located in back yards are not eligible for a grid-tied System. Properties consisting of multi-unit buildings are not eligible for a grid-tied System.

Standards:
The following standards apply to all Systems:
(a) IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, as amended and supplemented, which is incorporated by reference herein. IEE Standard 1547 can be obtained through the IEE website at www.ieee.org; ***and***
(b) UL 1741, Inverters, Converters, and Controllers for use in Independent Power Systems (January 2001), as amended and supplemented, which is incorporated
by reference herein. UL Standards can be obtained through the Underwriters Laboratories website at www.ul.com.

Certification of customer-generator facilities:
Equipment packages shall be certified for interconnected operation. An equipment package shall be considered certified for interconnected operation if it has been submitted by a manufacturer to a nationally recognized testing and certification laboratory and has been tested and listed by the laboratory for continuous interactive operation with an electric distribution system in compliance with the applicable codes and standards as set forth in IEEE 1547, listed above.

Docusign Envelope ID: A5D4A8F3-09FE-4CEF-B25D-C6ADCF72D6DB

System Operation and Responsibility:
Systems shall be installed, operated, and maintained by the Customer at the Customer's sole expense. The Customer will be responsible for an application review fee for each review and a one-time cost of the bi-directional meter in amounts established by HCP. HCP will install the meter onto the Customer's meter base and read and maintain the meter consistent with Hurricane City's Standard Operating Procedure at the City's expense.

Neither the City nor HCP shall be liable for, and Customer shall indemnify and defend the City and HCP, for all damages, claims, liabilities, losses, injuries, or deaths resulting from or relating to (1) the City permitting or continuing to allow an attachment of a grid-tied System to the City's power grid; (2) the Customer's System; (3) the Customer's generation of power; and (4) the acts or omissions of the Customer in generating power.

Customer and City Requirements
(a) Once a metering interconnection has been approved, the City will not require a Customer to test or perform maintenance on its facility except for the following:

1. An annual test in which the Customer-Generating Facility is disconnected from the City's distribution equipment to ensure that the inverter stops delivering power to the grid.
2. Any manufacturer-recommended testing or maintenance.
3. Any post-installation testing necessary to ensure compliance with IEEE 1547 or to ensure safety.
4. Documentation is required for testing done yearly and needs to be submitted to the City.

(b) The City shall have the right to inspect a Customer-Generating Facility after interconnection approval is granted, at reasonable hours and with reasonable prior notice to the Customer. If the City discovers that the Customer-Generating Facility is not in compliance with the requirements of this subchapter, and the noncompliance adversely affects the safety or reliability of the electric distribution system, the City may require the Customer to disconnect the Customer-Generating Facility until compliance is achieved.

(c) The City shall have the right to disconnect the Customer-Generating Facility in the event it causes system problems. The Customer will have the option to correct the problem, at which time the system will be re-inspected before beginning operation again.

(d) The Customer shall be required to install a manual disconnect located within five feet of the meter.

Signature verifying acceptance of above terms required before start of project:

Customer Signed by: Clark Seay 59E401EC6C84470... Date 11/7/2024

UTAH ASSOCIATED MUNICIPAL POWER SYSTEMS

December 2024

Project Meeting Overview Report

CARBON FREE POWER PROJECT (CFPP)

1. **Philo Shelton was elected Project Chair.**
2. Discussed in Executive Session:
    a. Project wind down status, timeline and DOE engagement.

CENTRAL-ST. GEORGE PROJECT

1. **Gary Hall was re-elected Project Chair.**
2. **Approved the Washington County 69kV-138kV Transformer upgrade Plan #3, as discussed.**
3. Discussed the Operations Report including substation reports for the month of November.

COLORADO RIVER STORAGE PROJECT (CRSP)

1. **Darren Hess was elected Project Chair.**
2. Discussed the Operations Report including output for each resource for the month of November.

CRAIG MONA PROJECT

1. **Cory Daniels was re-elected Project Chair.**
2. Discussed the Operations Report including production line usage for the month of November.

FIRM POWER SUPPLY PROJECT

1. **Mark Montgomery was elected Project Chair.**
2. Discussed the Operations Report including output and scheduling from each resource for the month of November.

GOVERNMENT AND PUBLIC AFFAIRS PROJECT (GPA)

1. **Les Williams was elected Project Chair.**
2. Discussed Federal & State Legislation including Executive Branch and Congressional Updates:
    a. The White House including EPA, Interior and DOE.
    b. The Senate including EPA, Interior and DOE.
    c. The House including voting, new House members and committee assignments.
    d. State matters including Operation Gigawatt, legislature and lobbyists.
    e. 2025 General Session and the topics of focus including energy-related issues.
3. **Legislative Reception at the Utah State Capitol is scheduled for February 20, 2024.**
4. **Reminder to RSVP for the 2024 APPA Legislative Rally.**

HORSE BUTTE PROJECT (HBW)

1. **Bruce Rigby was elected Project Chair.**
2. Discussed plant operations including generator repair and site mowing activity.
3. Discussed software upgrade including current status and next steps.
4. Discussed the Operations Report including production output for the month of November.

HUNTER PROJECT

1. **Jason Norlen was elected Project Chair.**
2. Discussed the Operations Report including plant scheduled output for the month of November.

INTERMOUNTAIN POWER PROJECT (IPP)

1. **Nick Tatton was re-elected Project Chair.**
2. Discussed IPP Callback including current status, timeline, project updates, IPP UAMPS forecast and IPP compared to market.
3. Discussed a plant update including plant visits, investigating connecting to the switch yard and coal usage planning.
4. Discussed the Operations Report including scheduled output for the month of November.

MEMBER SERVICES PROJECT

1. **Josey Parsons was re-elected Project Chair.**
2. Discussed AMI including current status and next steps.

MILLARD COUNTY PROJECT

1. **Joel Eves was elected Project Chair.**
2. **Approved a resolution relating to the Millard County Power Project; declaring the Effective Date and finalizing the terms of the Power Sales Contracts; authorizing UAMPS to proceed with the development of the Project under the direction of the Project Management Committee; and related matters with the discussed changes.**
3. Discussed in Executive Session:
    a. Project update including development parameters, land options and next steps.
    b. Development milestones and timeline.

NATURAL GAS PROJECT

1. **Jason Norlen was elected Project Chair.**
2. Discussed the Operations Report including the MMBtu scheduled for the month of November.

NEBO PROJECT

1. **Shawn Black was re-elected Project Chair.**
2. Discussed plant operation including November statistics, operational item highlights, plant maintenance/safety highlights, outage follow-up items and plant water update.
3. Discussed the Operations Report for the month of November including Nebo energy breakdown and Nebo sales margins.

POOL PROJECT

1. **Jeremy Franklin was re-elected Project Chair.**
2. Discussed in Executive Session:
    a. Scheduling coordinator including investigating options, criteria details, overall scoring and UAMPS recommendations.
3. **Approved moving forward with negotiation agreement for Scheduling Coordinator services, as recommended and discussed.**
4. Discussed the PX & Scheduling Report including UAMPS yearly peak, energy and member internal generation.
5. Discussed the Forecast Load and Resources.
6. Discussed Mercuria Swap & RECs including optimizing PCC2 REC sales, value optimization and next steps.
7. Discussed the Operations Report for the month of November including load peak and energy.

RESOUCE PROJECT

1. **Allen Johnson was re-elected Project Chair.**
2. **Approved the formation of the Millard County Natural Gas Project as a standalone project and moved it out from under the umbrella of the Resource Project.**
3. Discussed in Executive Session:
    a. Horse Butte 2 Study Project including current status, budget and next steps.
    b. Rodatherm & Cove Fort 2 Study Project including current status, timeline and next steps.
    c. Uinta Wind Study Project including term sheet update and next steps.

d. Power County Natural Gas including current status and next steps.

4. **Approved Horse Butte 2 Study Project & Budget Amendment #12 of $110,000, as presented.**
5. **Approved Uinta Wind Study Project Term Sheet as presented and discussed.**

SAN JUAN PROJECT

1. **Isaac Jones was re-elected Project Chair.**

VEYO HEAT RECOVERY PROJECT

1. **Kent Kummer was elected Project Chair**
2. Discussed past and future project REC sales including REC comparisons,
3. **Approved selling all RECs produced by the Veyo Project in 2024 at the best available price and move the sale of 2025 RECs to budget discussions.**
4. Discussed the 2024 plant outage projects and future planned maintenance.
5. Discussed the Operations Report including scheduling Veyo for the month of November with peak output and tripped/restricted hours.

ANNUAL MEMBER MEETING

1. **Elected Project Directors.**

BOARD OF DIRECTORS MEETING

1. **Elected UAMPS Officers:**
   a. Rick Hansen was elected Chair.
   b. Shane Ward was elected Vice Chair.
   c. Greg Bellon was elected Secretary.
   d. Shawn Black was elected Treasurer.
2. Discussed the Operations Report:
   a. Natural Gas including regional storage and gas consumption for electricity generation.

b. Seasonal outlook including December forecast and 2025 Q1 forecast.

c. Industry news including EDAM filing, Western Market development and WECC 2024 assessment of Resource Adequacy Report.

d. Transmission update including challenges building new transmission, the approval process, and other state and federal transmission related policies and initiatives.

3. Discussed the Budget Committee including members and the upcoming meeting schedule.
4. **Approved resolution relating to the Millard County Power Project; declaring the Effective Date and finalizing the terms of the Power Sales Contracts; authorizing UAMPS to proceed with the development of the Project under the direction of the Project Management Committee; and related matters.**
5. Discussed in Executive Session:
    a. Compensation Survey
    b. CEO Contract Negotiations
6. **Approved the Compensation Survey.**
7. Approved all action items for the Project Meetings.

Forecast

(2025 & 2027)

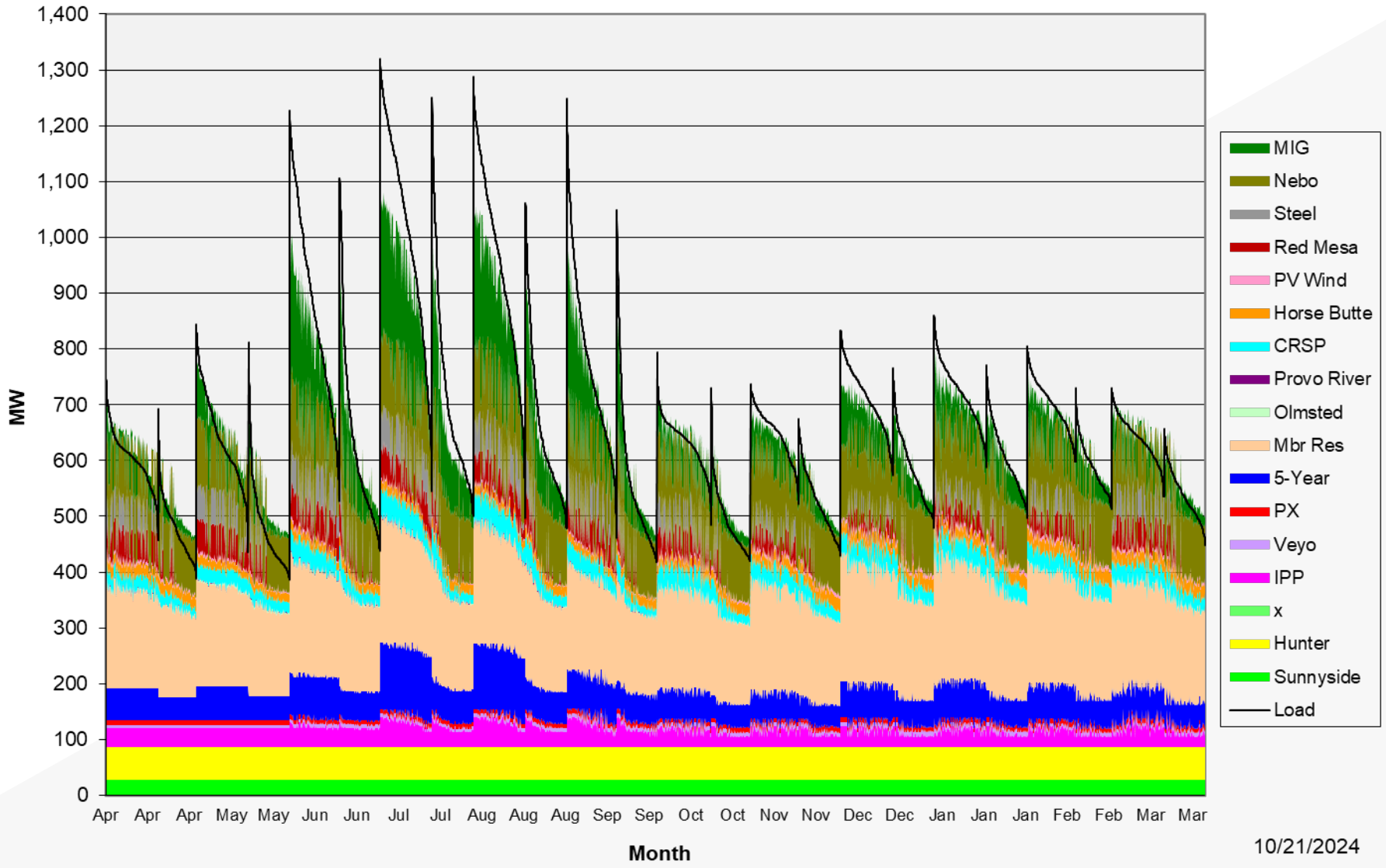


Pool Project

UAMPS SMARTENERGY

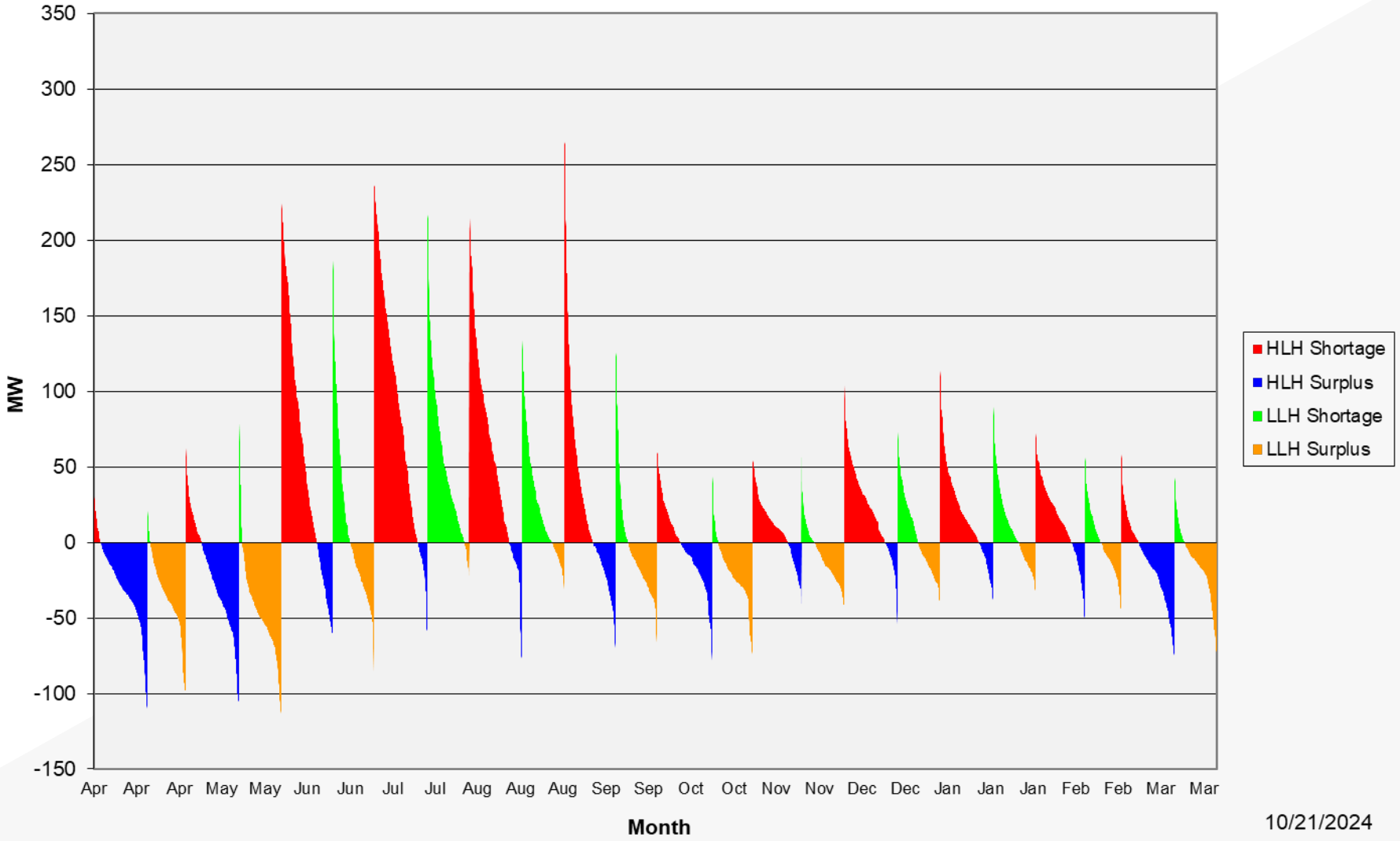
Kelton Andersen

UAMPS Total Forecasted Load and Resources, April 2025 - March 2026



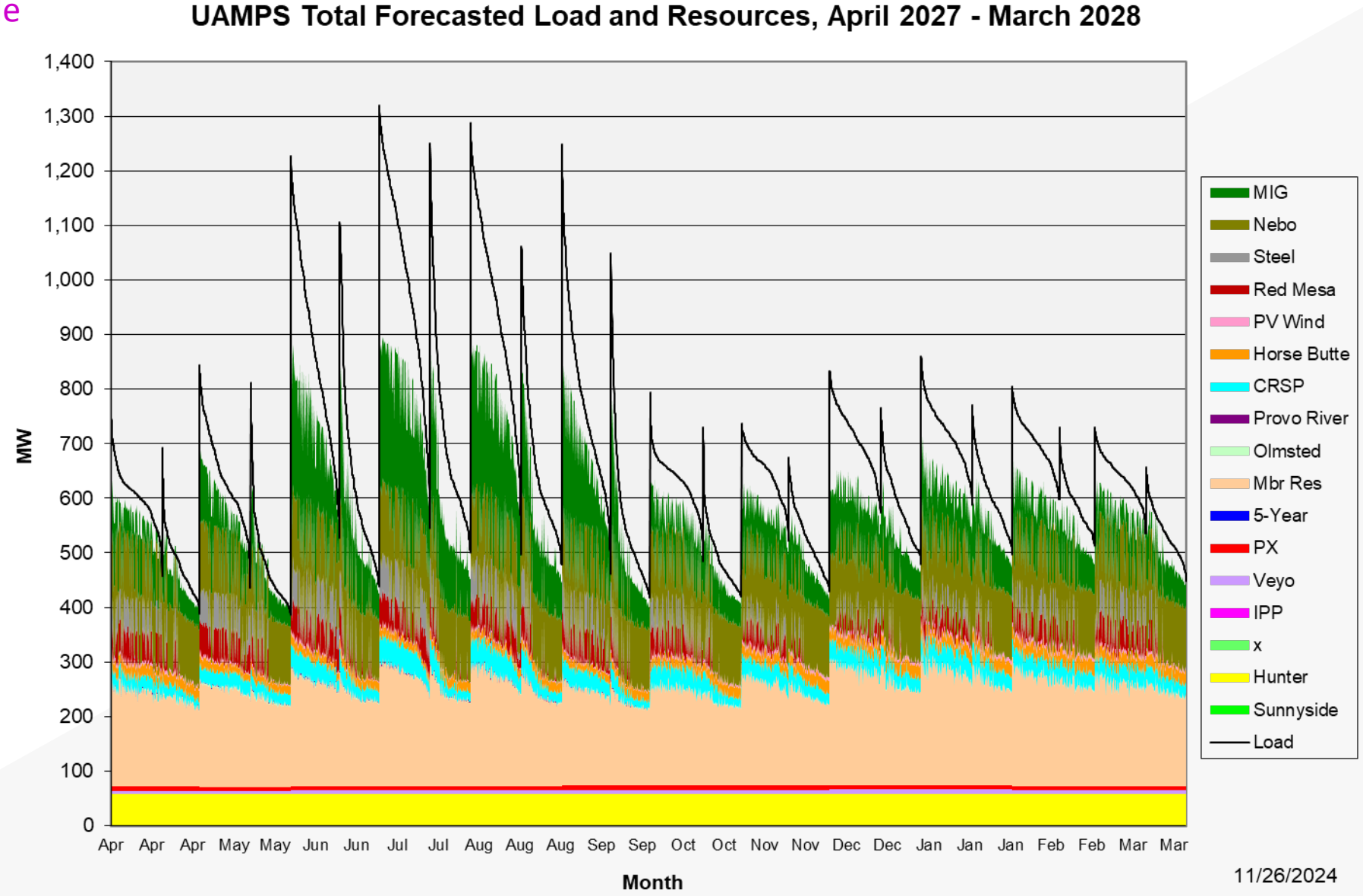
10/21/2024

UAMPS Total Forecasted Load Compared to Resources, April 2025 - March 2026



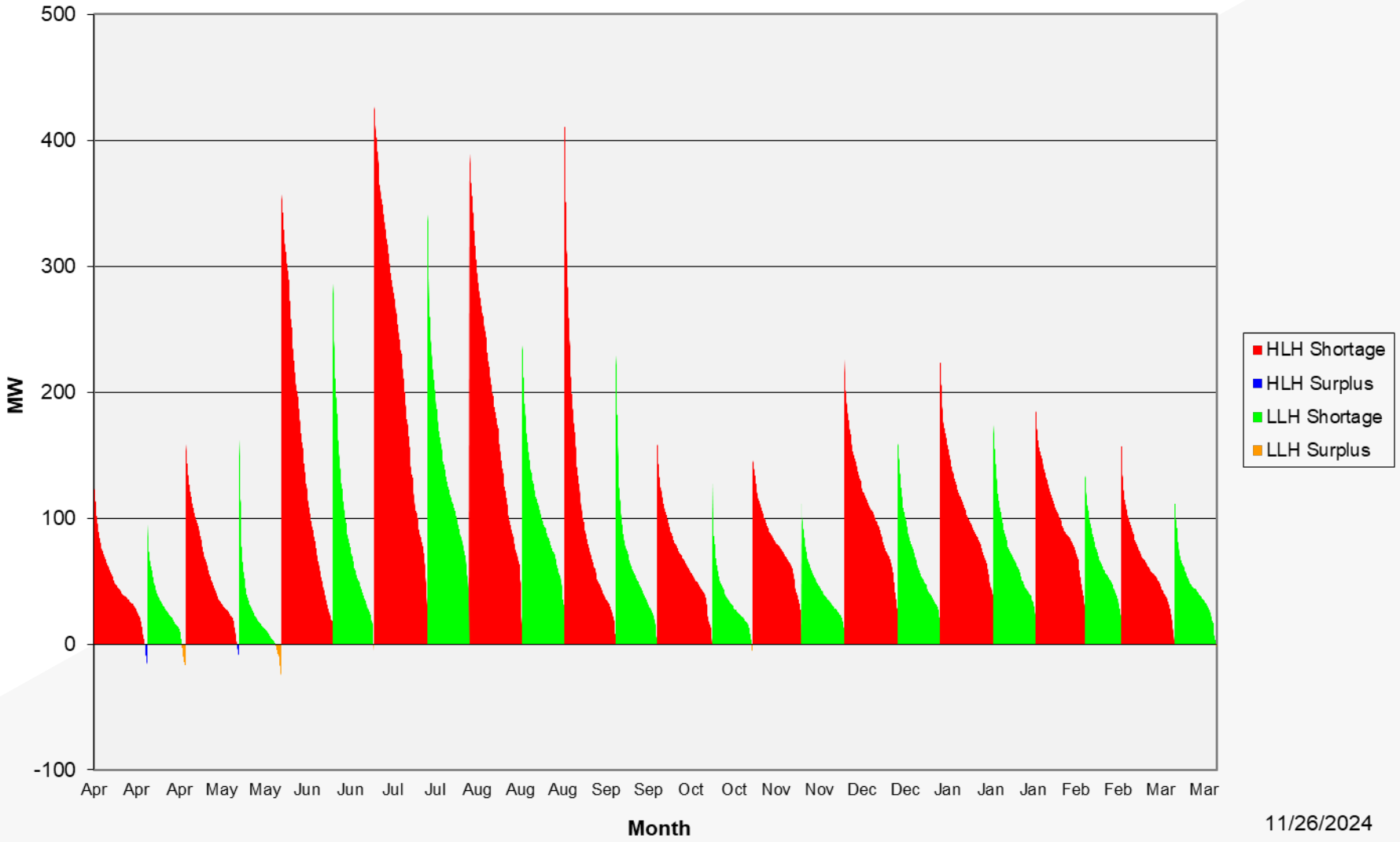
10/21/2024

- No Load Growth from 2025-2026 Forecast
- 5-Year Purchase ended
- No IPP included
- No Sunnyside



11/26/2024

- No Load Growth from 2025-2026 Forecast
- 5-Year Purchase ended
- No IPP included
- No Sunnyside



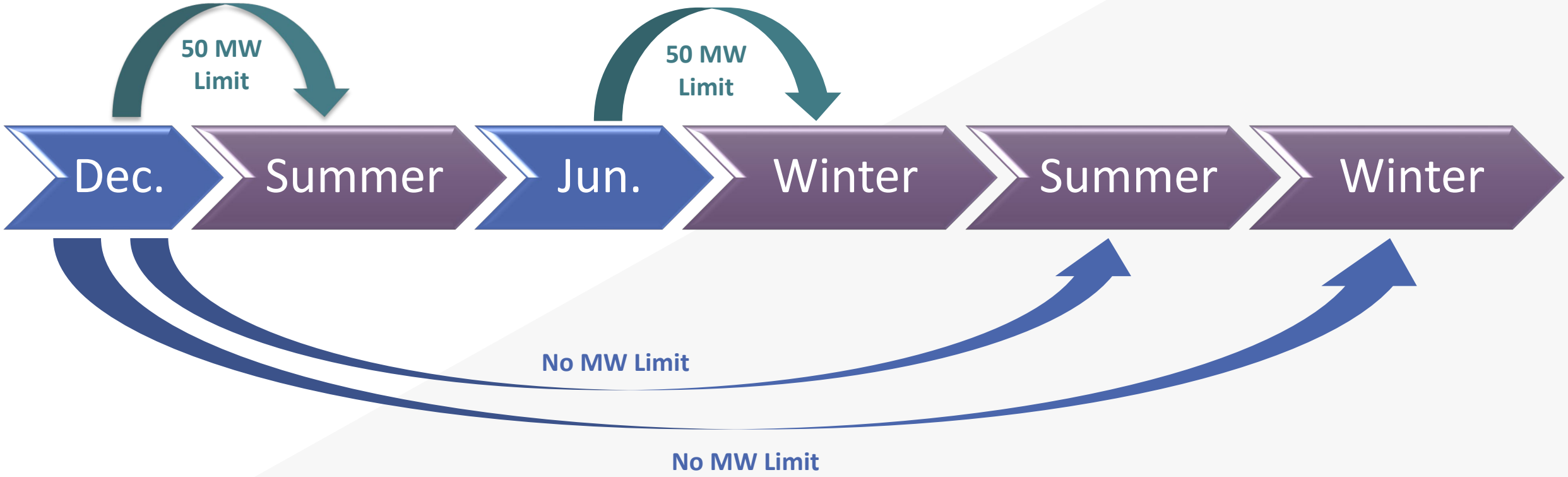
IPP Callback

Intermountain Power Project

Kelton Andersen



IPP Callback Timing *(current contract)*



IPP Callback Summer 2025

- Capacity changes mid-season when coal shuts down and natural gas starts
- Callback requests were made based on Q3, 840 MW capacity

	Capacity:	1,800 MW	840 MW
	Summer 2025	**Apr - Jun**	**Jul - Sep**
	% Share	kW	kW
Participant	Callback	Called Back	Called Back
Beaver	0.116%	**2,088**	**974**
Bountiful	0.952%	**17,136**	**7,997**
Enterprise	0.056%	**1,008**	**470**
Ephraim	0.119%	**2,142**	**1,000**
Fairview	0.084%	**1,512**	**706**
Fillmore	0.143%	**2,574**	**1,201**
Heber	0.627%	**11,286**	**5,267**
Holden	0.000%	**0**	**0**
Hurricane	0.147%	**2,646**	**1,235**
Hyrum	0.315%	**5,670**	**2,646**
Kanosh	0.011%	**198**	**92**
Kaysville	0.208%	**3,744**	**1,747**
Lehi	0.430%	**7,740**	**3,612**
Logan	1.429%	**25,722**	**12,004**
Meadow	0.008%	**144**	**67**
Monroe	0.107%	**1,926**	**899**
Morgan	0.179%	**3,222**	**1,504**
Mt. Pleasant	0.101%	**1,818**	**848**
Murray	1.130%	**20,340**	**9,492**
Oak City	0.011%	**198**	**92**
Parowan	0.101%	**1,818**	**848**
Price	0.143%	**2,574**	**1,201**
Spring City	0.017%	**306**	**143**
UAMPS Total	6.434%	**115,812**	**54,046**
Coop Total	0.944%	16,992	7,930
Grand Total	7.378%	132,804	61,975

IPP Callback 50 MW Limit

Participant	50 MW Based on 840 MW Apr - Jun kW	Jul - Sep kW
Beaver	2,101	**981**
Bountiful	8,625	**4,025**
Enterprise	1,013	**473**
Ephraim	2,559	**1,194**
Fairview	611	**285**
Fillmore	2,605	**1,216**
Heber	3,190	**1,489**
Holden	244	**114**
Hurricane	748	**349**
Hyrum	2,804	**1,308**
Kanosh	204	**95**
Kaysville	3,760	**1,755**
Lehi	2,188	**1,021**
Logan	12,563	**5,863**
Meadow	229	**107**
Monroe	661	**309**
Morgan	967	**451**
Mt. Pleasant	1,816	**848**
Murray	20,353	**9,498**
Oak City	204	**95**
Parowan	1,852	**864**
Price	1,837	**857**
Spring City	305	**142**
UAMPS Total	71,439	**33,338**
Coop Total	35,704	**16,662**
Grand Total	107,143	**50,000**

- The capacity used affects the 50 MW limit
- Believe we can use the 840 MW capacity

UAMPS SMARTENERGY

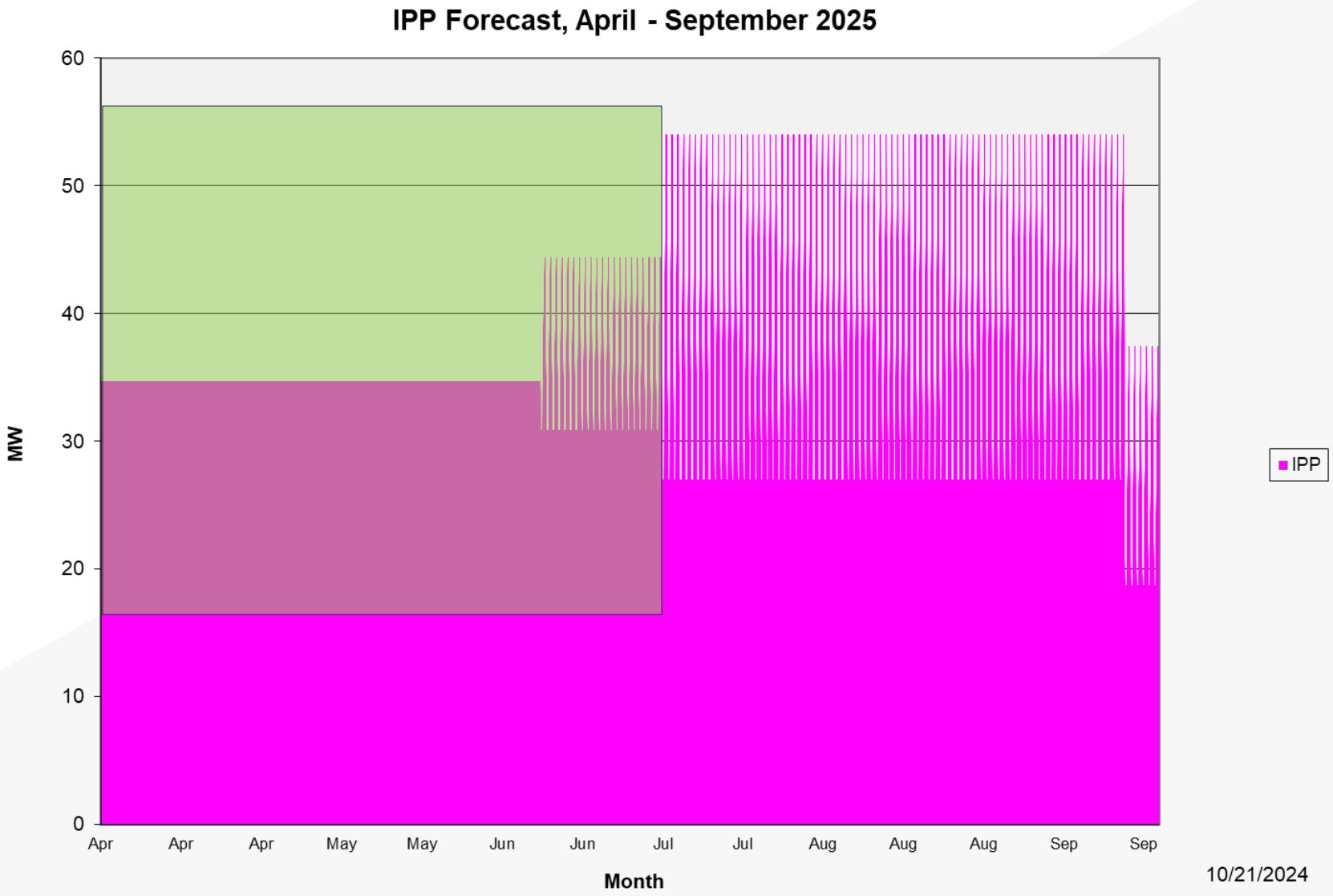
IPP Coal & Gas Units

- Ending coal allocation after March 31st
- Changing from two units to one unit online on April 1st
- Projecting coal pile to be near zero by end of June
  - Schedule above minimum required
- First fire on natural gas units planned for end of January to February
  - Test energy planned for mid-February
- Substantial completion:
  - Unit 3 = June 6th, Unit 4 = July 6th
  - May be delayed

IPP UAMPS Forecast

Q2 Coal Update:

- Expecting one unit online
- No coal allocation
- Min to Max available
- Will be an increased minimum MWh to burn coal pile



10/21/2024

Projected two coal units at minimum for Q2

Projecting natural gas shaped at 75% capacity factor for Q3

IPP Compared to Market

IPP

- Q2 Minimum to Maximum MW for 1 unit (coal)
- Q3 Shaped at 75% (gas)
  - Can take additional MW from gas
  - Valuable ability to change schedules
- IPP Budget = $92/MWh

Market

- Q2 Block purchase
- Q3 Block flat plus super-peak purchases
  - No ability to change
- $80 to $90/MWh

Recommend IPP, subject to load need

Mercuria REC Swap Opportunities Update

Pool Project



December 17, 2024

BLUF

- Member REC sale appendices to be extended to 18-months+
- Pool RECs from five CEC approved projects together
  - Optimize value
- If desired, members can participate and exchange their RECs for unbundled RECs in return

REC Swap/Sale Update

- For members electing to participate, UAMPS will sell CA certified RECs as PCC2 RECs for 2025
  - Horse Butte, Pleasant Valley, Red Mesa, Steel Solar 1A & 1B
- Optimize future REC sale years (2026+)
  - Update member appendices
- Pool together and optimize RECs sale value

Optimizing PCC2 REC Sales

- “Best” time to sell PCC2 RECs is ~6 months prior to the calendar year beginning
  - EX: Sell 2026 RECs in Q3 2025
- Currently most Member Appendices only allow for 12-month forward sale term
  - Increase to 18-month+ term to facilitate these conservative forward deals

Value Optimization

- Mercuria deal utilizes RECs from five UAMPS projects
- UAMPS recommends combining REC sales for any remaining RECs
  - Optimize overall $/REC
  - No winners/losers
  - REC sales/forward sales happen in blocks
    - If some RECs aren’t bundled into PCC2s the ones left will be sold unbundled
    - Sell blocks of HBW last due to higher unbundled value

Next Steps

- UAMPS will send out new appendices increasing sale term to 18-months
- New appendix allowing the pooling and optimizing of the RECs for selling purposes
- Once the Mercuria deal contract terms have been finalized, UAMPS will ask for Pool Project approval of the deal
  - Utilizing the project for the energy side of the deal

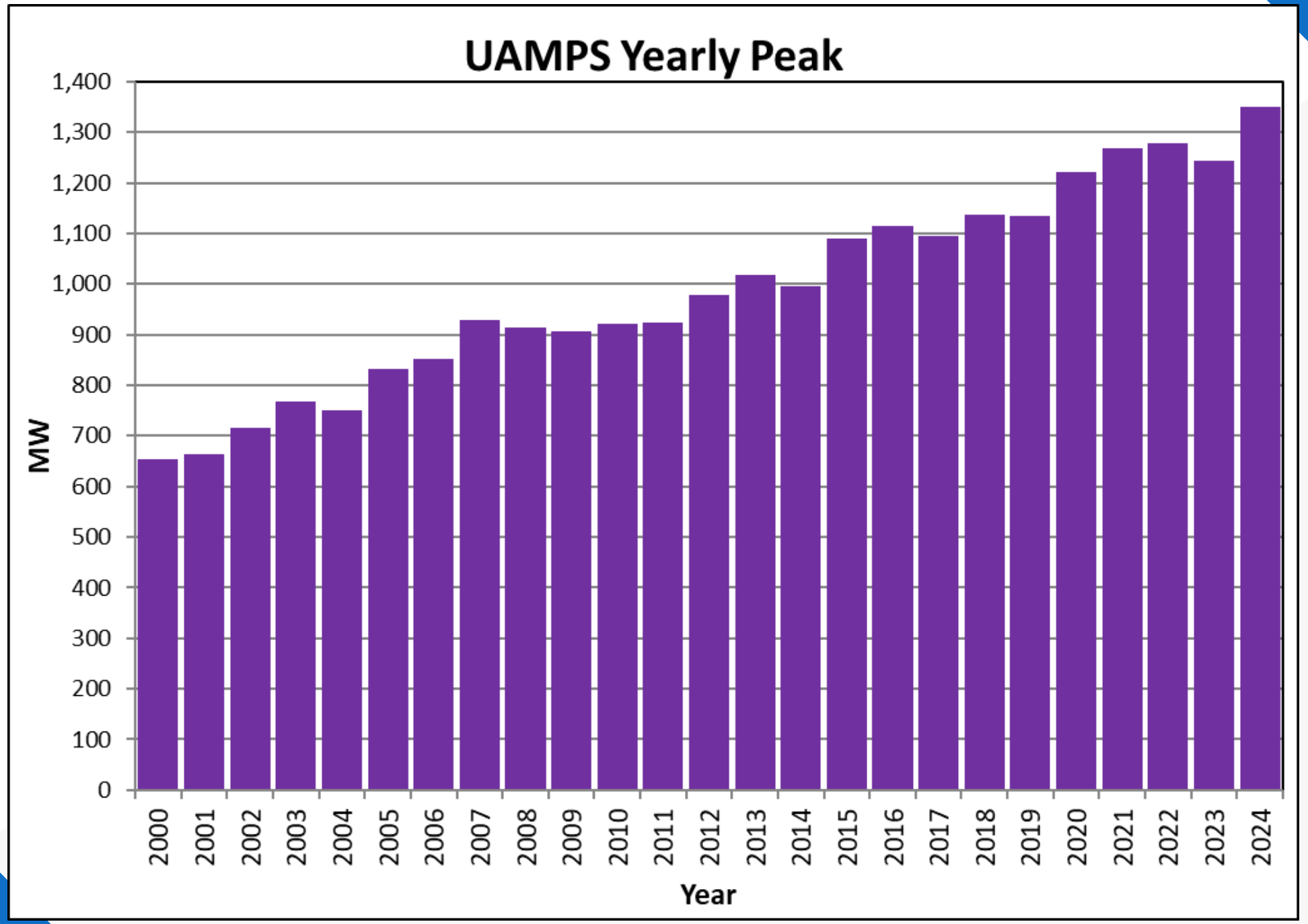
PX & Scheduling Report
November 2024

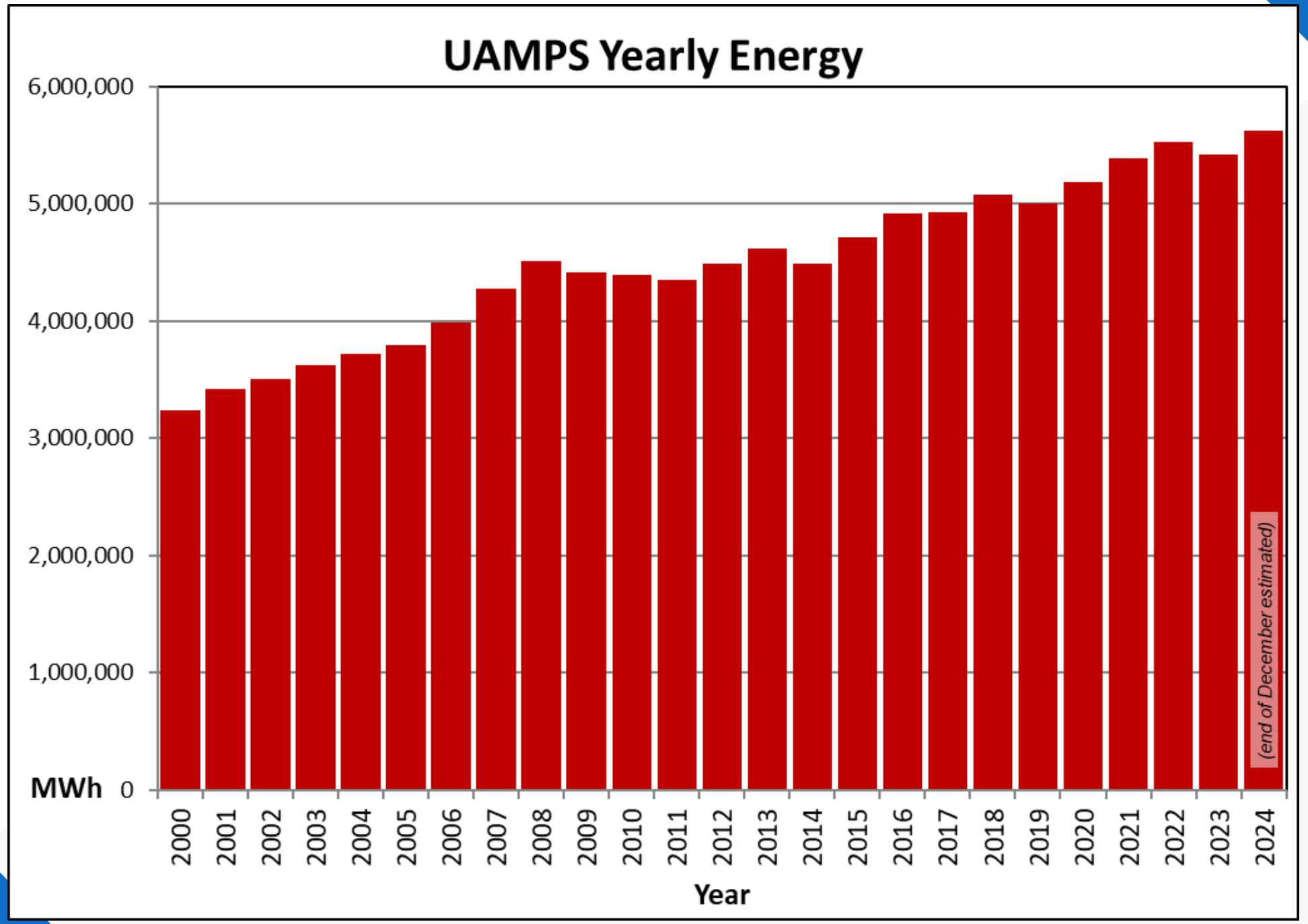


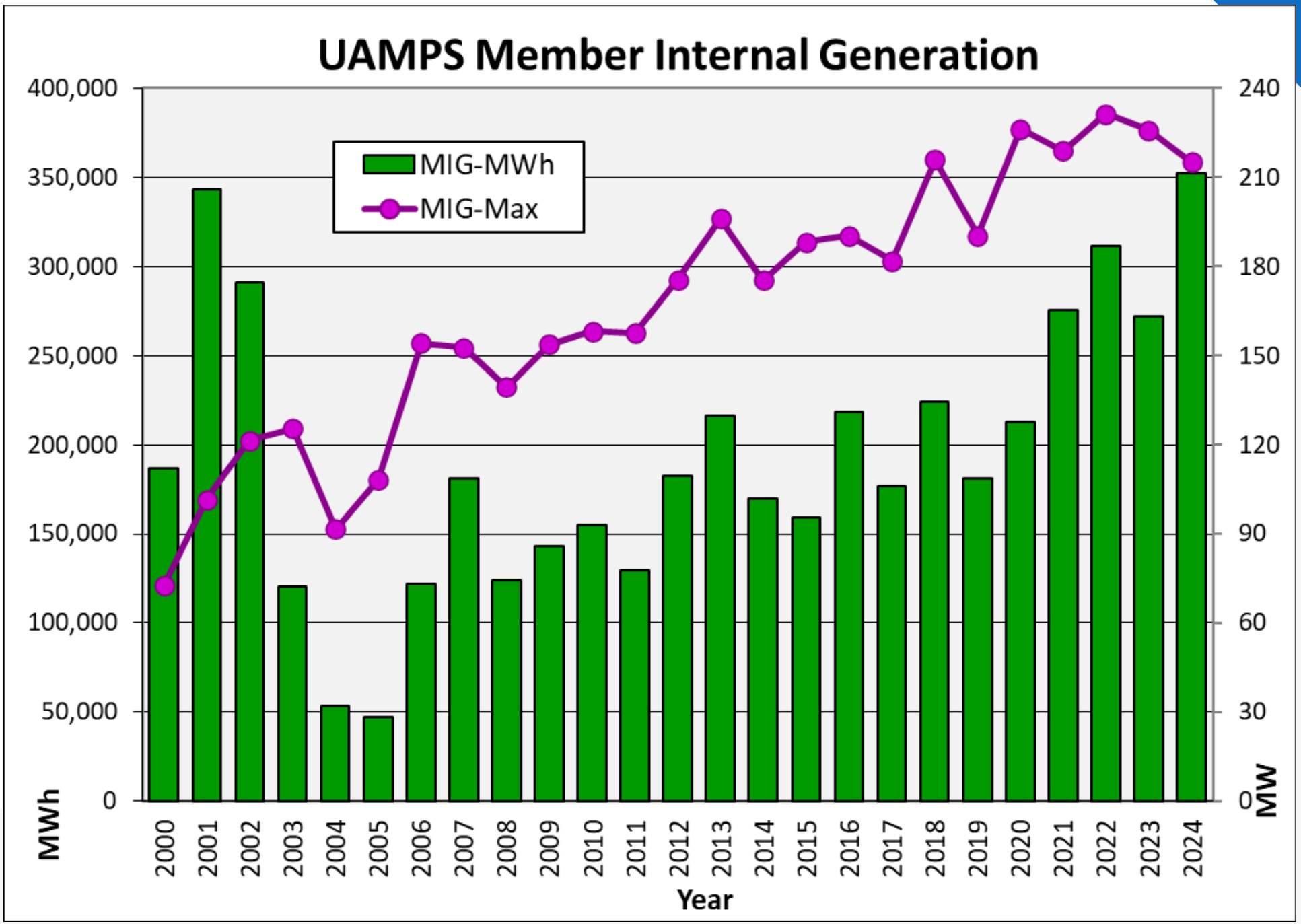
Pool Project

UAMPS

Kelton Andersen


UAMPS Yearly Peak
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
MW
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year


UAMPS Yearly Energy
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
MWh 0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
(end of December estimated)
Year


UAMPS Member Internal Generation
MIG-MWh
MIG-Max
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
MWh
240
210
180
150
120
90
60
30
0
MW
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year

Millard County Project Formation



UAMPS SMARTENERGY

Emily Wegener

Millard County Project Formation

A Resolution Relating to the Millard County Power Project; Declaring the Effective Date of the Power Sales Contracts; Authorizing and Directing UAMPS to Proceed with the Project under the Direction of the Project Management Committee; and Related Matters

Millard County Project Formation

- Effective Date of Power Sales Contract is date of Resolution
- Project Management Committee is formed
- Final Power Sales Contract terms slightly modified
  - Exhibits A and B have redlined changes; none are material
- Ratification of prior actions taken by UAMPS in connection with the development of the project
- Exhibit C sets forth Development Shares and Development Cost Shares
- Step up cap to be set at 20%

Millard County Project Formation

A Resolution Relating to the Millard County Power Project; Declaring the Effective Date of the Power Sales Contracts; Authorizing and Directing UAMPS to Proceed with the Project under the Direction of the Project Management Committee; and Related Matters

WECC

Resource Adequacy Outlook

UAMPS Annual Member Meeting

December 16, 2024

Branden Sudduth, WECC
VP RPPA

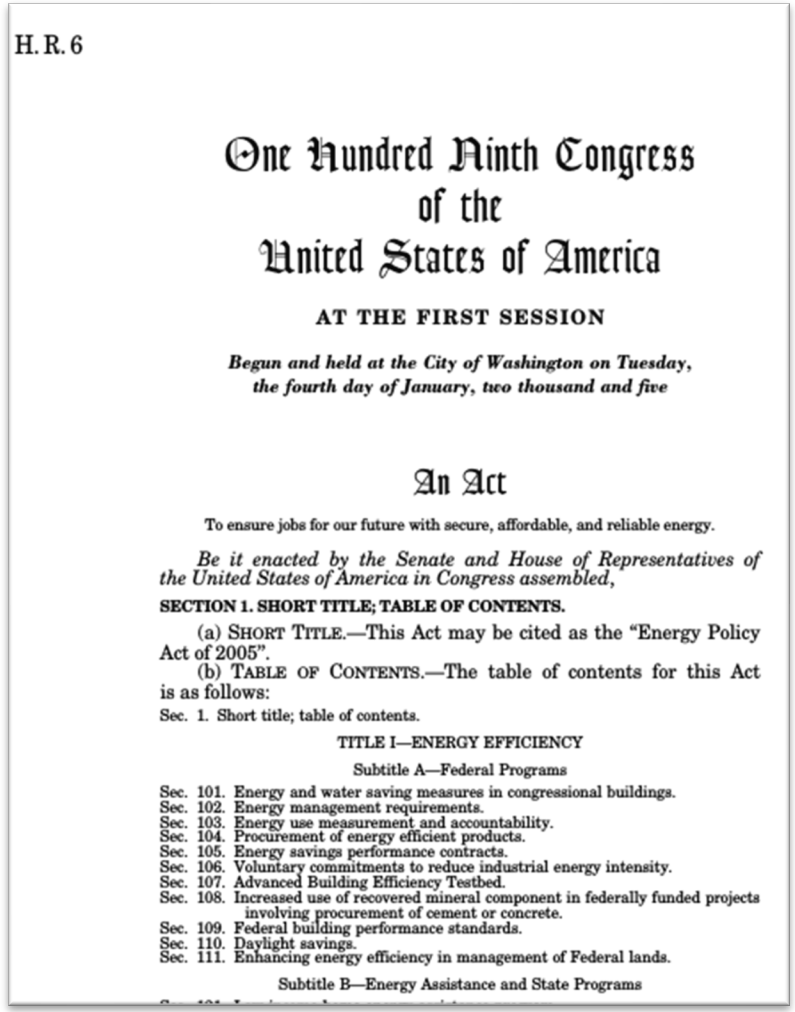
2003—The Great Northeast Blackout





Energy Policy Act of 2005

- Federal Power Act, Section 215 calls for mandatory enforceable standards
- FERC certifies an Electric Reliability Organization—the ERO (NERC) responsible for activities such as:
  - Standards Development, Monitoring, and Enforcement
  - Reliability Assessments
- NERC may delegate authority to Regional Entities; e.g., WECC



H. R. 6

One Hundred Ninth Congress
of the
United States of America

AT THE FIRST SESSION

Begun and held at the City of Washington on Tuesday, the fourth day of January, two thousand and five

An Act

To ensure jobs for our future with secure, affordable, and reliable energy.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Energy Policy Act of 2005".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.

TITLE I—ENERGY EFFICIENCY

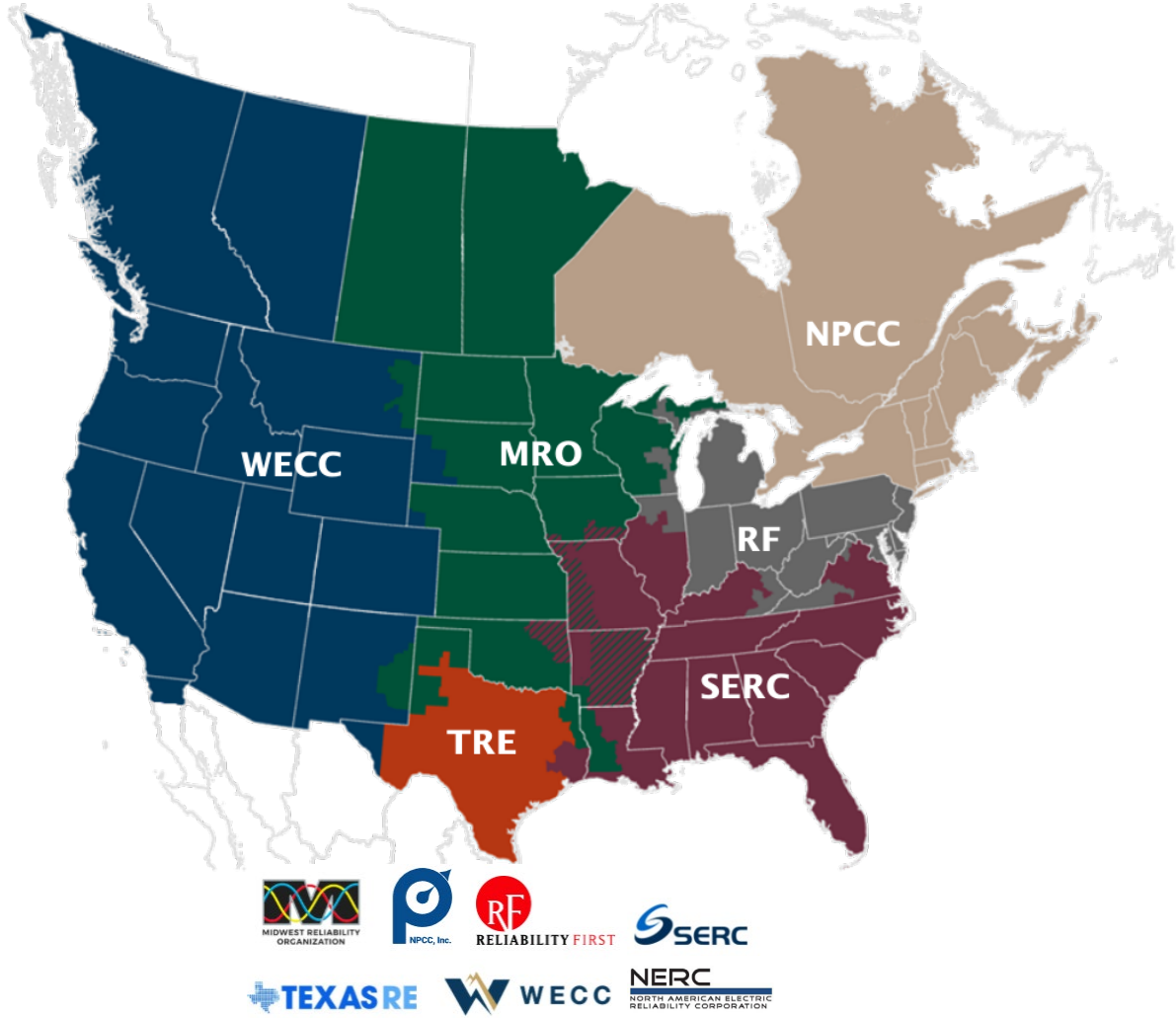
Subtitle A—Federal Programs

Sec. 101. Energy and water saving measures in congressional buildings.
Sec. 102. Energy management requirements.
Sec. 103. Energy use measurement and accountability.
Sec. 104. Procurement of energy efficient products.
Sec. 105. Energy savings performance contracts.
Sec. 106. Voluntary commitments to reduce industrial energy intensity.
Sec. 107. Advanced Building Efficiency Testbed.
Sec. 108. Increased use of recovered mineral component in federally funded projects involving procurement of cement or concrete.
Sec. 109. Federal building performance standards.
Sec. 110. Daylight savings.
Sec. 111. Enhancing energy efficiency in management of Federal lands.

Subtitle B—Energy Assistance and State Programs

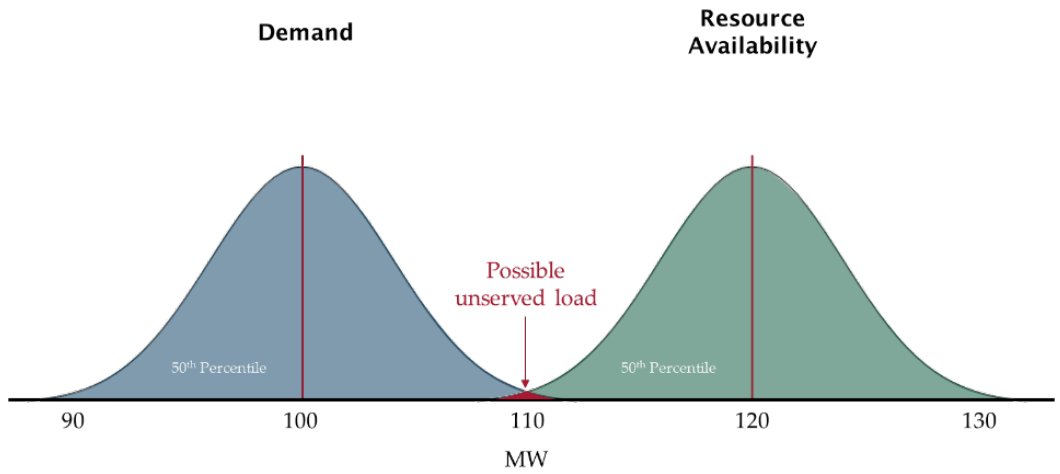
The ERO Enterprise

"The vision for the Electric Reliability Organization Enterprise, which is comprised of NERC and the six Regional Entities, is a highly reliable and secure North American bulk power system. Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid."

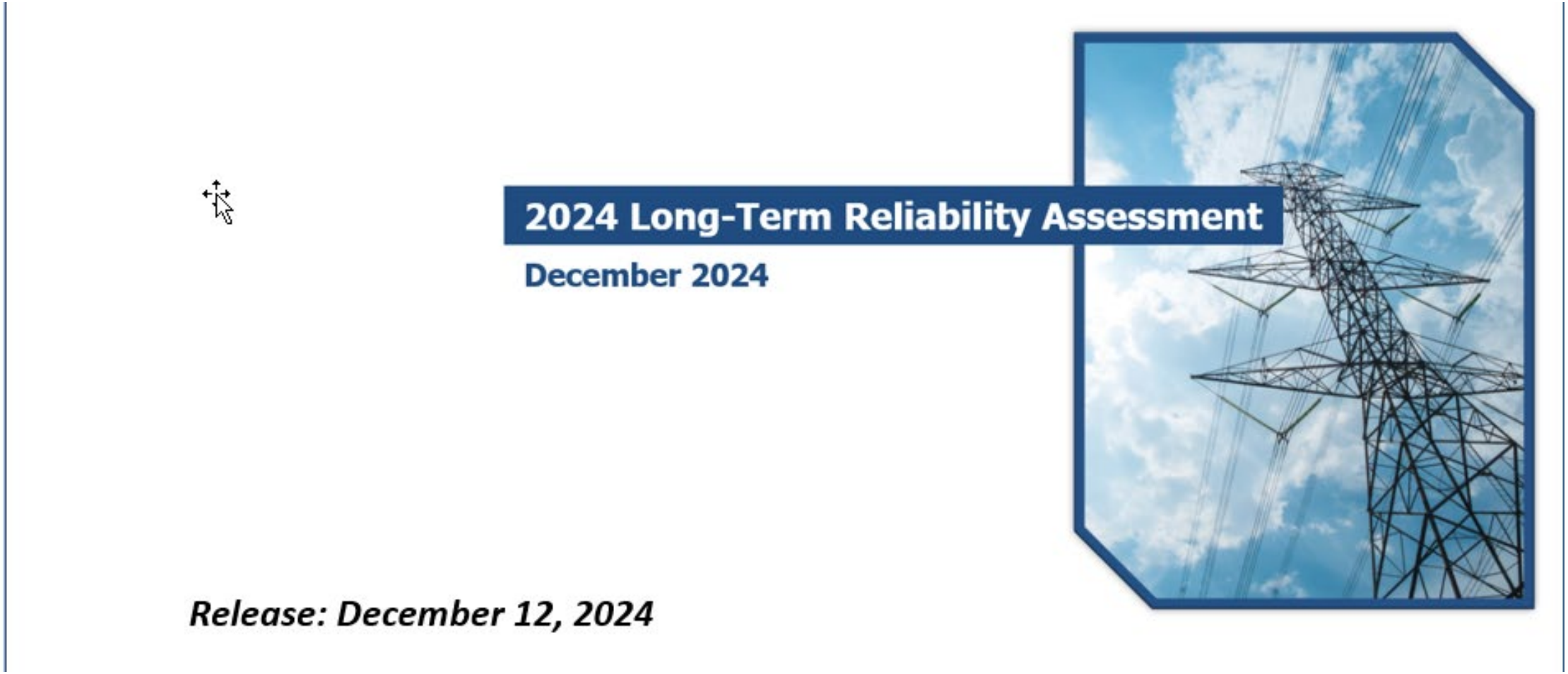


Reliability Assessments: Resource Adequacy

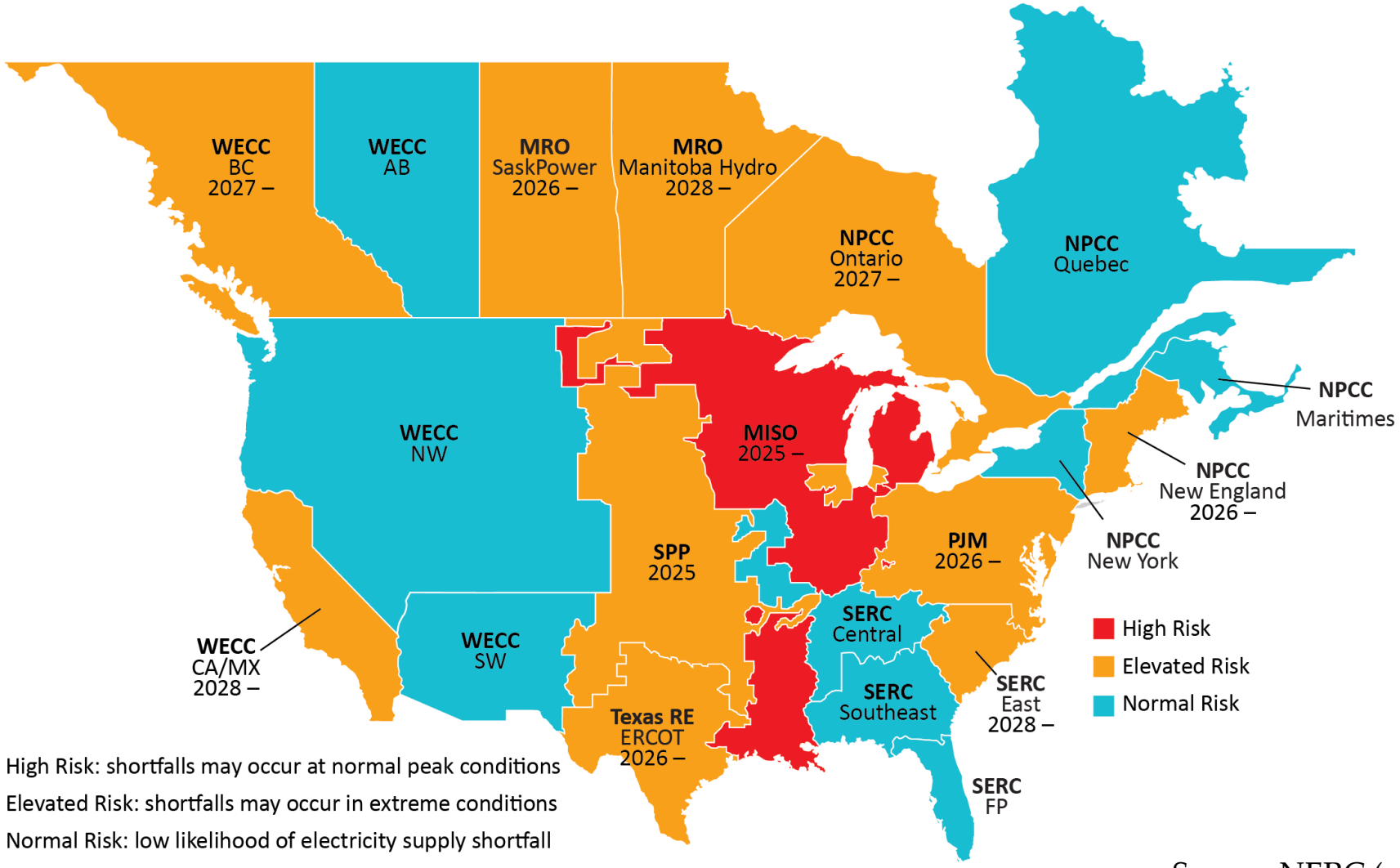
- Evolution - Deterministic to Probabilistic
- Primary drivers
  - Increase of variable energy resources
  - Retirement of dispatchable resources
  - Energy limitations (versus capacity)
  - Extreme weather events
  - Load growth uncertainty



NERC Long-Term Reliability Assessment (LTRA)



LTRA Outlook



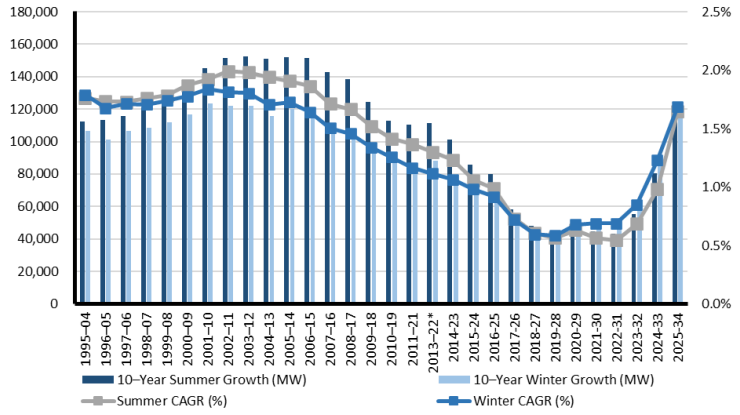
High Risk: shortfalls may occur at normal peak conditions

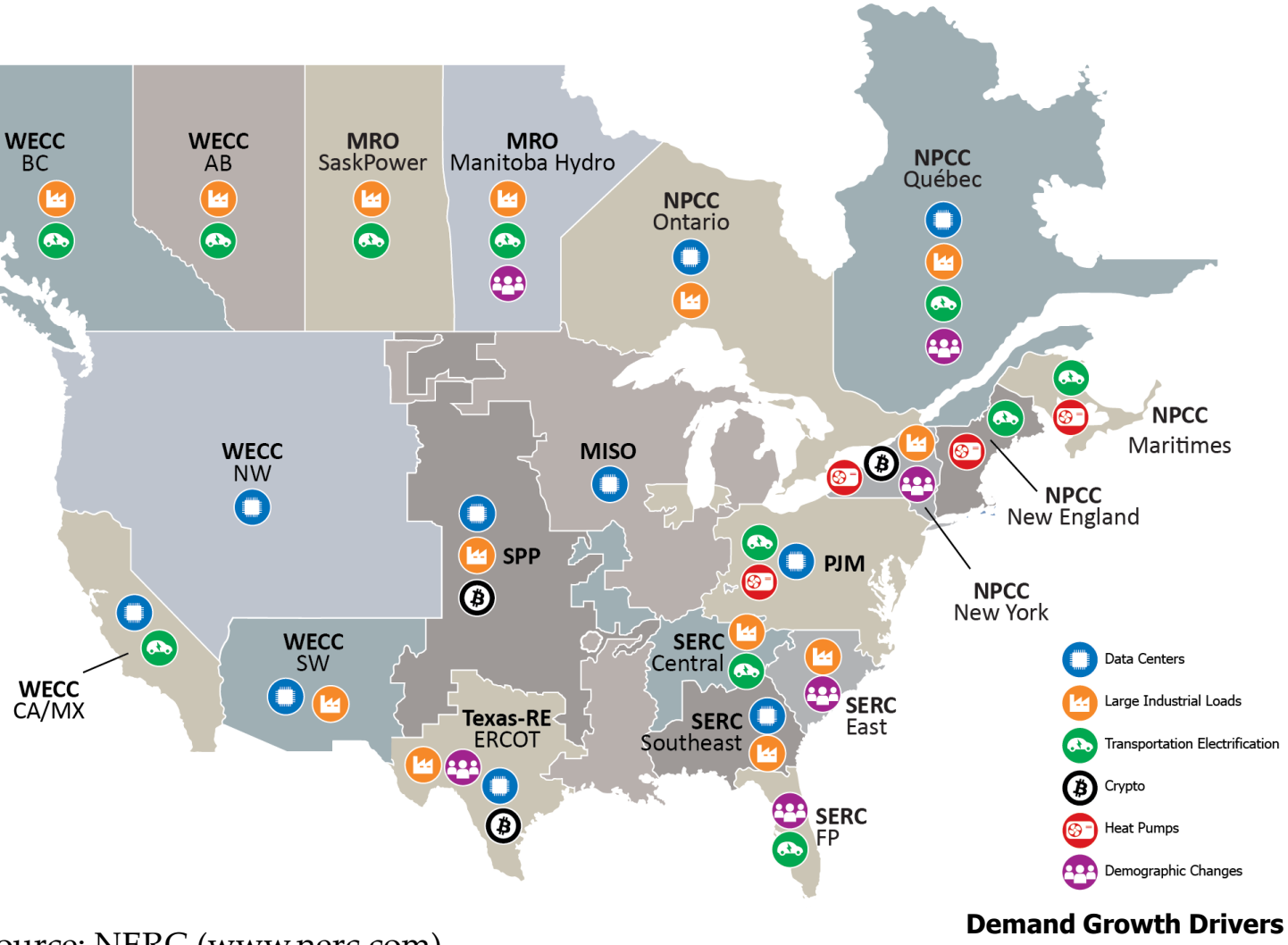
Elevated Risk: shortfalls may occur in extreme conditions

Normal Risk: low likelihood of electricity supply shortfall

Source: NERC (www.nerc.com)

LTRA – Demand Growth is Accelerating

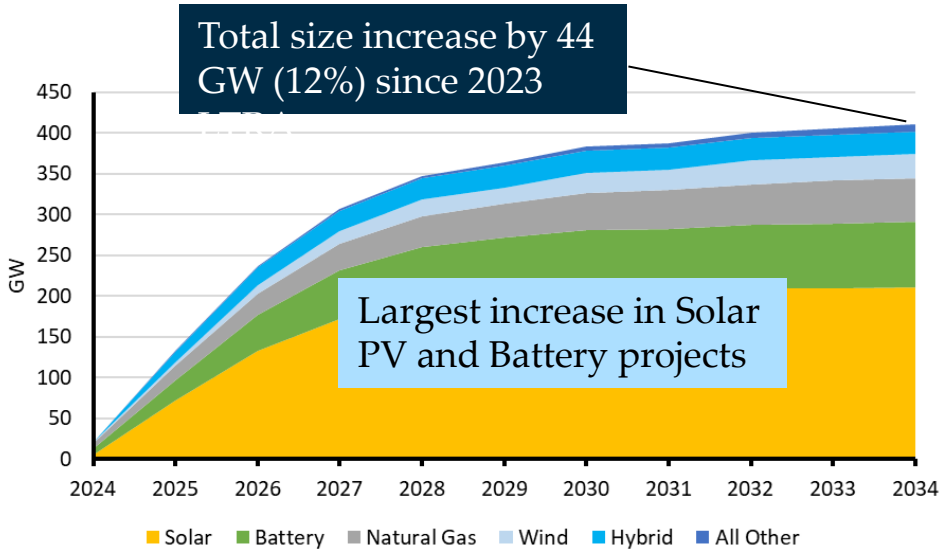




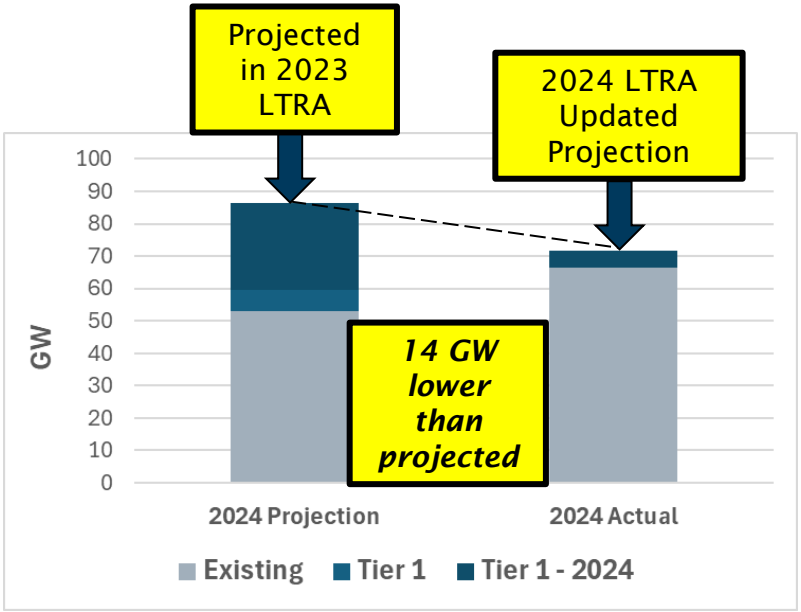
Source: NERC (www.nerc.com)

LTRA - Resources Projections Reflect Slower Rate of Additions

- Resources in the interconnection process continue to grow
- Project delays and cancellations are causing resource growth to fall short of projections



Resources in Interconnection Process
Tier 1 (Signed Agreements) and Tier 2 (Processing)

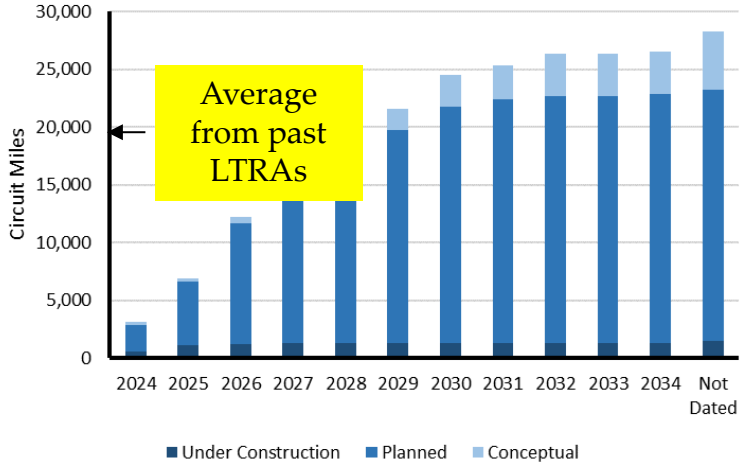


Solar On-Peak Capacity | prior-year projection v. current year actual

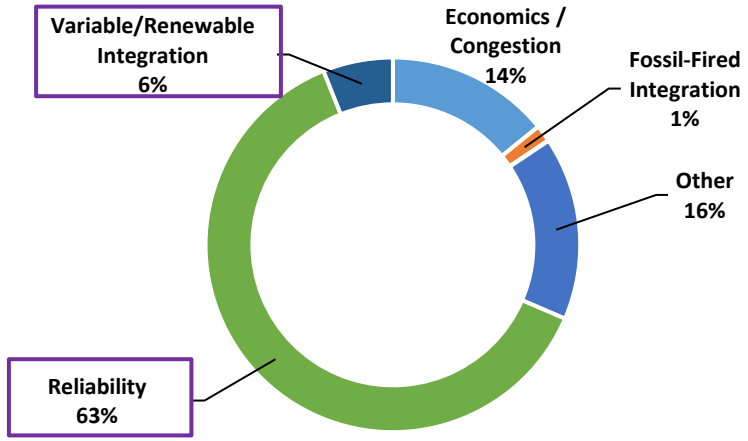
Source: NERC (www.nerc.com)

LTRA – Transmission Development Increasing

- More line-miles are in transmission project planning than in prior LTRAs
- Assessment areas report significant investment in transmission development including projects to increase transfer capability



2024 LTRA Cumulative Transmission Projects >100 kV



2024 LTRA Transmission Project Primary Driver

Source: NERC (www.nerc.com)

LTRA – Emerging Issues

Data Centers and Large Industrial Load	Growth in large load parcels like data centers and industrial facilities pose various challenges for system planners and operators.
Battery Energy Storage Systems (BESSs)	Poor visibility of BESSs' state-of-charge poses risks for operators who expect energy available for dispatch.
Electric Vehicles and Electric Load	With increased adoption of Electric Vehicles (EVs) which use batteries to store energy, there is a need to understand the impact of battery charging on system performance.
Energy Drought	More reliance on wind, solar, and hydro resources in the resource mix has the potential to expose the electricity system to supply shortages under abnormal weather patterns.

Source: NERC (www.nerc.com)

WECC Western Assessment of Resource Adequacy (WARA)

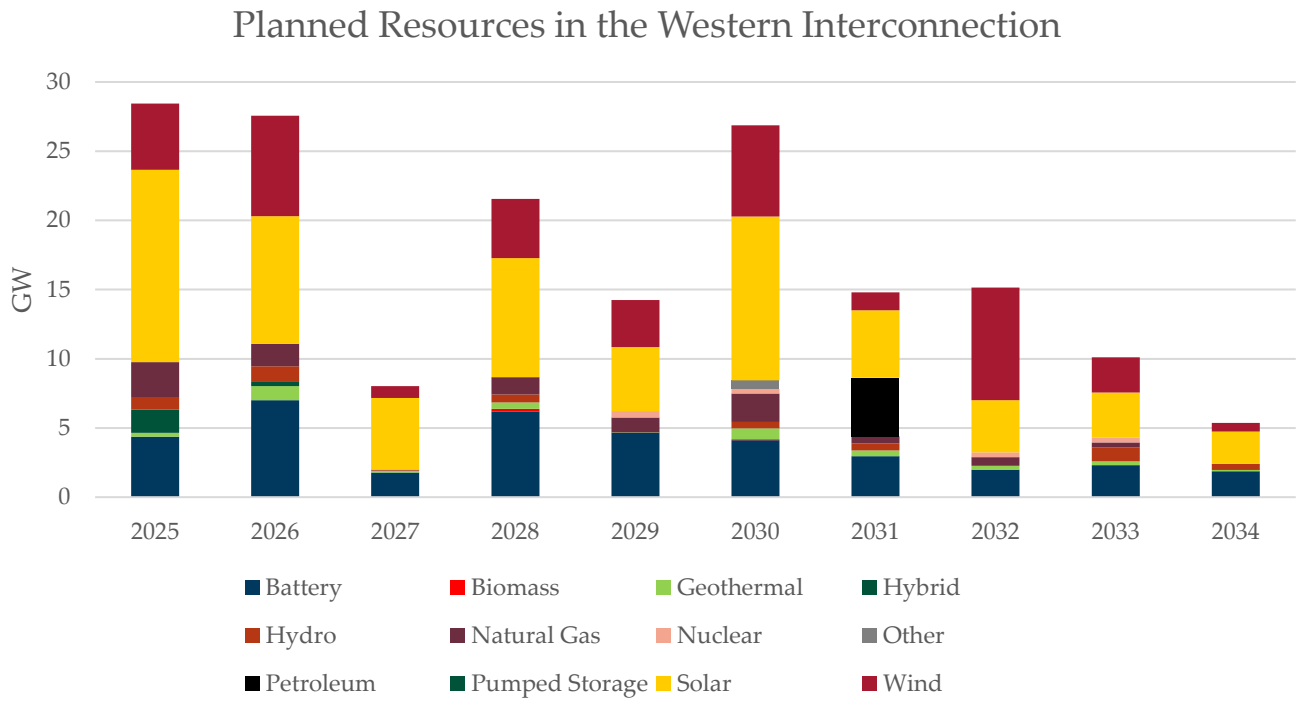
- Western Interconnection-wide analysis
  - Also reported by subregion
- Considers subregion-to-subregion transfer limitations
- Probabilistic, hourly analysis
  - Evaluates the next ten years
- Uses data submitted to WECC by Balancing Authorities



WARA – Planned Resource Additions

Resource Additions

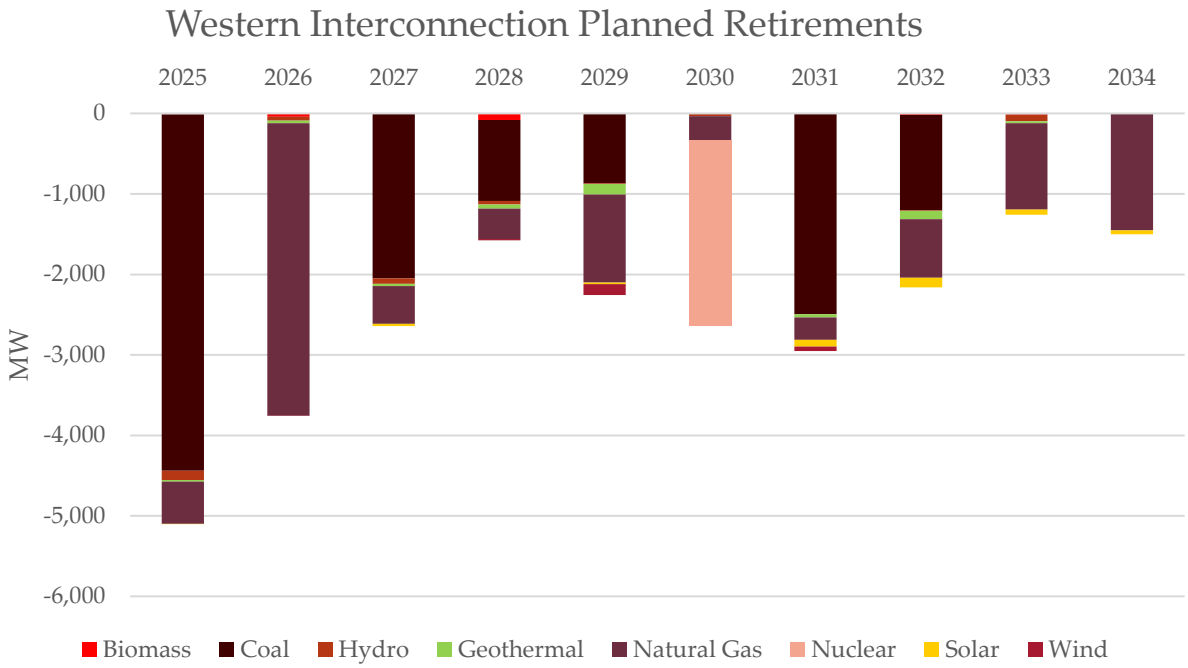
- More than 172 GW of new generation capacity over the next decade
- More than 85% of that is battery storage, solar, and wind



WARA – Planned Resource Retirements

Resource Retirements

- 25.85 GW of generation retirements over the next 10 years
- More than 24 GW are baseload generation (e.g., coal, natural gas, nuclear)



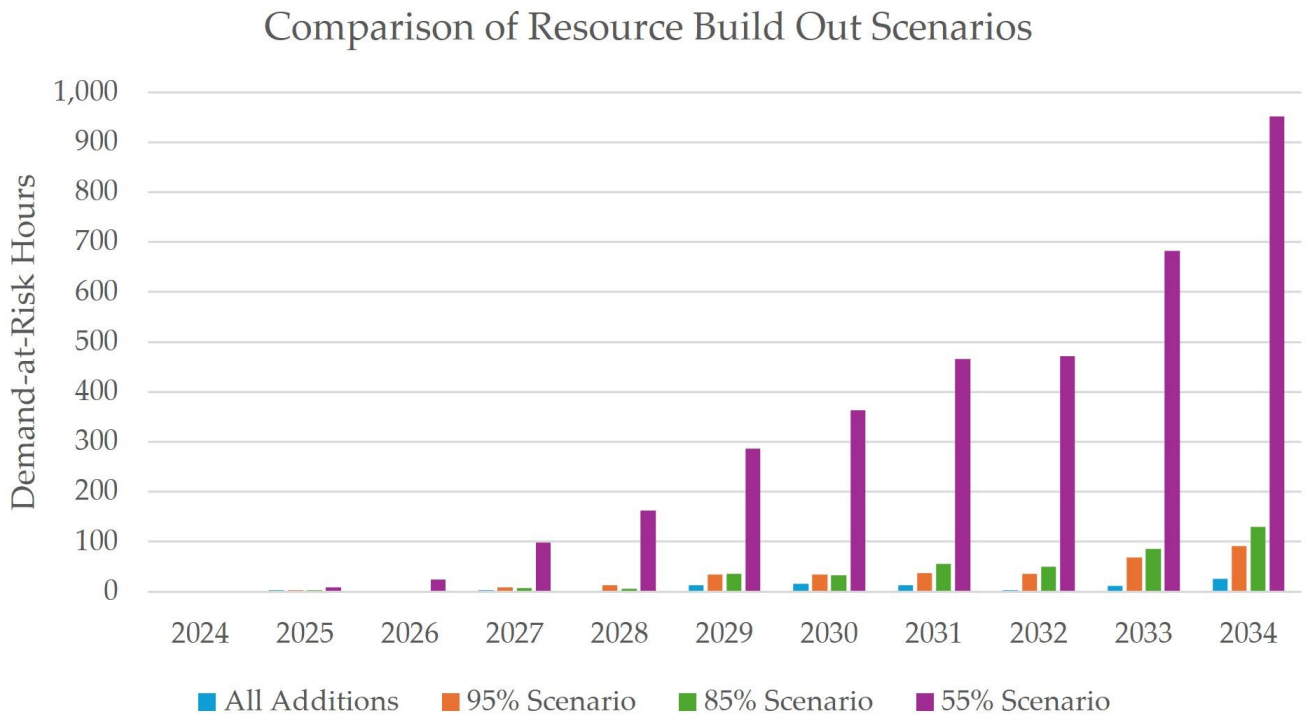
WARA – Delayed Resource Build Scenarios

Sensitivity Analysis

- Build outs as a percentage of planned resource additions

Context

- Between 2018 and 2023, approximately 76% of the proposed resource additions came online in the year scheduled
- In 2023, 53% of new resources planned to come online at the beginning of the year actually came online



WARA – 2024 Key Takeaways

- Demand forecasts are changing drastically on a year-to-year basis
- New large loads creating reliability challenges
- Entities planning to add unprecedented amounts of new generation over the next decade
- With demand growth, new resource delays and cancellations will create serious resource adequacy challenges
- Variability increasing with the addition of energy limited resources



Overall Operations Report

Board of Directors

Rachel Stanford

Topic Discussions

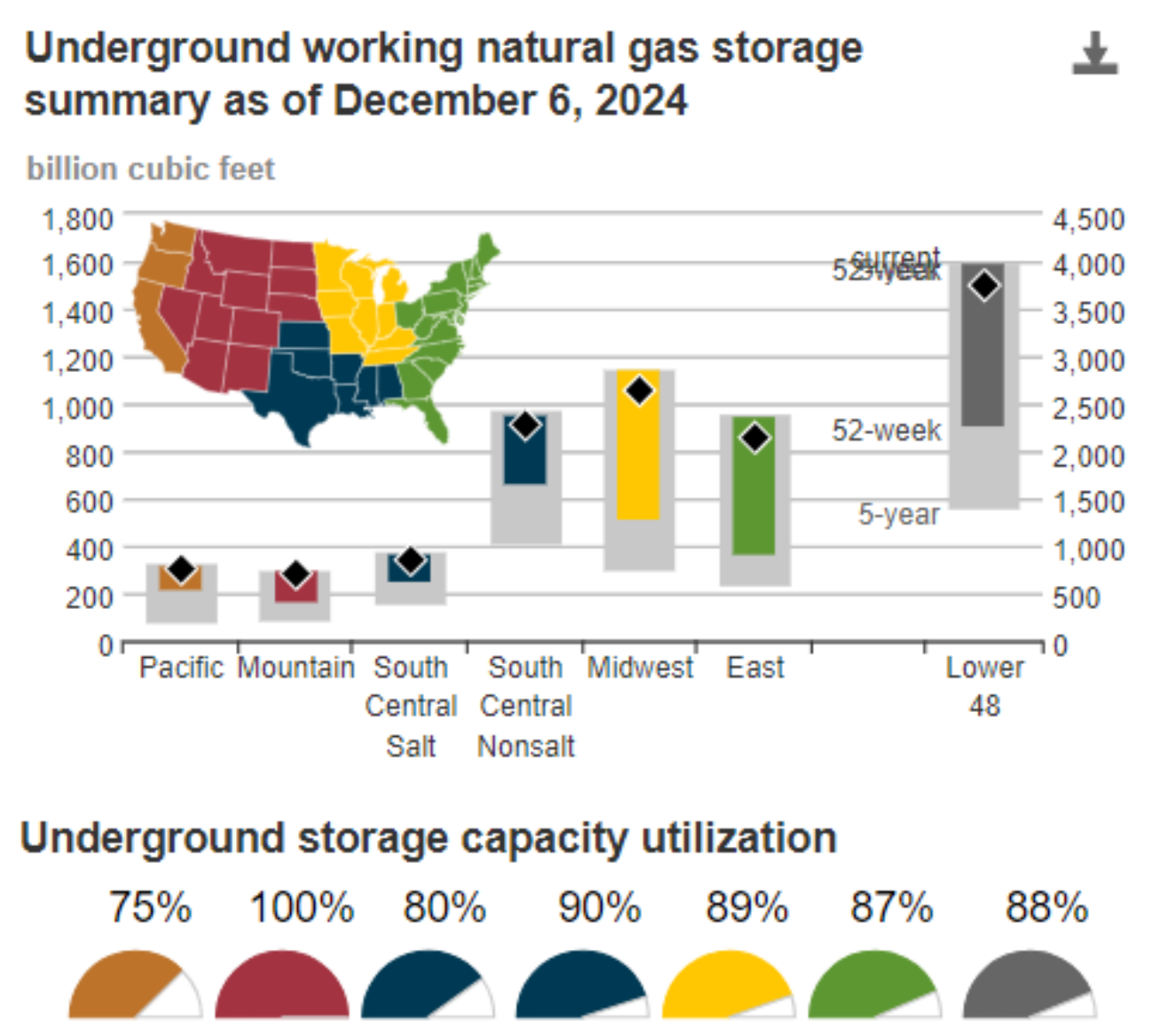
- Natural Gas
  - Storage
- Seasonal Outlook
  - 3-month Seasonal Outlook
- Western Market Development
  - PacifiCorp EDAM Filing
- Industry News
  - WECC 2024 Assessment of Resource Adequacy Report
- Transmission
  - Challenges Building New Transmission



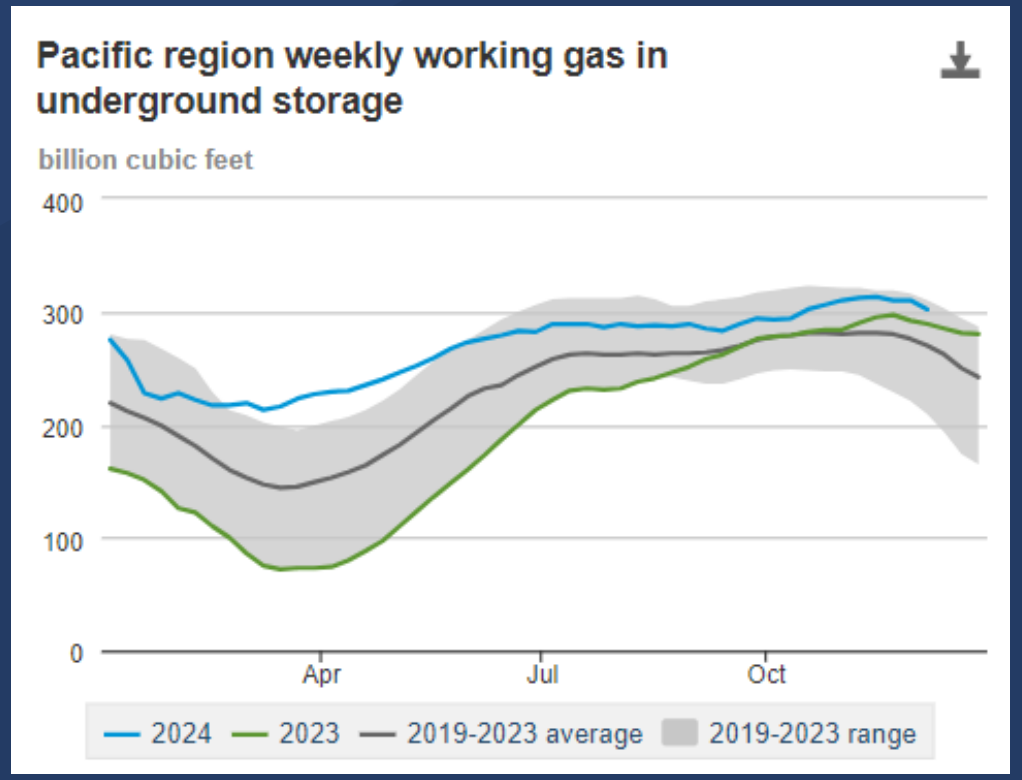
Natural Gas

National Gas Storage

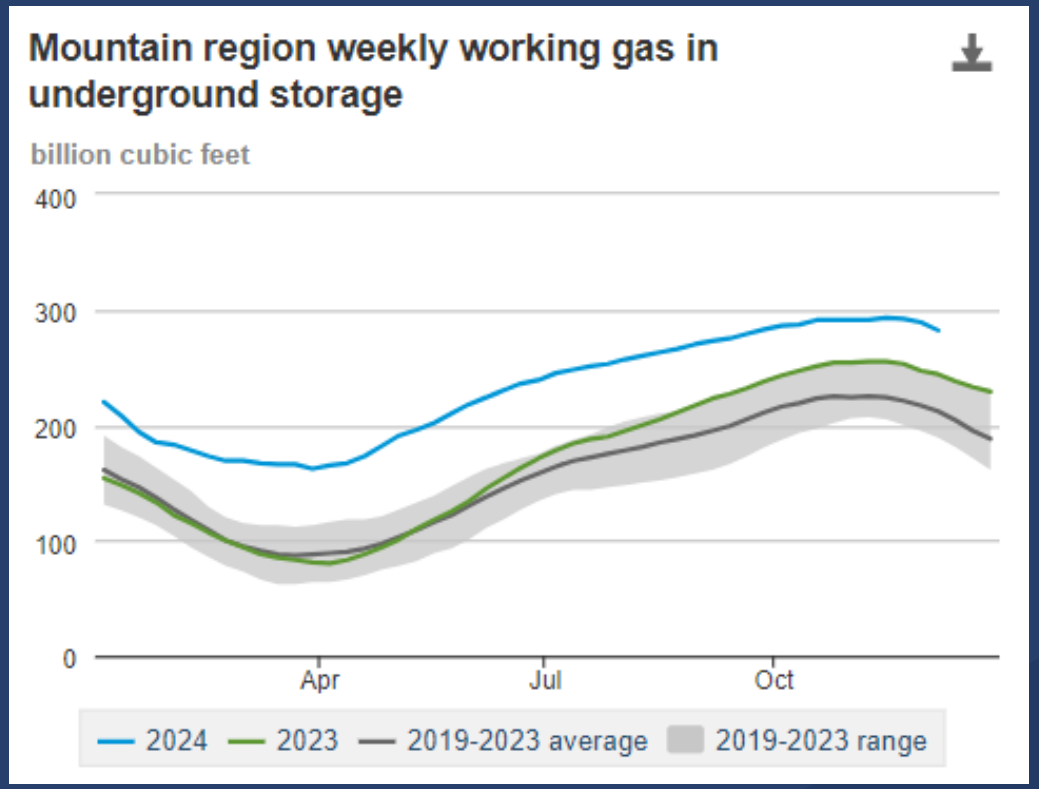
- Pacific region saw 2% increase & Mountain region did not change from the October reporting



Pacific Region



Mountain Region



UAMPS SMARTENERGY

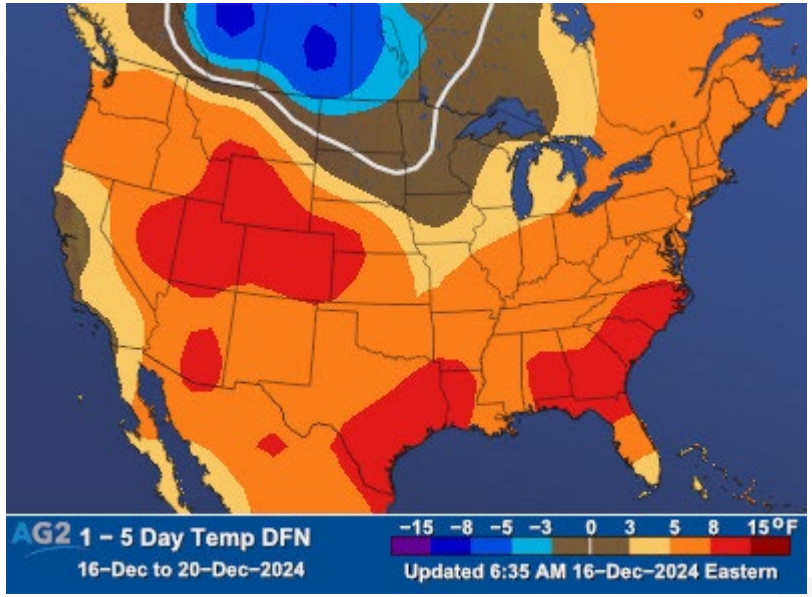


Seasonal Outlook

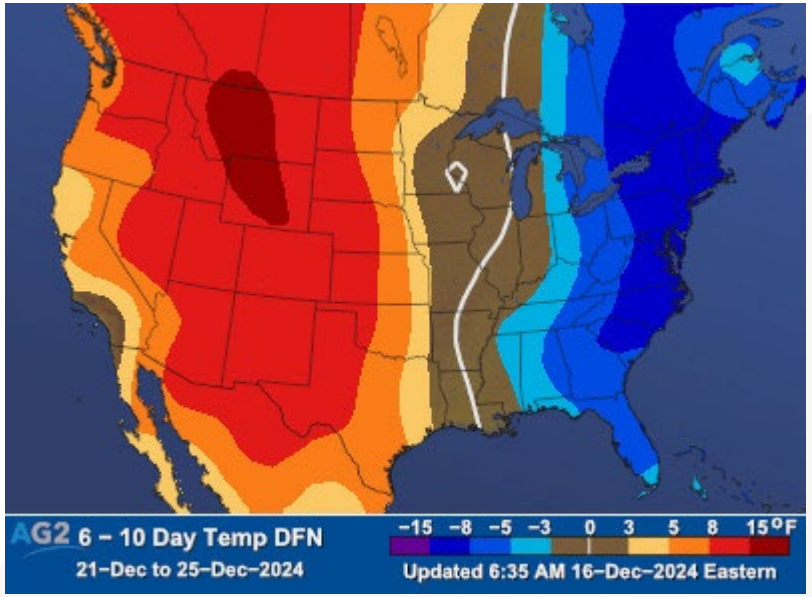
LAMPS

SMARTENERGY

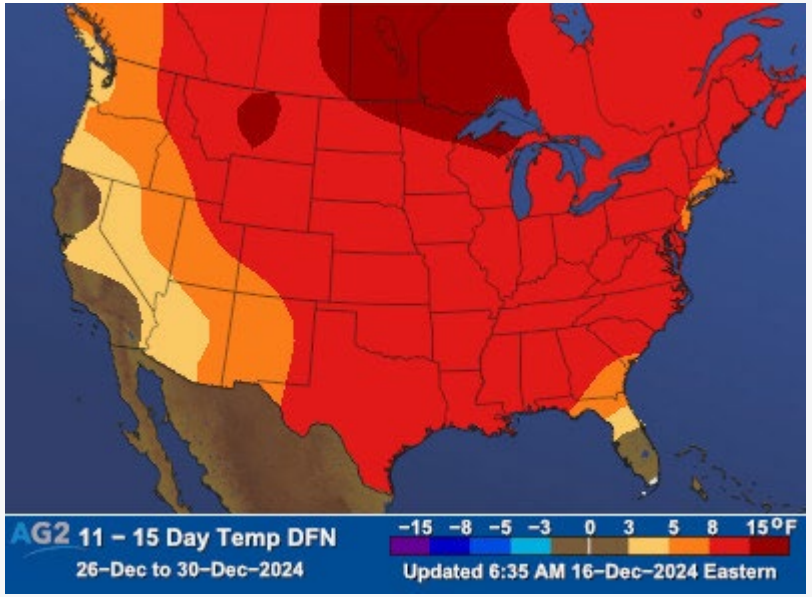
DECEMBER FORECAST



1-5 Day Forecast



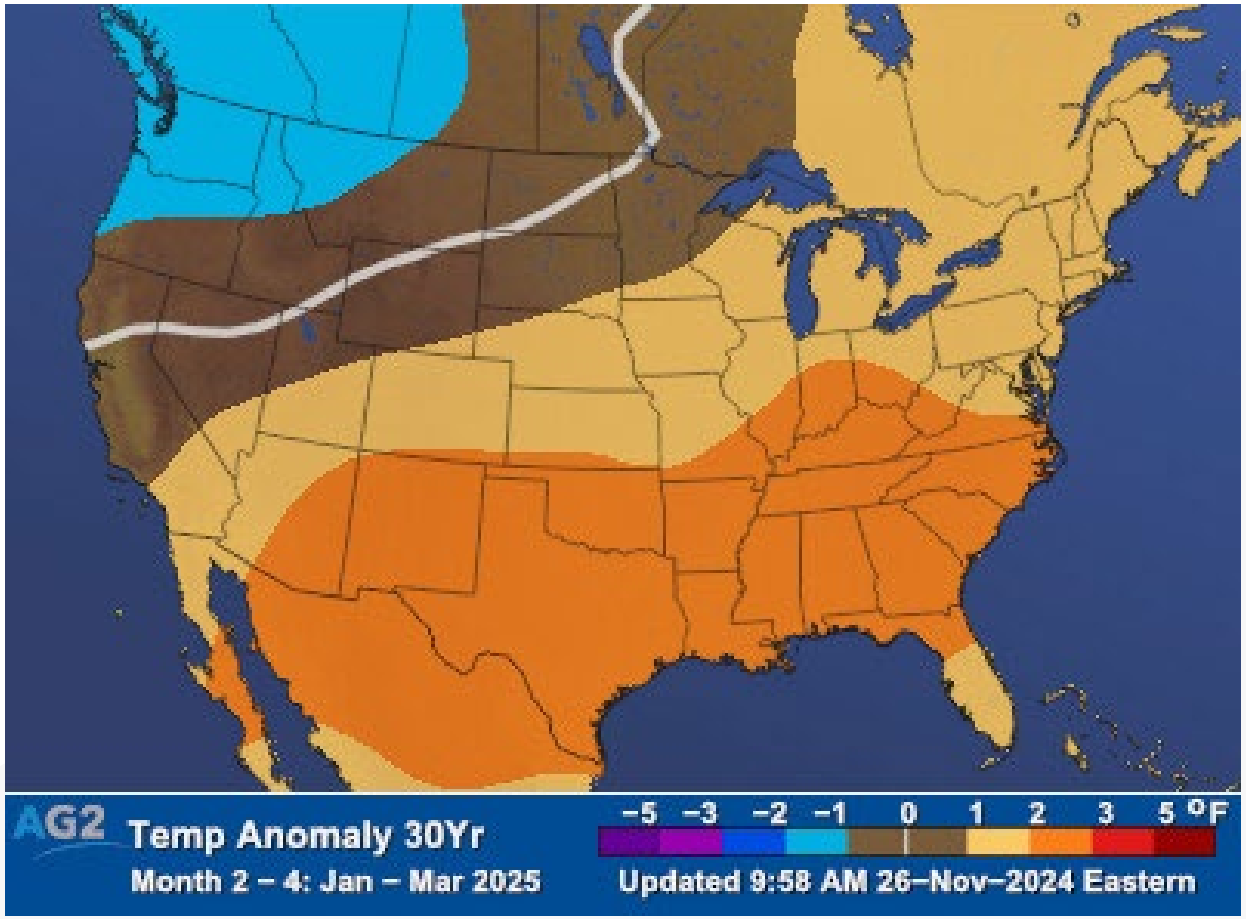
6-10 Day Forecast



11-15 Day Forecast

UAMPS SMARTENERGY

FUTURE FORECAST



January – March 2025


Western
Market
Development

PacifiCorp EDAM Tariff

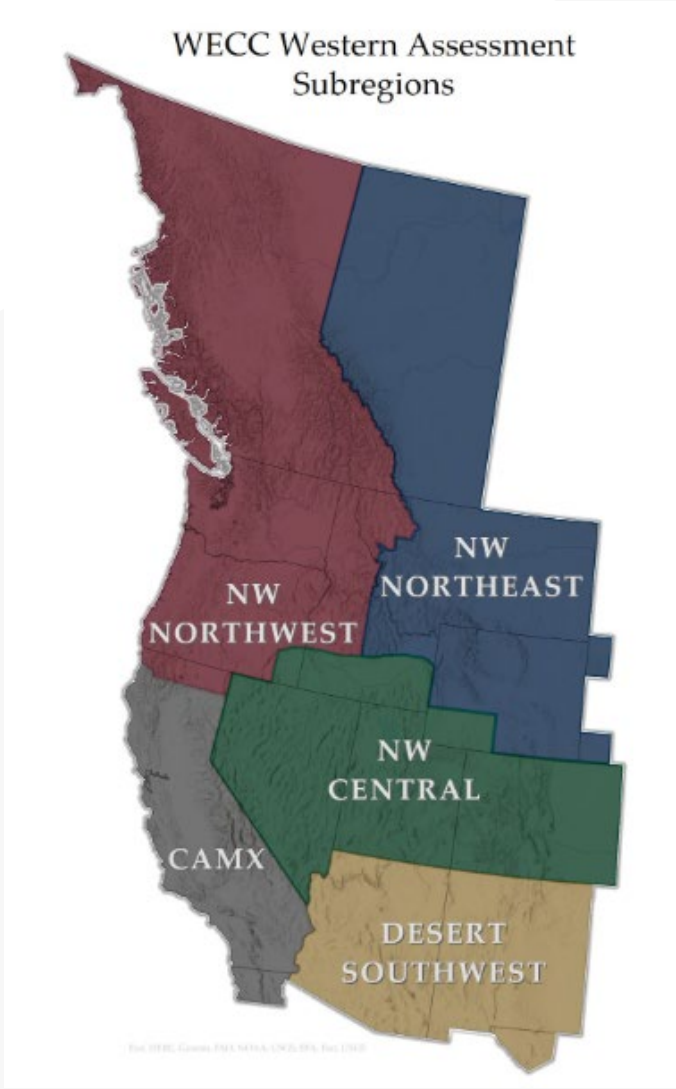
- November 26, 2024, PacifiCorp filed its proposed final EDAM Tariff with the FERC with a requested approval no later than March 31, 2025
- Initial comment period set to close January 8th but, at stakeholder request, has been extended to January 15th
- UAMPS, along with 34 other agencies, has intervened
- Staff is working with consultants and counsel to draft comments for submission by the deadline



Industry News

Western Assessment of Resource Adequacy

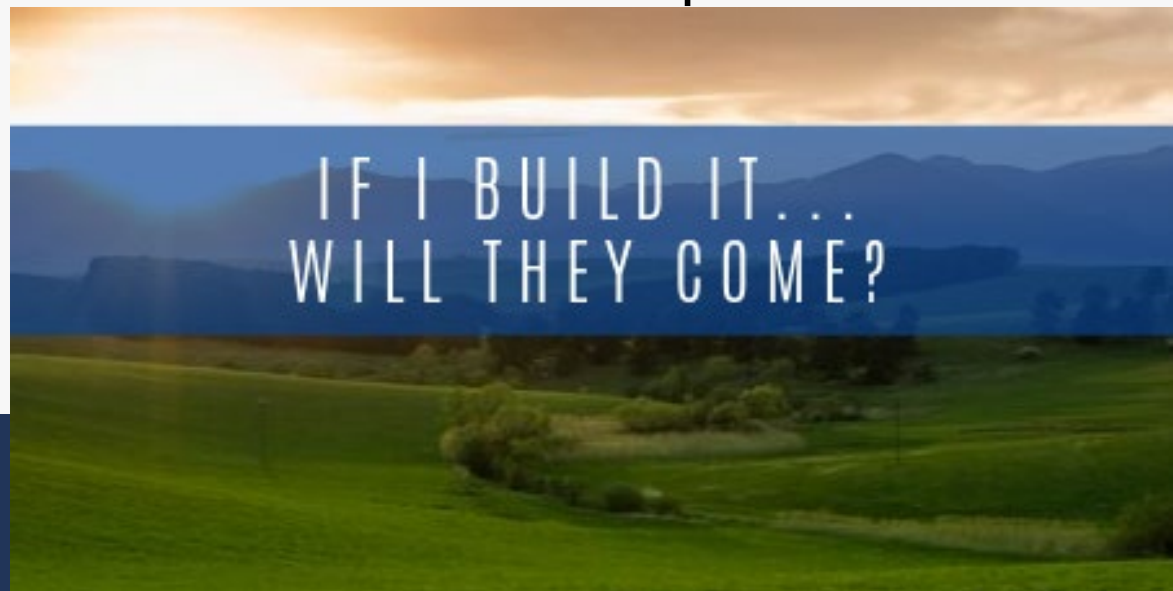
- *WECC's annual Western Assessment of Resource Adequacy examines resource-adequacy-related risks concerning the reliability of the Western Interconnection over the next 10 years. Through an energy-based probabilistic approach, WECC looks at the risks throughout the interconnection and five subregions. This work is meant to help stakeholders target specific areas and topics for deeper evaluation and mitigation.*




Transmission

Who Can Build New Transmission

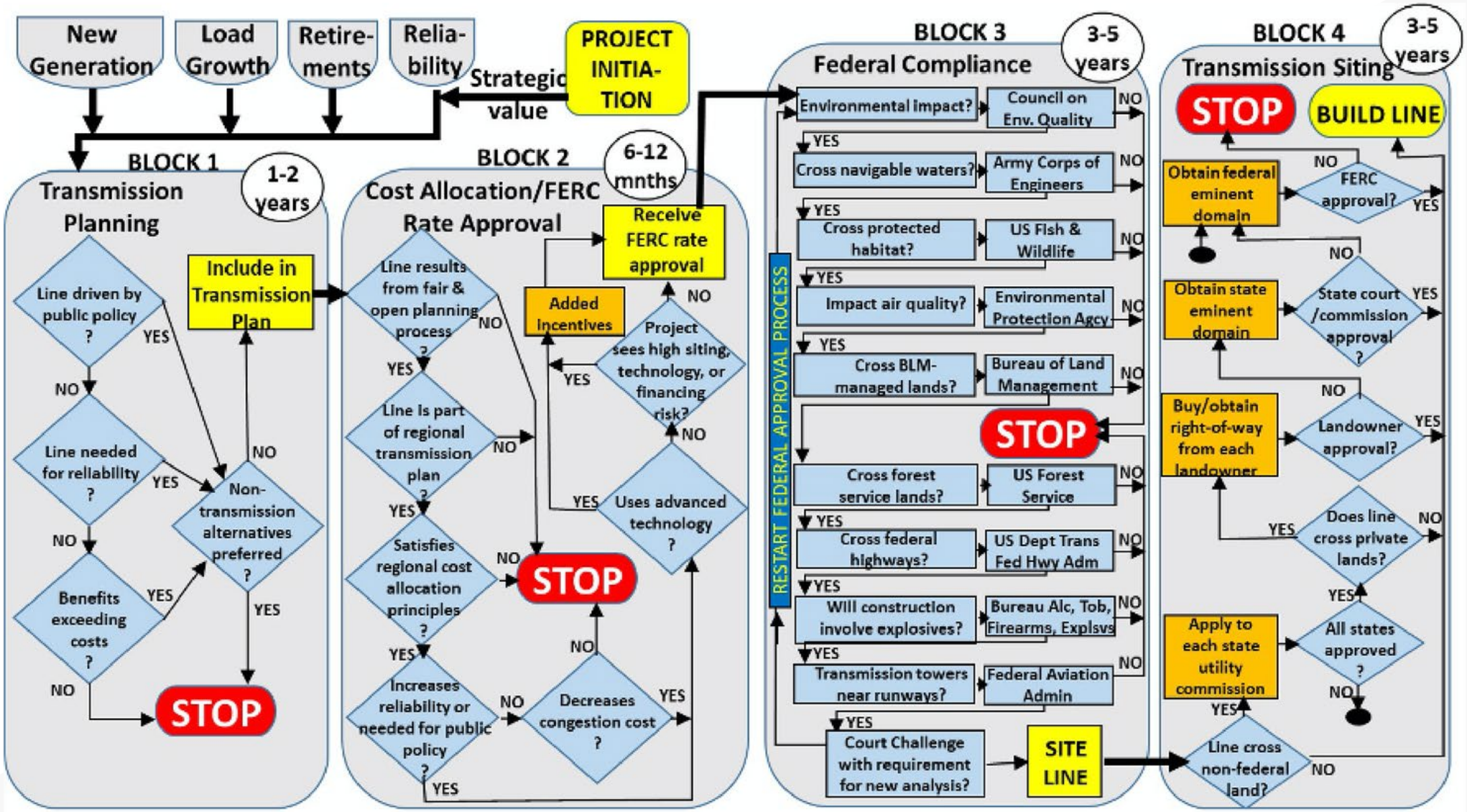
- Regulated Utilities
  - Obligation to perform Planning Studies to ensure sufficient transmission to serve load
  - Unilateral decision making for determining what transmission investment will be done and what benefits will be realized
  - Guaranteed fixed rate of return
  - Transmission is constructed in a reactive manner, near term once the existing transmission system becomes over-burdened as loads grow
- Merchant Developers
  - No guaranteed fixed rate of return – instead charge Load Serving Entities for use of the lines
  - Uncommon due to challenges finding enough customers to make the investment profitable



Process for Building New Transmission

- Requires a variety of permitting and siting approvals from federal, state and local agencies as well as private landowners and is a very time prohibit process
- Securing interregional (multi-state) right of way, or right of way across protected lands, can take many years
  - TransWest Express – 732 miles HV merchant transmission line which spans from Wyoming to Nevada took 13 years to receive permitting approvals
- Utilizing existing right of ways can help expedite the construction of new transmission lines

Transmission Approval Process



Federal and state governments have recognized the challenges associated with the lengthy planning, permitting, and siting process for transmission lines. Several transmission related policies have been proposed and/or adopted as part of broader efforts to decarbonize.

Permitting reform which would address construction delays for transmission construction and many other different types of infrastructure projects, is also being considered.

Transmission Policy & Initiatives

- *Congress*
  - Advancing Grid Enhancing Technologies (GETs) Act
  - Building American Energy Security Act
  - Building Integrated Grids with Inter-Regional Energy Supply (BIG WIRES) Act
  - Clean Electricity and Transmission Acceleration (CETA) Act
  - Energizing our Communities Act
  - Enhancing Electric Grid Resilience Act
  - Facilitating America's Siting of Transmission and Electric Reliability (FASTER) Act
  - Grid Resiliency Tax Credit Act
  - Interregional Transmission Planning Improvement Act
  - Promoting Efficient and Engaged Reviews (PEER) Act
  - Streamlining Interstate Transmission of Electricity (SITE) Act
  - Streamlining Powerlines Essential to Electric Demand (SPEED) and Reliability Act

Transmission Policy & Initiative cont.

- *Department* of Energy
  - Categorical Exclusions for Transmission
  - Coordinated Interagency Transmission Authorizations and Permits (CITAP) Program
  - Memorandum of Understanding Regarding Facilitating Federal Authorization for Electric Transmission Facilities
  - Building a Better Grid Initiative
  - Grid Modernization Initiative (GMI)
  - Electric Advisory Committee (EAC)
  - Grid Resilience and Innovation Partnership (GRIP) Program
  - National Interest Electric Transmission Corridors (NIETCs)
  - Transmission Facility Financing (TFF)
  - Transmission Facilitation Program (TFP)
  - Transmission Siting and Economic Development (TSED) Grants Program
  - Wholesale Electricity Market Studies and Management (WEMSE) Program

Transmission Policy & Initiatives cont.

- *Major Industry Reports*
  - Offshore Wind Transmission Study
  - Transmission Interconnection Roadmap
  - Pathways to Commercial Liftoff: Innovative Grid Deployment
  - Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection
  - Transmission Needs Study

Transmission Policy & Initiatives cont.

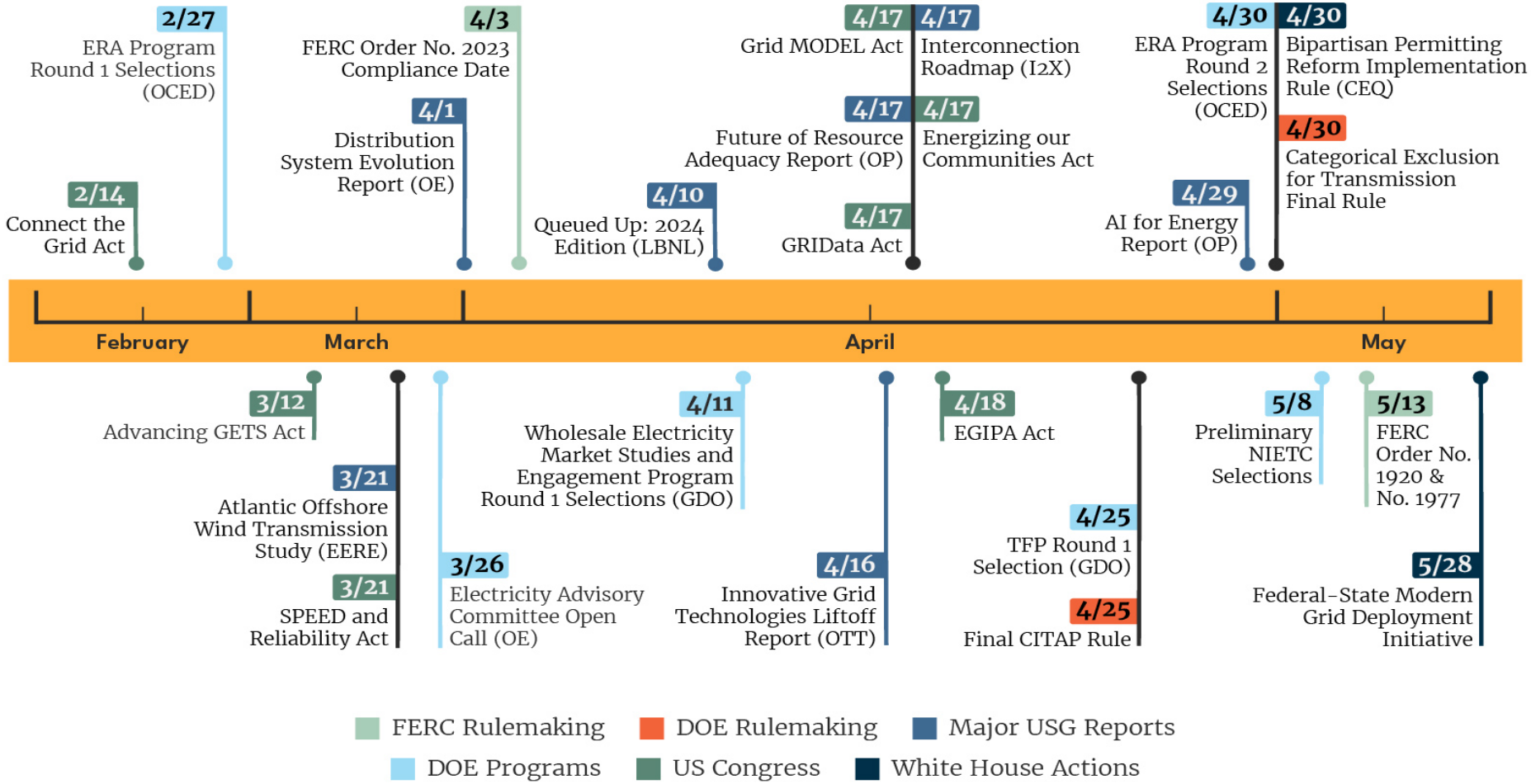
- *<u>FERC Rulemaking</u>*
  - Order No. 2023-A for Generation Interconnection Procedures
  - Order No. 1920 for long-term regional transmission planning reform
  - Order No. 1977 for siting authority to support transmission development in NIETCs and add new resource report requirements

Transmission Policy & Initiatives cont.

- White House Action
  - *Bipartisan Permitting Reform Implementation Rule*
    - Streamlines NEPA environmental review process, sets deadlines for reviews, requires lead agency, and increased community involvement
  - *Federal Permitting Improvement Steering Council*
    - Dashboard to track all federal infrastructure projects across the country
  - *Federal-State Modern Grid Deployment Initiative*
    - Commits the White House and 21 states to increase efforts and collaboration in creating a more efficient power system
      - Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Washington and Wisconsin

TRACKING TRANSMISSION TRENDS

2024



Source: Third Way. "Tracking Transmission Trends: A Timeline of Recent Key Federal Actions". https://www.thirdway.org/blog/tracking-transmission-trends-a-timeline-of-recent-key-federal-actions. Accessed 4 June, 2024.

THIRD WAY

LAMPS SMARTENERGY