



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

Power Board Meeting Agenda

6/5/2024

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 May 2024

STAFF REPORTS

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

OLD BUSINESS

1. Update about requirements for Pre-Qualified Contractors – Mike Ramirez

NEW BUSINESS

1. Update about outages and reliability – Scott Hughes
2. Discussion about Power Cost Adjustments – 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





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1 The Hurricane City Power Board met on May 1, 2024, at 3:00 p.m. at the Clifton Wilson Substation located at
2 526 W 600 N.

3
4 In attendance were Mac Hall, Dave Imlay, Joseph Prete, Tony Certonio, Scott Hughes, Brian Anderson, Mike
5 Ramirez, Dayton Hall, Fred Resch, Mike Vercimak, Bruce & Linda Zimmerman, and Crystal Wright.

6
7 Mac Hall welcomed everyone to the meeting. Fred Resch led the Pledge of Allegiance and Scott Hughes
8 offered the prayer. Dave Imlay motioned to approve minutes from the April 2024 meeting after one
9 clarification. Tony Certonio seconded the motion. Motion passed unanimously.

10

11 **Scott Hughes:** Scott Hughes thanked those that were able to attend the UAMPS Municipal Toolkit and
12 discussed presentations from that meeting. There was some interest in discussing the Power Cost Adjustment
13 (PCA) information that was presented at the toolkit. Scott Hughes will get information together to present to
14 the Power Board in the next couple of months. Joseph Prete would like to know which communities have a
15 PCA, which do not, and more information for the ones who don't have it who have experienced any financial
16 crisis because of that choice.

17

18 **Brian Anderson:** Brian Anderson reported that we have one distribution circuit that has been energized out to
19 Three Falls Substation. Joseph Prete asked if the substation has been energized. Brian Anderson explained that
20 there is only power to the substation to get the control building power. The Line & Service crews spent some
21 time in the switch basement getting the terminations done. Scott Hughes wanted to commend the crews for
22 the excellent work they did. He explained there are times you'll go into those basements and wires will be
23 crossed, not organized or neat and it makes the work to change things more difficult. The guys kept everything
24 organized which will help with efficiency later. He is grateful for their expertise and work quality. UAMPS had a
25 project where they had to move poles. We had to transfer our distribution wires to the new pole and put in
26 new anchors. The Line Crew completed some underground work required to provide another option to under
27 build a UAMPS line to provide another feed into the Dennett project by the Shooting Park. We will wait to
28 complete that project until we have more funding. He described the work that the Line Crew has been doing to
29 refresh the Christmas Décor. He showed pictures and explained the safety meeting we held this month. It was
30 Bucket Truck Rescue and is something we must re-certify each year. We must rescue a 200-lb. dummy out of
31 the bucket truck within a timed limit each year.

32

33 **Mike Ramirez:** Mike Ramirez described an outage that was scheduled with S&S Steel for some upgrades they
34 needed done. We also completed some work down in Interstate Rock's pit reworking some secondary leads to
35 handle the upgrades they were doing to their system. They've added demand in their pit which has increased
36 their load and required some upgrades to their system which they paid for. He showed some pictures of the
37 new vending machines that Fastenal has delivered. They will be stocked with consumables. We are hoping to
38 increase efficiency by not having to run to various stores for those items every time an employee needs them.

39



40 **Jared Ross:** Mike Ramirez reported for Jared Ross. The new gates at Three Falls Substation have been installed.
41 The battery banks have been tested and energized. This provides the DC power the control station will need.
42 An antenna and radios have been installed to begin connecting communication between the substation and
43 Clifton Wilson. We have been working on getting the required signage prepped and installed. They've also
44 been working on installing the switch grounding pads. Joseph Prete asked if the timeline is still on track. Scott
45 Hughes confirmed that it is.

46
47 Mac Hall mentioned that he noticed the budget discussion was excluded from the agenda. After a short
48 discussion, it was decided to present that information quarterly unless someone has questions. The budget
49 information will continue to be included in the monthly packet.
50

51 **Southwest Utah Technical Task Force Update:** Scott Hughes explained what the Task Force is and why it was
52 created. The wire was changed out to be able to handle the increased load between St George substation to
53 the Purgatory Substation. It can now handle more capacity. The group has been discussing a 138kv loop
54 through Washington County. Dave Imlay asked if this is the line coming down the east side of the county. Scott
55 Hughes stated no, the line on the east side is planned to be a 345kv line. Joseph Prete asked a question about
56 transmission lines coming down into Washington County. Discussion about what would be possible due to
57 catastrophe on any of those lines. Joseph Prete asked if all our generators are up and running. Scott Hughes
58 replied that Generator 5 hasn't been completely reinstalled after it came back. We are working on getting the
59 prep work done for the upcoming generator run season.
60

61 **Discussion about requirements for Pre-Qualified Contractors:** Mike Ramirez presented some history regarding
62 our current pre-qualification process and why we have been looking to update it. Our current requirements
63 show a S200 license is required which doesn't even exist anymore. That license has been updated to an E200
64 license. He went through the requirements for the updated E200 license. The secondary issue we're having is
65 current journeyman lineman would like to do work and they know the high voltage electrical side but may not
66 know the excavation side of things. Tony Certonio asked a question about the stricter E200 license
67 requirement. His company specifically has an E100 and B100 and is able with those licenses to do work in all
68 Southern Utah cities currently. They do not have an E200 license so it would exclude them from being able to
69 work in Hurricane City. His concern is it would limit your contractor pool and may increase costs. Scott Hughes
70 explained that when we choose to contract this work out, we want to make sure that quality work is being
71 done by knowledgeable companies to reduce the man hours it takes our employees explaining how to do it to
72 our standards. This is an open discussion to get ideas from the board. We continue to have problems with
73 contractors requiring a lot of our employee time explaining things they should already know. Joseph Prete
74 asked how this affects the discussion that has been ongoing about what work the City contracts out and what
75 we keep. How would increasing our requirements affect those discussions and operations? Mike Ramirez and
76 Scott Hughes explained that currently underground installations are almost always contracted by the general
77 contractor of each individual development. They must meet our pre-qualifications currently and be on our pre-
78 qualification list. Tony Certonio asked what the upgraded license allows them to do. Dave Imlay asked what
79 exactly we are asking to change. Mike Ramirez summarized the S200 is no longer a license in Utah and
80 journeyman lineman currently cannot work on our system under our current requirements. Another question
81 is whether we require all our currently qualified contractors to update to our new standard. Tony Certonio
82 stated if we are going to require a license then it needs to be an overall requirement for everyone and maybe
83 give them a grace period to get the new licensing in place. He stated if we're limiting to a higher standard of
84 E200, we will be limiting our options in the future. He does a lot of work in Washington City and explained how
85 they operate over there. Mac Hall suggested that we reach out to Rick Hansen with Washington City to find
86 out how they operate and table this discussion while we do some research.

87 The next discussion is similar except it deals specifically with solar contractors. We currently require them to
88 go through an in-house orientation explaining our policies and a solicitor's license to go door-to-door, but do
89 not verify any other electrical licensing. Dayton Hall asked if the solar companies do any work on our side of
90 the meter or just theirs. Scott Hughes stated that it's just theirs, but they are interconnected to our grid. We
91 can look online to verify licenses for solar companies. Tony Certonio suggested checking if the S202 is a
92 requirement for solar installations and then to use that license if it is. Joseph Prete would like to see a policy
93 that is fair to companies that aren't as large and may be pushed out of the market to take on those jobs with
94 stricter policies, while still maintaining a standard for quality work and installations. Mac Hall suggested writing
95 up what we'd like to do and then bring it back for review.
96

97 **Discussion and possible recommendation about a line extension:** Scott Hughes presented information about
98 a specific line extension. He stated the way we understand the ordinance is that there should be a formal
99 application for line extensions. The developer would complete the application, go through a staff review,
100 through the Power Board for a recommendation, and ultimately present it to the City Council for approval. He
101 didn't want to go through all the work of creating a formal application if the City Council doesn't want to
102 proceed with the process in this way. We'll informally process this specific application and if the City Council
103 likes how the process feels, then he will spend the time to create the application for a more formal process for
104 future extension requests. There continue to be requests for new developments in the southern end of the
105 valley for more power. He explained a specific group of developments that need infrastructure and capacity.
106 One of those included is our Water Department, which needs power for a new well they are installing to meet
107 their own infrastructure needs for that same area. He discussed what would be necessary for both the need
108 for infrastructure and capacity. He discussed the previous Capacity Projects that had been created for similar
109 purposes. Mac Hall wanted to clarify who would be paying for this. Scott Hughes stated that it would be the
110 five developments included. Joseph Prete asked if the City is obligated to throw this concept of combining
111 forces for line extensions out there or if we just tell them there isn't power currently. Mike Vercimak stated
112 this is why it is important for the City Council to weigh-in because one City utility may decide to improve
113 service to an area, however the other City utilities are not prepared to do the same. Once one utility exists,
114 then the Planning Department begins to get pressured to get the other utilities there, when budgetary and
115 other constraints prevent them from doing so immediately. He feels like the line extension ordinance was put
116 together for this specific reason. Crystal Wright read the actual ordinance, which is Hurricane City Code Section
117 8-4-3, Application for Service. There was a discussion about easements that already exist and what would still
118 need to be obtained. Dayton Hall summarized that for this extension and for the others that will inevitably
119 come what level of detail and information would the Power Board like to see to be able to make their
120 recommendation to the City Council. Dave Imlay asked if we're making a recommendation on the process of a
121 line extension approval or just this specific line extension. Mac Hall wants to know how the board would like
122 the process to be. The discussion was that the Power Board is comfortable with this process. Scott Hughes
123 stated he would like to use this line extension request as a template for future requests. He wants to
124 informally bring this to the City Council to see if there is more information they would like included in the
125 future to begin to create a formal application. Dave Imlay made a recommendation for this specific line
126 extension as an approval from the Power Board to the City Council. Tony Certonio seconded the motion. The
127 motion passed unanimously. Joseph abstained.
128

129 **UAMPS Updates:** Scott Hughes stated we will continue to put more of this information into the packet, but
130 unless there are any questions regarding what was included, we will not go over it today.
131

132 Joseph Prete made a motion to go into a closed meeting to discuss potential interest in the purchase of real
133 property. Tony Certonio seconded the motion. Motion passed unanimously at 5:05 pm. Came out of closed
134 session at 5:17 pm.

135
136 Power Board adjourned at 5:17 p.m. The next Power Board Meeting is scheduled for June 5, 2024, at 3:00 p.m.

DRAFT

BUDGET

Apr



AVERAGE YEARLY POWER PRICES

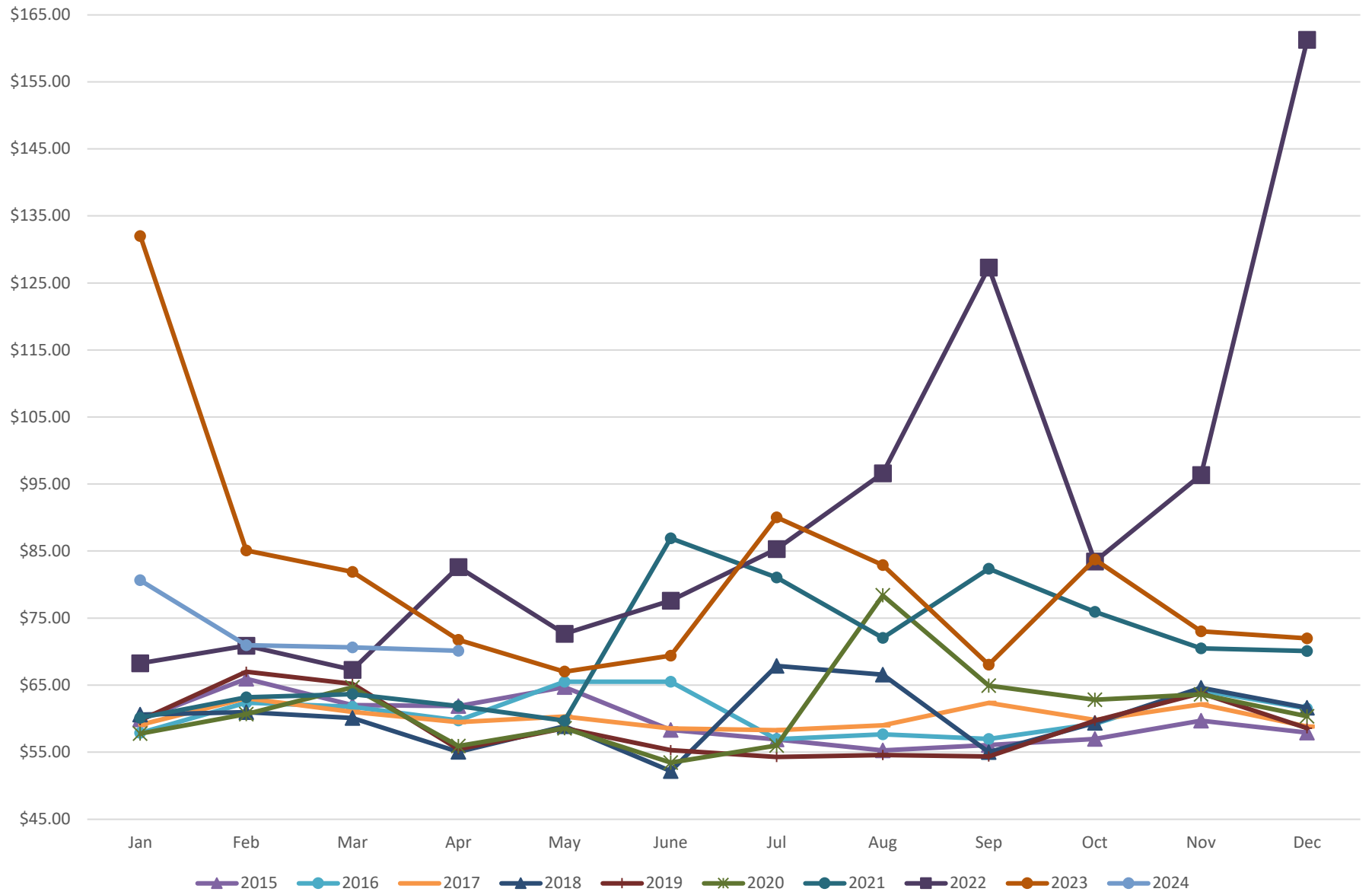
23-24 bdgt amount (thru Apr 2024) **\$78.79**
 BDGT Year to Date **\$77.64**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<i>Jan</i>	\$59.86	\$57.87	\$59.07	\$60.62	\$59.75	\$57.76	\$60.14	\$68.25	\$132.00	\$80.65
<i>Feb</i>	\$65.94	\$62.38	\$63.04	\$60.96	\$67.00	\$60.67	\$63.19	\$70.88	\$85.08	\$70.96
<i>Mar</i>	\$62.03	\$61.77	\$60.99	\$60.09	\$65.17	\$64.67	\$63.64	\$67.28	\$81.89	\$70.62
<i>Apr</i>	\$61.88	\$59.71	\$59.49	\$55.02	\$55.44	\$55.92	\$61.86	\$82.63	\$71.74	\$70.12
<i>May</i>	\$64.71	\$65.51	\$60.32	\$58.86	\$58.55	\$58.55	\$59.69	\$72.66	\$67.01	
<i>June</i>	\$58.30	\$65.51	\$58.54	\$52.17	\$55.30	\$53.44	\$86.91	\$77.60	\$69.40	
<i>Jul</i>	\$56.91	\$56.95	\$58.29	\$67.87	\$54.29	\$55.98	\$81.04	\$85.31	\$90.02	
<i>Aug</i>	\$55.27	\$57.67	\$59.00	\$66.55	\$54.58	\$78.40	\$72.03	\$96.60	\$82.90	
<i>Sep</i>	\$56.06	\$56.97	\$62.36	\$55.00	\$54.34	\$64.93	\$82.38	\$127.29	\$68.06	
<i>Oct</i>	\$56.97	\$59.23	\$59.79	\$59.36	\$59.70	\$62.82	\$75.92	\$83.45	\$83.76	
<i>Nov</i>	\$59.68	\$64.18	\$62.14	\$64.60	\$63.80	\$63.60	\$70.47	\$96.34	\$73.03	
<i>Dec</i>	\$57.90	\$61.51	\$58.80	\$61.61	\$58.55	\$60.33	\$70.07	\$161.27	\$71.99	
<i>Yr Avg</i>	\$59.63	\$60.64	\$60.15	\$60.23	\$58.87	\$61.42	\$70.61	\$90.80	\$81.41	\$73.09
<i>Weighted Avg</i>	\$58.99	\$59.55	\$59.90	\$60.56	\$58.11	\$61.98	\$72.46	\$92.09	\$81.92	\$73.37

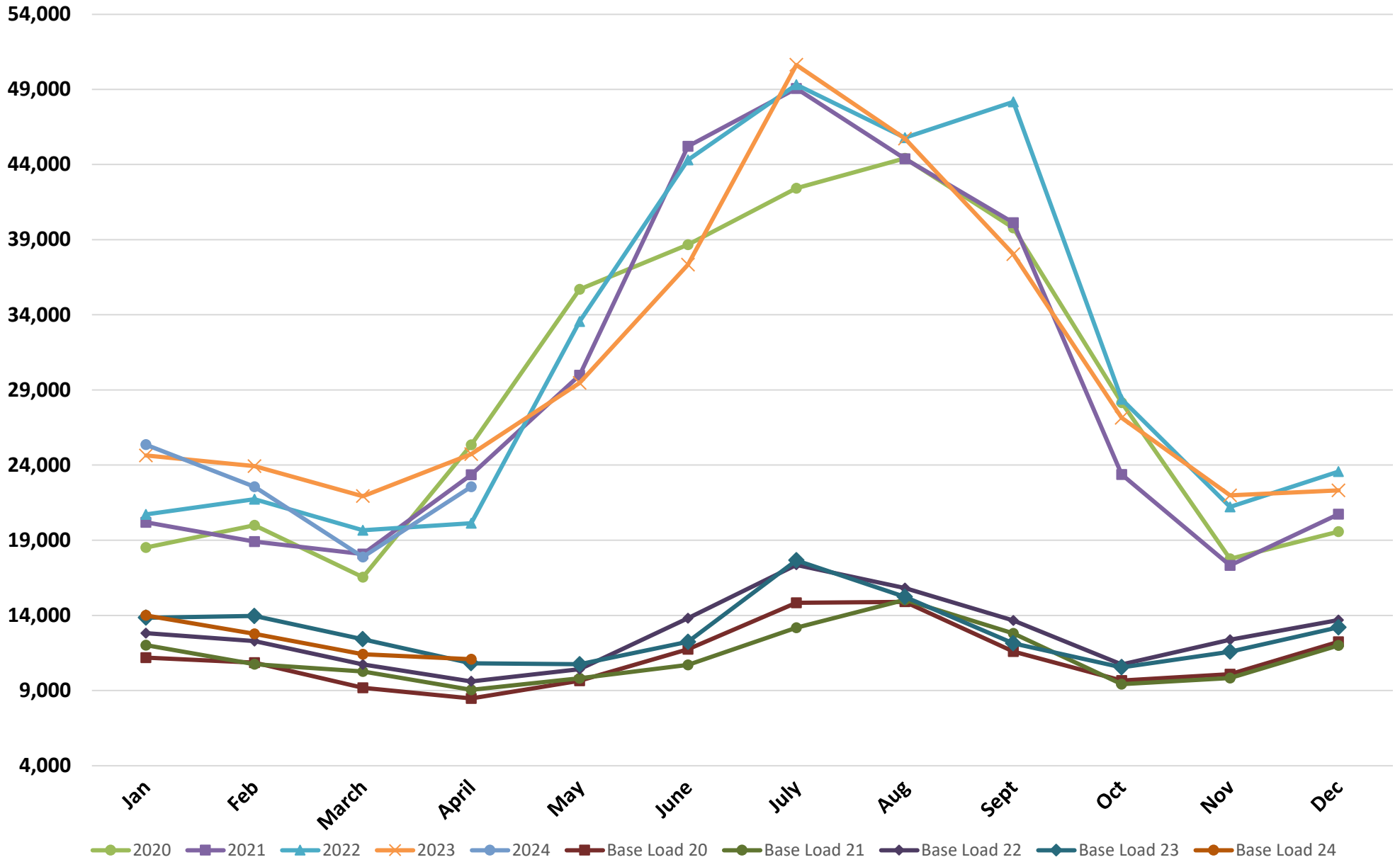
**Cy to
Date**

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.

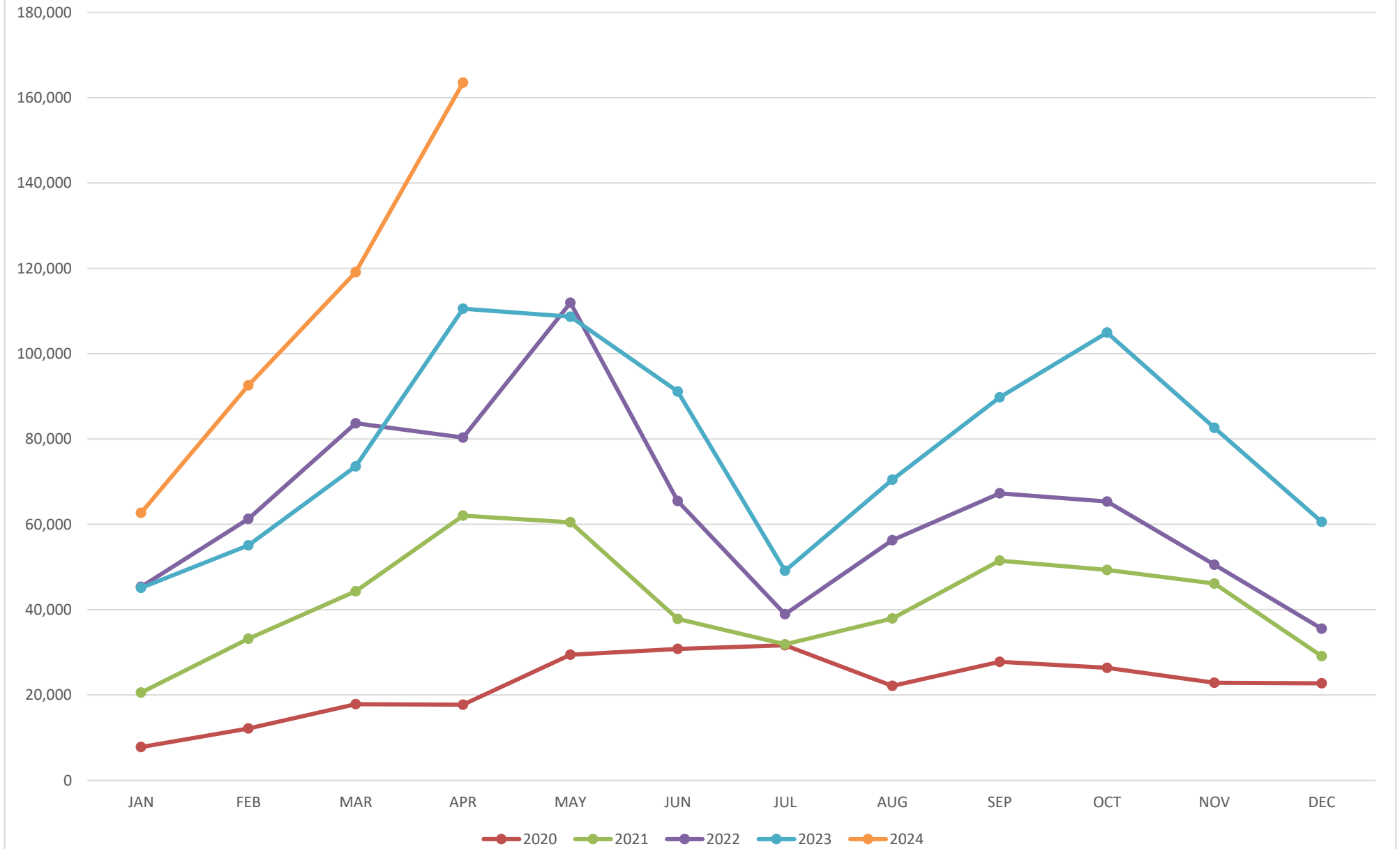
Avg Monthly Price



2020 - 2024 KW LOAD



Solar Kwh



ENERGY REVENUE MARGINS AND DEFICITS BY MONTHS



Energy Revenue

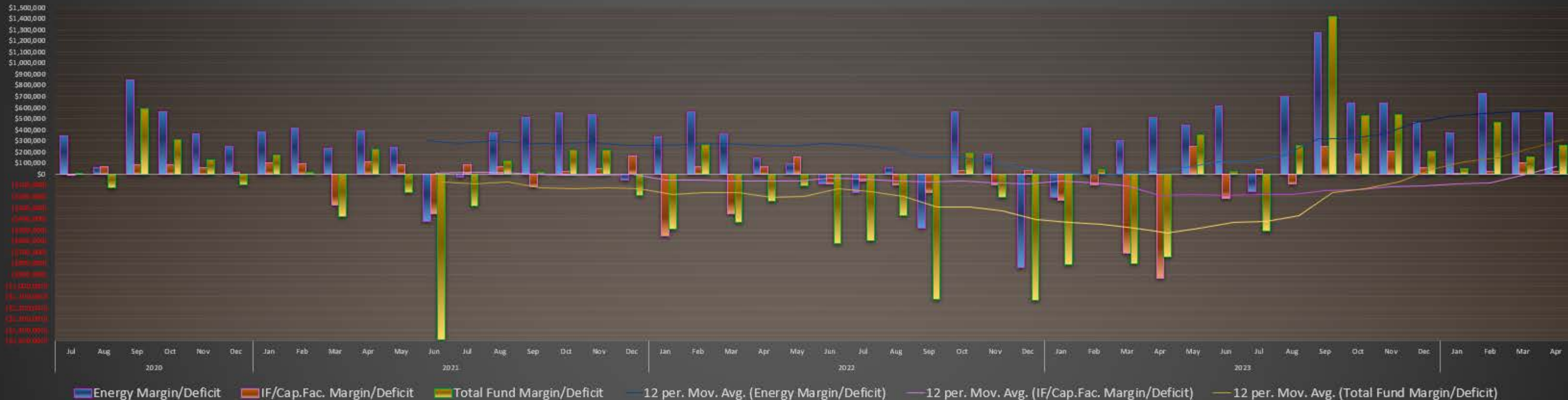
Cost of Sales

Energy Margin/Deficit

Energy Margin/Deficit Statistics



Total Fund Margins And Deficits With TREND LINES



HURRICANE CITY LICENSE QUALIFICATIONS

Hurricane City Power has always required electrical contractors to be prequalified to install any HV equipment on our system. The requirement has changed a couple of times in the past, we are looking to solidify a position that will be in conjunction with state laws.

HIGH VOLTAGE INSTALLERS

PAST QUALIFICATIONS: E100 or S200 with a minimum of 3 years of experience of this type of work, equipment to properly install, complete an application, classroom instruction, and prequalification test. Certified Linemen were also given privileges to install if they passed the test.

RECOMMENDED NEW QUALIFICATIONS: **E200 ONLY** with a minimum of 3 years of experience of this type of work, equipment to properly install, complete an application, classroom instruction, and prequalification test. **Certified Lineman will no longer be able to install high voltage conduit/cable/equipment per state laws.**

SOLAR INSTALLERS

PAST QUALIFICATIONS: Obtain a solicitation license from Hurricane City and complete a solar orientation class by Hurricane Power.

RECOMMENDED NEW QUALIFICATIONS: Provide proof of license **E200, E201, S202, B100**. Obtain a solicitation license from Hurricane City and complete a solar orientation class by Hurricane Power. Due to the nature of the license capabilities per state law, solar contractors may need to **provide names of other qualified companies** to complete the project on the initial application form.

AN ATTACHED SPREADSHEET SHOWS THE PERMISSIBLE QUALIFICATIONS FOR EACH LICENSE.

STATE LICENSE

	HIGH VOLTAGE INSTALLATION		SOLAR INSTALLATION			
	HV CONDUIT	HV CABLE	DC RESIDENTIAL	DC COMMERCIAL	AC RESIDENTIAL	AC COMMERCIAL
E100	✓	✗	✗	✗	✗	✗
B100	✓	✗	✓	✗	✗	✗
E200	✓	✓	✓	✓	✓	✓
E201	✗	✗	✓	✓	✓	✗
S202	✗	✗	✓	✓	✗	✗

GENERAL ENGINEERING CONTRACTOR ALLOWED TO INSTALL CONDUIT

GENERAL BUILDING CONTRACTOR ALLOWED TO INSTALL SOLAR ON OWN PROJECT/ NOT TO ACTIVELY SEEK JOBS

GENERAL ELECTRICAL CONTRACTOR ALLOWED TO ALL WORK

RESIDENTIAL ELECTRICAL CONTRACTOR

SOLAR PHOTOVOLTAIC CONTRACTOR



Hurricane City Power

2023 ANNUAL BENCHMARKING REPORT **eRELIABILITY** TRACKER

I. About This Report

This report focuses on distribution system reliability across the country and is customized to each utility that participates in the American Public Power Association's eReliability Tracker service. APPA created the eReliability Tracker Annual Report to assist utilities in their efforts to understand and analyze their electric system. In 2012, APPA developed the eReliability Tracker thanks to a grant from the Demonstration of Energy & Efficiency Developments (DEED) program.

This report reflects data in the eReliability Tracker from January 1, 2023 to December 31, 2023. This analysis might not properly reflect your utility's statistics if you do not have a full year of data in the system. The report includes data recorded as of March 15, 2024.

Reliability reflects both historic and ongoing engineering investment decisions within a utility. Proper use of reliability metrics ensures that a utility is performing its intended function and is providing service in a consistent and effective manner.

While the primary use of reliability statistics is for self-evaluation, you can use these statistics to compare your utility with similar utilities. However, differences such as electrical network configuration, ambient environment, weather conditions, and number of customers served typically limit most utility-to-utility comparisons. Due to the diverse range of utilities that use the eReliability Tracker, this report endeavors to improve comparative analyses by grouping utilities by size and region.

Since this report contains data for all utilities that use the eReliability Tracker, it is important to consider how a particularly large or small utility can affect comparative benchmarks. To ease the issues associated with comparability, each utility's reliability statistics are weighted based on customer count when aggregated. This means that all utilities are equally weighted, and all individual statistics are developed on a per customer basis.

The aggregate statistics in this report are calculated from the 324 utilities with verified 2023 outage data. Utilities that experienced no outages in 2023, or did not upload any data, will have NULL, None, or "0" values in their report for utility-specific data and were not included in the aggregate analysis. Also note that log-normal data with a z-score¹ greater than 3.25 may be excluded if it significantly distorts the aggregate statistics.

-
1. A z-score indicates how much a data point differs from the mean. For instance, a z-score of 3.25 indicates that the data point is three and one-quarter standard deviations from the mean. A z-score of 0 indicates that the data point is identical to the mean.

Utility Classifications

This report separates utilities into groups according to geographic region and the number of customers served. Table 1 shows the range of customer counts for utilities that use the eReliability Tracker by five distinct groups of approximately 105 utilities per group.

Your utility is in size class 4 and region 1.

Table 1. Customer count range per size class

	Customer Count Range
Class 1	[0, 1518)
Class 2	[1518, 3480)
Class 3	[3480, 7325)
Class 4	[7325, 14489)
Class 5	[14489, 503649)

Each utility is also grouped with all other participating utilities within their region. Figure 1 shows the number of utilities using the eReliability Tracker in each region and Figure 2 shows the states and territories included in each region.

Figure 1. Number of utilities subscribed to the eReliability Tracker by region

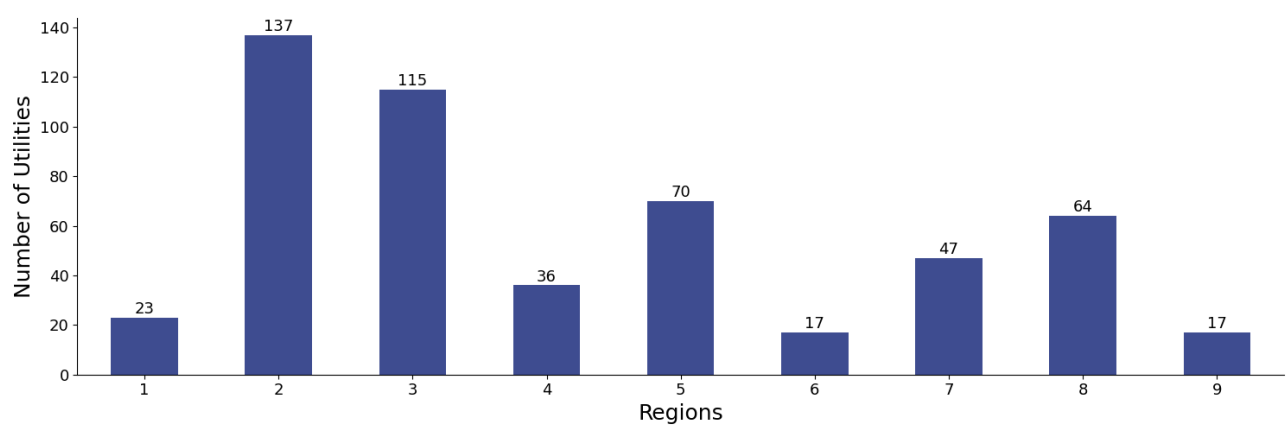
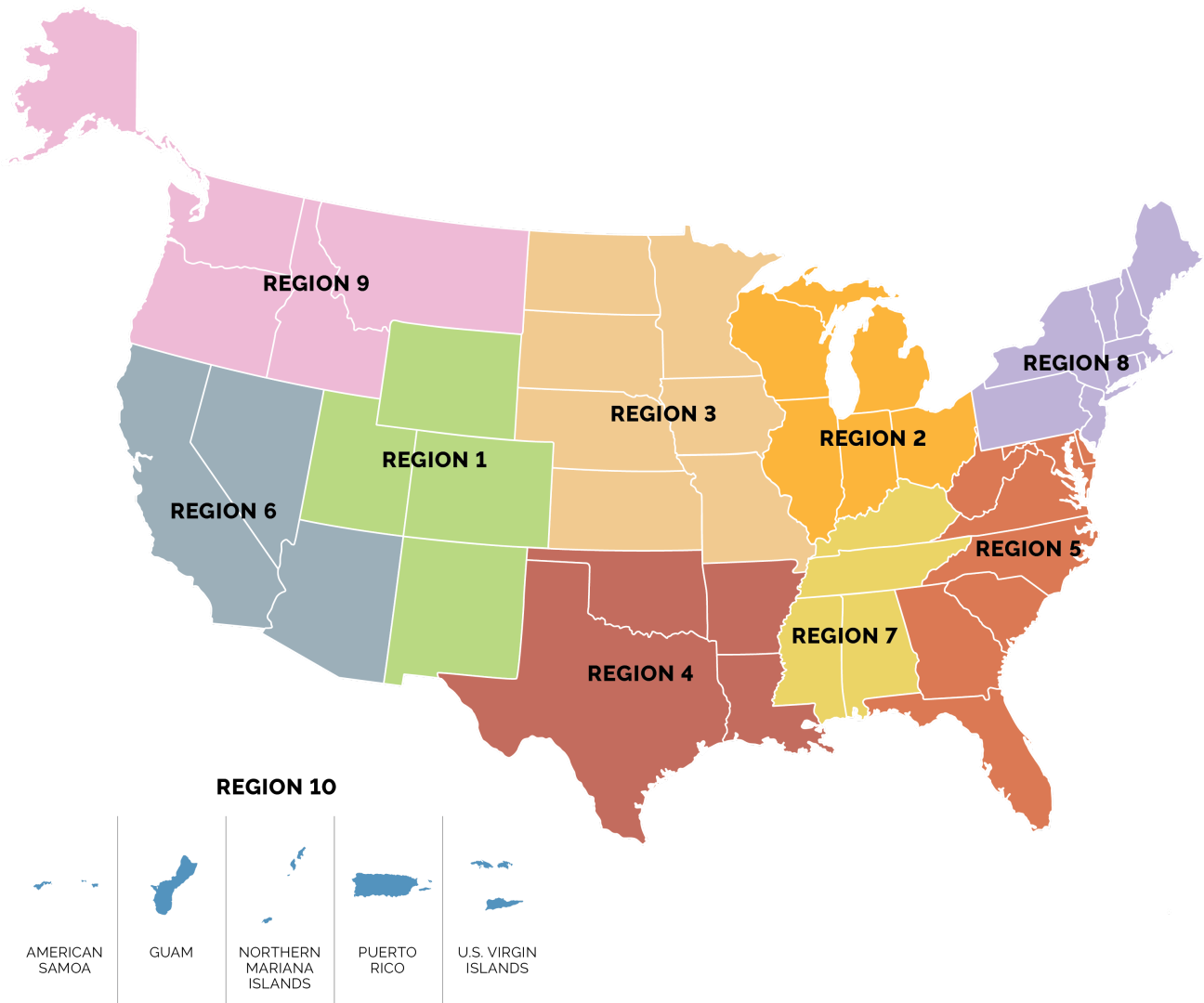


Figure 2. Regions



II. IEEE Statistics

When it comes to reliability, the industry standard metrics are defined in the Institute for Electrical and Electronics Engineers' Guide for Electric Power Distribution Reliability Indices, or IEEE 1366 guidelines. For each utility, the eReliability Tracker performs IEEE 1366 calculations for System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), Customer Average Interruption Duration Index (CAIDI), Momentary Average Interruption Frequency Index (MAIFI) and Average Service Availability Index (ASAI).

It is important to note how major events (MEs) are calculated and used in this report. An example of a ME includes severe weather, such as a tornado or hurricane, that leads to unusually long outages in comparison to your distribution system's typical outage. This report uses the **APPA ME threshold**, which is based directly on the SAIDI for specific outage events, rather than a daily SAIDI. The APPA ME threshold allows a utility to remove outages that exceed the IEEE 2.5 beta threshold for outage events, which considers up to 10 years of the utility's outage history. In the eReliability Tracker, if a utility does not have at least 36 outage events prior to the year being analyzed, then no threshold is calculated. If this is the case for your utility, then you will have a NULL value in the following field and the calculations without MEs in the SAIDI, SAIFI, CAIDI, and ASAI sections of this report will be the same as the calculations with MEs for your utility. More outage history will provide a better threshold for your utility.

Your utility's APPA major event threshold is **13.88** minutes.

For each of the reliability indices, this report displays your utility's metrics alongside the mean values for all utilities using the eReliability Tracker and within the same class and region as your utility. The first table within each of the following subsections allows you to better understand the performance of your electric system relative to other utilities nationwide and to those within your same region or size class. The second table breaks down the national data into quartile ranges, a minimum value, and a maximum value.

All indices, except MAIFI, are calculated for outages with and without MEs. Furthermore, the tables show indices for scheduled and unscheduled outages. Note that scheduled and unscheduled calculations include MEs. Also note that wherever MEs are excluded, the exclusion is based on the APPA ME threshold for your system.

II.1. System Average Interruption Duration Index

SAIDI is the average duration (in minutes) of an interruption per customer served by the utility during a specific time frame.

Since SAIDI is a sustained interruption index, only outages lasting longer than five minutes are included in the calculations. SAIDI is calculated by dividing the sum of all customer minutes of interruption¹ within the specified time frame by the average number of customers served during that period. For example, a utility with 100 customer minutes of interruption and 100 customers would have a SAIDI of 1.

Note that in the tables below, scheduled and unscheduled calculations include MEs. Also note that wherever MEs are excluded, the exclusion is based on the APPA ME threshold for your system.

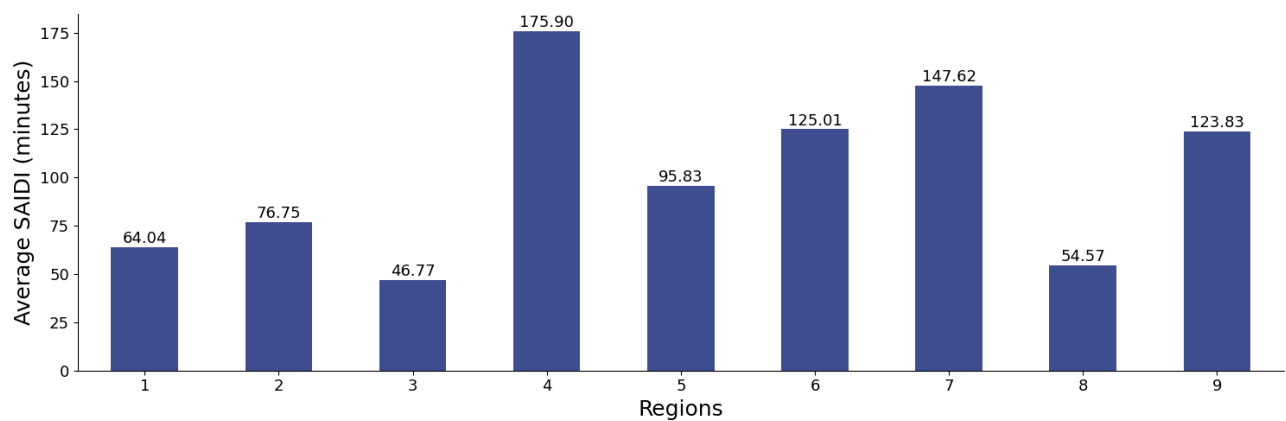
Table 2. Average SAIDI with and without MEs
In minutes

	All	No MEs	Unscheduled	Scheduled
Your utility	20.77	20.77	6.25	14.49
Utilities that use the eReliability Tracker	88.97	47	84.06	8.95
Utilities in your region	64.04	38.38	59.19	7.28
Utilities in your size class	72.22	37.37	70.12	3.36

Table 3. Summary SAIDI data from the eReliability Tracker
In minutes

	All	No MEs	Unscheduled	Scheduled
Minimum	0.2	0.04	0.04	0
First Quartile	18.2	11.89	15.9	0.19
Median	50.54	27.57	45.7	1.04
Third Quartile	111.3	58.28	106.4	4.44
Maximum	1028.99	691.25	1028.75	480.88

Figure 3. Average SAIDI by region



1. Customer minutes of interruption is calculated by multiplying total customers interrupted and total minutes of interruption.

II.2. System Average Interruption Frequency Index

SAIFI is the average instances a customer on the utility system will experience a sustained interruption during a specific time frame.

Since SAIFI is a sustained interruption index, only outages lasting longer than five minutes are included in the calculations. SAIFI is calculated by dividing the total number of customers that experienced sustained interruptions by the average number of customers served during that period. For example, a utility with 150 customer interruptions and 200 customers would have a SAIFI of 0.75.

Note that in the tables below, scheduled and unscheduled calculations include MEs. Also note that wherever MEs are excluded, the exclusion is based on the APPA ME threshold for your system.

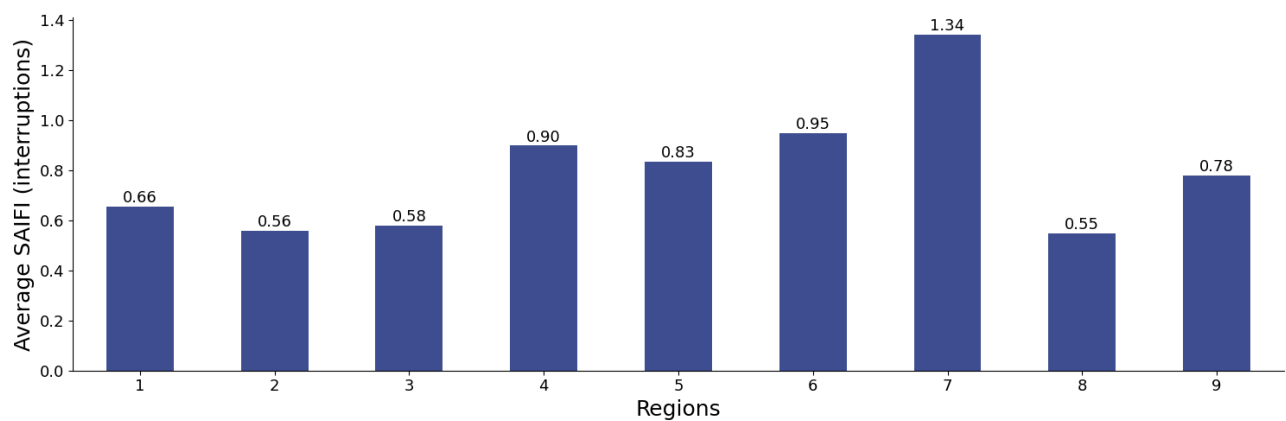
Table 4. Average SAIFI with and without MEs
In interruptions

	All	No MEs	Unscheduled	Scheduled
Your utility	0.16	0.16	0.12	0.04
Utilities that use the eReliability Tracker	0.74	0.51	0.7	0.06
Utilities in your region	0.66	0.46	0.62	0.06
Utilities in your size class	0.7	0.48	0.67	0.03

Table 5. Summary SAIFI data from the eReliability Tracker
In interruptions

	All	No MEs	Unscheduled	Scheduled
Minimum	0	0	0	0
First Quartile	0.22	0.16	0.22	0
Median	0.56	0.37	0.52	0.01
Third Quartile	1.07	0.71	1.01	0.04
Maximum	3.47	2.86	3.47	1

Figure 4. Average SAIFI by region



II.3. Customer Average Interruption Duration Index

CAIDI is the average duration (in minutes) of an interruption experienced by customers during a specific time frame.

Since CAIDI is a sustained interruption index, only outages lasting longer than five minutes are included in the calculations. CAIDI is calculated by dividing the sum of all customer minutes of interruption by the number of customers that experienced one or more interruptions during that period. This metric reflects the average customer experience (minutes of duration) during an outage.

Note that in the tables below, scheduled and unscheduled calculations include MEs. Also note that wherever MEs are excluded, the exclusion is based on the APPA ME threshold for your system.

Table 6. Average CAIDI with and without MEs

In minutes

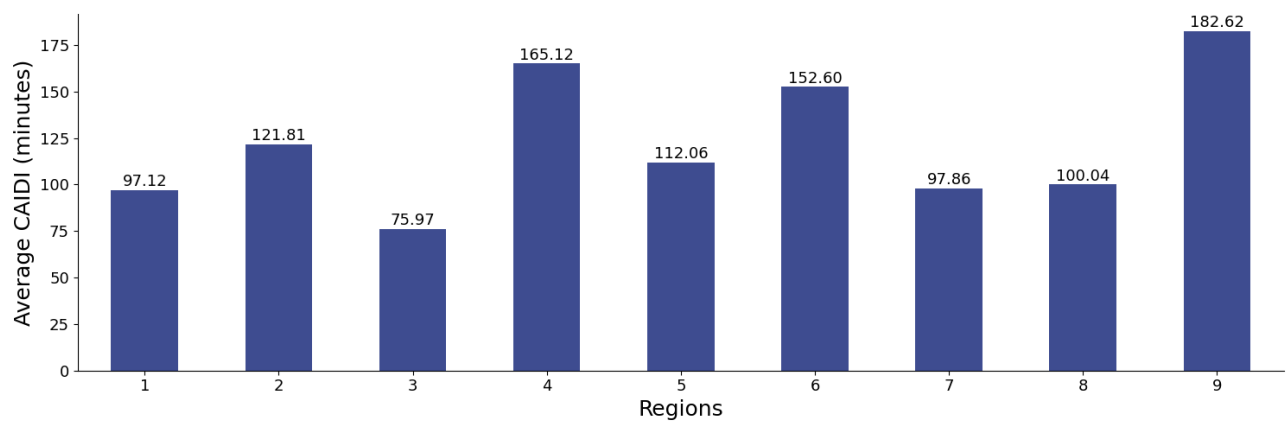
	All	No MEs	Unscheduled	Scheduled
Your utility	133.33	133.33	52.11	402.14
Utilities that use the eReliability Tracker	111.62	87.71	110.38	130.83
Utilities in your region	97.12	88.77	94.36	161.61
Utilities in your size class	107.49	81.49	107.94	103.51

Table 7. Summary CAIDI data from the eReliability Tracker

In minutes

	All	No MEs	Unscheduled	Scheduled
Minimum	15.04	13.65	14.74	6.68
First Quartile	64.3	53.52	63.02	59.83
Median	88.91	75.24	89.51	85.93
Third Quartile	130.35	106.26	129.46	140.8
Maximum	716.84	482.79	777.49	1373.7

Figure 5. Average CAIDI by region



II.4. Momentary Average Interruption Frequency Index

MAIFI is the average number of momentary interruptions a utility customer will experience during a specific time frame.

In this report, an outage with a duration of five minutes or less is classified as momentary. MAIFI is calculated by dividing the total number of customers that experienced momentary interruptions by the total number of customers served by the utility. For example, a utility with 20 momentary customer interruptions and 100 customers would have a MAIFI of 0.20.

Momentary interruptions can be more difficult to track and utilities without an automated outage management system might not log these interruptions; therefore, some utilities have a MAIFI of zero.

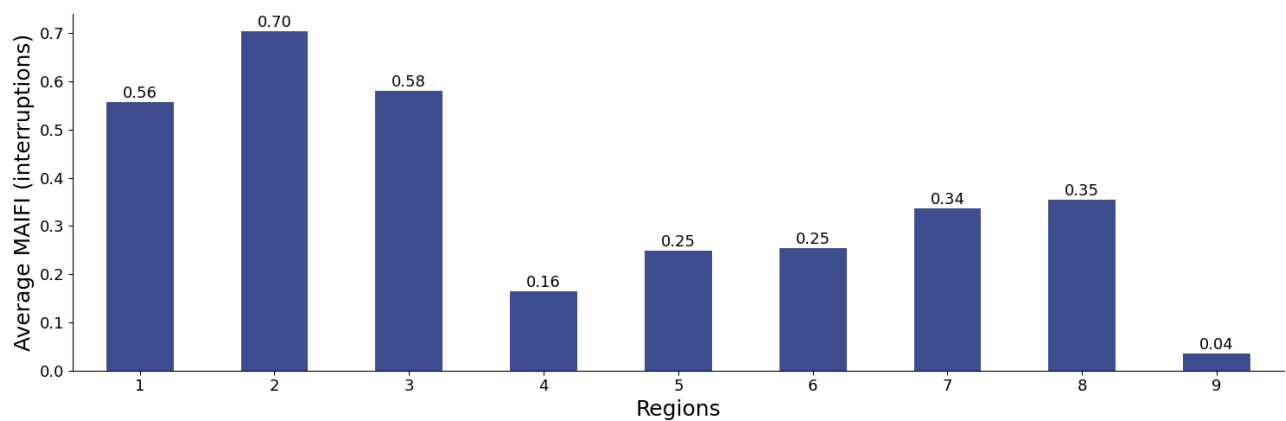
Table 8. Average MAIFI
In interruptions

	All
Your utility	NULL
Utilities that use the eReliability Tracker	0.41
Utilities in your region	0.56
Utilities in your size class	0.42

Table 9. Summary MAIFI data from the eReliability Tracker
In interruptions

	All
Minimum	0
First Quartile	0
Median	0.06
Third Quartile	0.43
Maximum	4.45

Figure 6. Average MAIFI by region



II.5. Average Service Availability Index

ASAI is the percentage of time the sub-transmission and distribution systems are available to serve customers during a specific time frame.

This load-based index represents the percentage availability of electric service to customers within the period analyzed. It is calculated by dividing the total hours in which service is available to customers by the total hours that service is demanded by the customers. For example, an ASAI of 99.99% means that electric service was available for 99.99% of the time during the given period. Note that the higher your ASAI value, the better the performance.

In the tables below, scheduled and unscheduled calculations include MEs. Also note that wherever MEs are excluded, the exclusion is based on the APPA ME threshold for your system.

Table 10. Average ASAI with and without MEs

In percentage

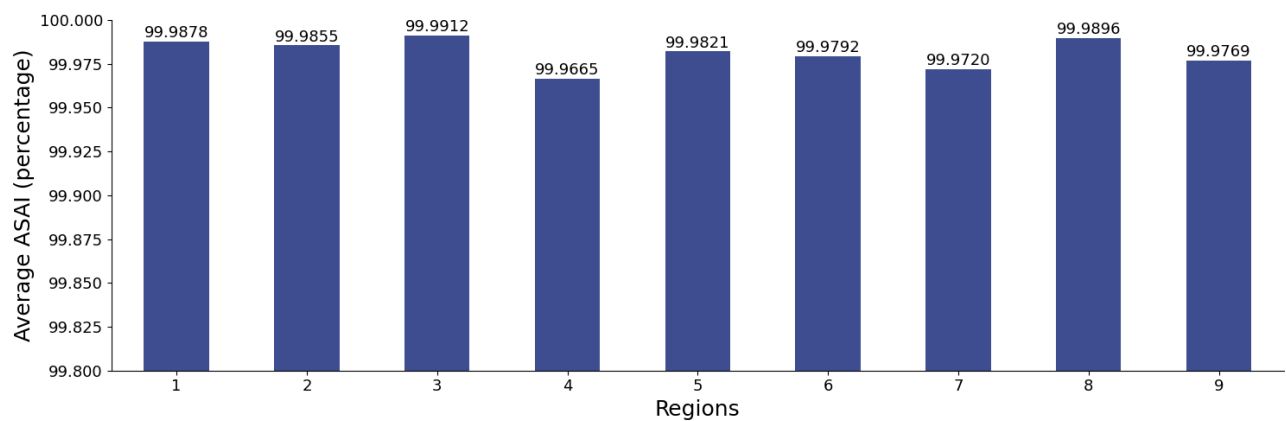
	All	No MEs	Unscheduled	Scheduled
Your utility	99.996	99.996	99.9988	99.9972
Utilities that use the eReliability Tracker	99.9833	99.9912	99.9842	99.9982
Utilities in your region	99.9878	99.9927	99.9887	99.9986
Utilities in your size class	99.9864	99.9929	99.9868	99.9993

Table 11. Summary ASAI data from the eReliability Tracker

In percentage

	All	No MEs	Unscheduled	Scheduled
Maximum	99.9999	99.9999	99.9999	99.9999
First Quartile	99.9965	99.9977	99.9969	99.9999
Median	99.9907	99.9947	99.9916	99.9998
Third Quartile	99.979	99.989	99.9804	99.9991
Minimum	99.8042	99.8684	99.8042	99.9085

Figure 7. Average ASAI by region



II.6. Energy Information Administration Form 861 Data

Form EIA-861 collects annual information on electric power industry participants involved in the generation, transmission, distribution, and sale of electric energy in the United States and its territories.

In 2014, EIA began publishing reliability statistics in Form EIA-861; therefore, APPA included these statistics in this report for informational purposes. Please note that the following data includes 174 investor-owned, 465 rural cooperative, and 324 public power utilities that were large enough to be required to fill out the full EIA-861 form. The statistics do not include data from utilities that complete the EIA 861-S form, which smaller entities complete. Note that the 324 participating public power utilities include entities classified by EIA as municipal, political subdivision, and state. In addition, since the collection and release of EIA form data lags by a year, the data is based on 2022 data that was published October 5, 2023. Therefore, we suggest you only use the aggregate statistics contained herein as an informational tool for further comparison of reliability statistics.

In Form EIA-861, an entity provides SAIDI and SAIFI including and excluding ME days in accordance with the IEEE 1366-2003 or IEEE 1366-2012 standard.

Although EIA collected other reliability-related data, the tables below only include SAIDI and SAIFI data including and excluding ME days. You can download the full set of data at: www.eia.gov/electricity/data/eia861/.

Table 12. Your utility's SAIDI and SAIFI with and without IEEE ME days

SAIDI with IEEE ME days (minutes)	SAIDI without IEEE ME days (minutes)	SAIFI with IEEE ME days (interruptions)	SAIFI without IEEE ME days (interruptions)
20.77	20.77	0.16	0.16

Table 13. Summary SAIDI data from Form EIA-861, 2022
In minutes

	All	No MEs
Average	363.98	148.09
Minimum	0.08	0
First Quartile	79.8	54.64
Median	176.36	105.13
Third Quartile	369.21	178.96
Maximum	11949.11	1760.49

Table 14. Summary SAIFI data from Form EIA-861, 2022
In interruptions

	All	No MEs
Average	1.74	1.3
Minimum	0	0
First Quartile	0.85	0.64
Median	1.42	1.07
Third Quartile	2.25	1.66
Maximum	15.96	12.07

III. Outage Causes

Equipment failure, extreme weather events, wildlife, and vegetation are some of the most common causes of electric system outages. The following pie chart shows the percentages of the primary causes of outages for all utilities using the eReliability Tracker in 2023.

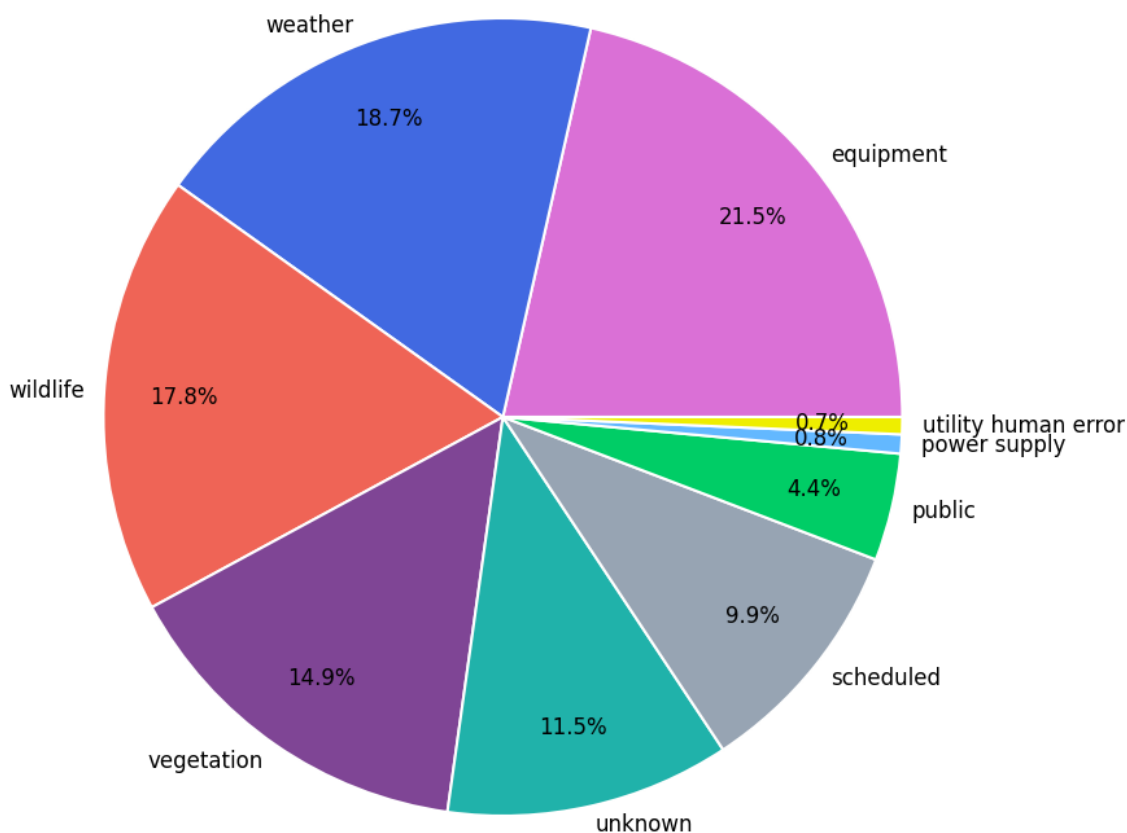


Figure 8. Primary causes of outages in 2023

Certain factors, such as regional weather and animal/vegetation patterns, can make some causes more prevalent for a specific group of utilities. The following section includes graphs depicting common causes of outages for your utility, all utilities in your region, and all utilities using the eReliability Tracker.

Charts containing aggregate information are customer-weighted to account for differences in utility size for a better analytical comparison. For example, a particularly large utility may have a large number of outages compared to a small utility. To avoid skewing the data toward large utilities, the number of cause occurrences is divided by customer size to account for the

differences. In Figures 9 to 14, the data represent the number of occurrences for each group of 1,000 customers. A customer-weighted occurrence rate of "1" means an average of one outage from that cause occurred per 1,000 customers in 2023.

Note that the sustained outage cause analysis is more comprehensive than the momentary outage cause analysis due to a larger and more robust sample size for sustained outages. Regardless, tracking both sustained and momentary outages helps utilities understand and reduce outages. To successfully use the outage information tracked by your utility, it is imperative to classify and record outages in detail. The more information provided per outage, the more conclusive and practical your analyses will be.

III.1. Sustained Outage Causes

In general, sustained outages are the most commonly tracked outage type. In analyses of sustained outages, utilities tend to exclude scheduled outages, partial power, customer-related problems, and qualifying major events from their reliability indices calculations. While this is a valid method for reporting, these outages should be included for internal review to make utility-level decisions. In this section, we evaluate common causes of sustained outages for your utility, corresponding region, and for all utilities that use the eReliability Tracker. It is important to note that sustained outages are classified in this report as outages that last longer than five minutes, as defined by IEEE 1366.

Figure 9. Top five causes of sustained outages for all utilities that use the eReliability Tracker

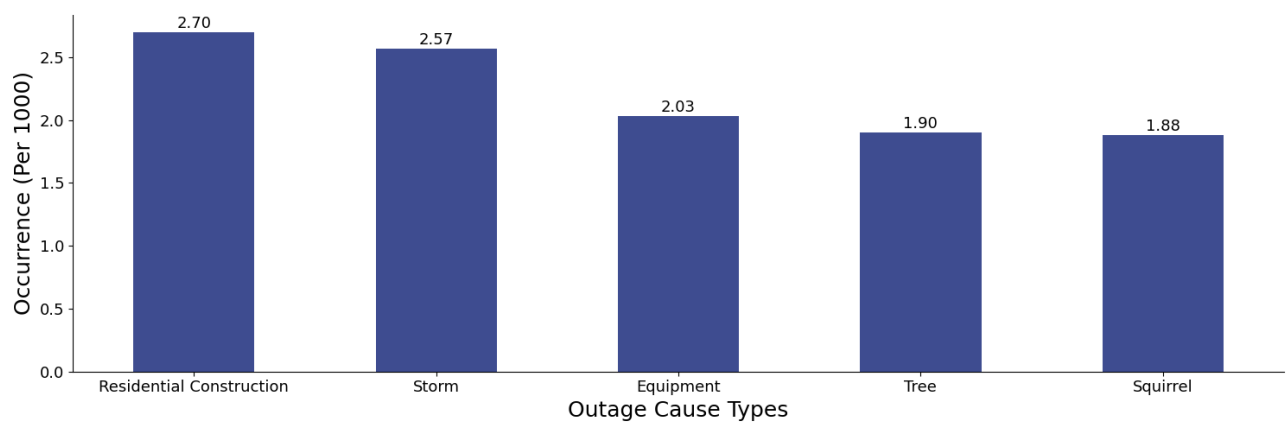


Figure 10. Top five causes of sustained outages for your utility¹

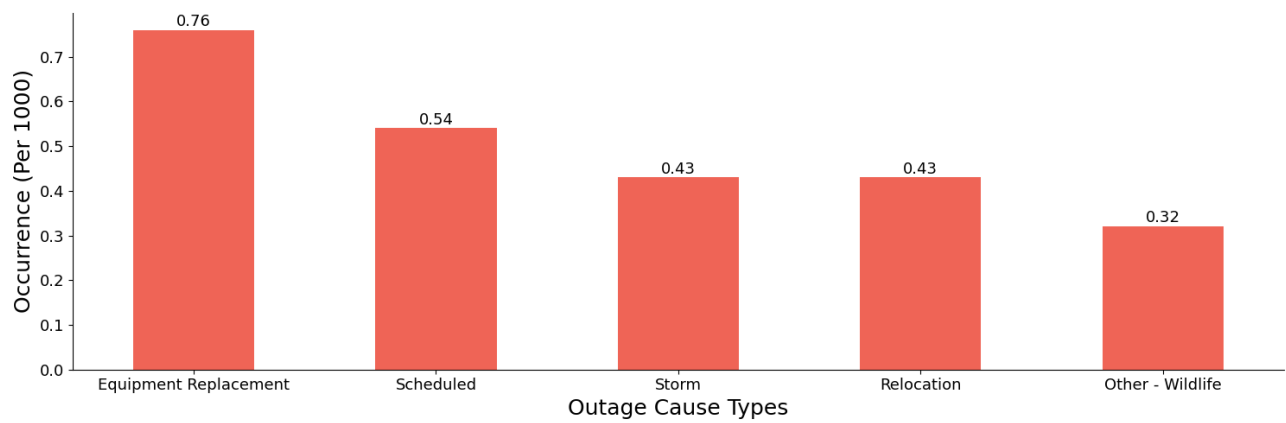
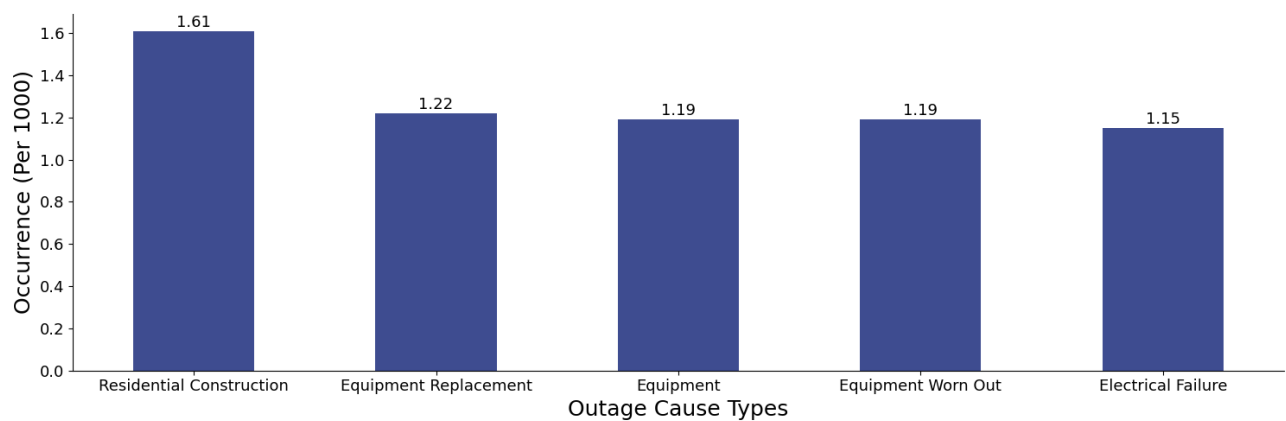


Figure 11. Top five causes of sustained outages in your region



-
1. The number of occurrences for each cause is divided by the utility's customer count (in thousands) to create an occurrence rate that can be compared across different utility sizes.

III.2. Momentary Outage Causes

The ability to track momentary outages can be difficult or unavailable on some systems, but due to the hazard they pose for electronic equipment, it is important to track and analyze the causes of momentary outages. This section evaluates the common causes of momentary outages for your utility, region, and size class as well as common causes for all utilities that use the eReliability Tracker. Please note that only outages lasting less than five minutes are classified as momentary, as defined by IEEE 1366. In Figures 12–14, for each utility, the number of occurrences for each cause is divided by that utility's customer count (in thousands) to create an occurrence rate that can be compared across different utility sizes.

Figure 12. Top five causes of momentary outages for all utilities that use the eReliability Tracker

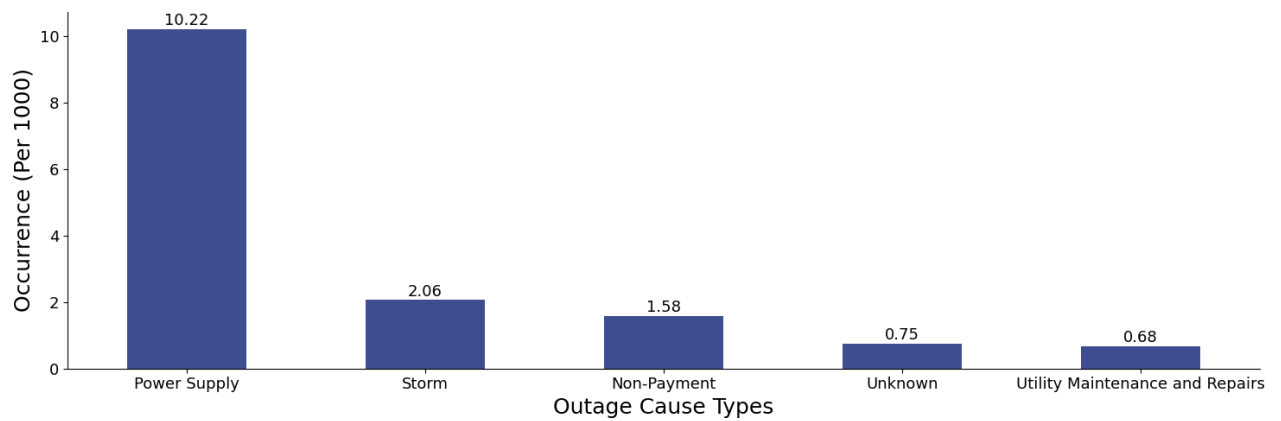


Figure 13. Top five causes of momentary outages for your utility

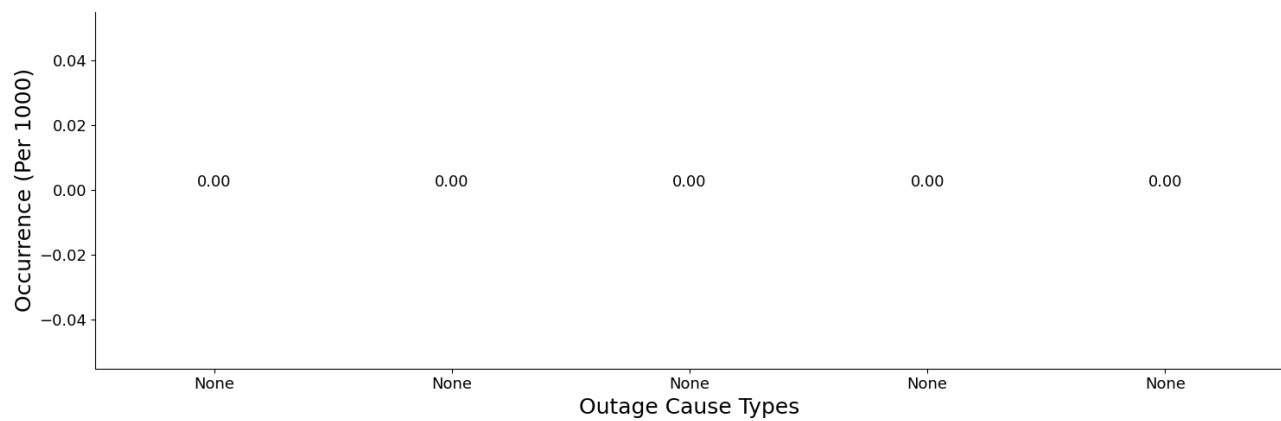
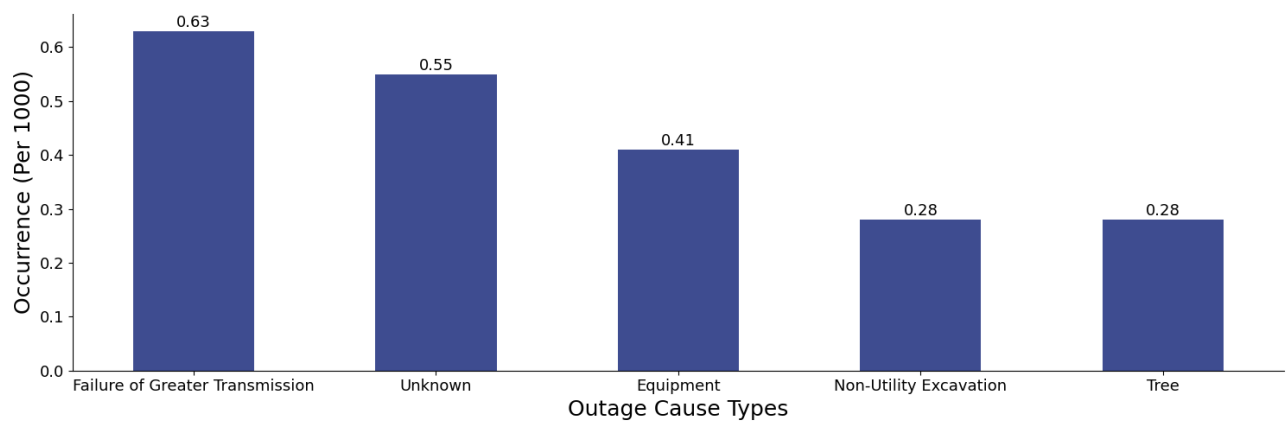


Figure 14. Top five causes of momentary outages in your region



Thank you for your active participation in the eReliability Tracker service. We hope this report is useful to your utility in analyzing your system. If you have any questions regarding the material provided in this report, please contact:

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Hurricane City Power and Washington City Recognized for Exceptional Electric Reliability

SALT LAKE CITY – Hurricane City Power and Washington City have been honored with national recognition for their outstanding electric reliability in 2023. The recognition comes from the American Public Power Association (APPA), a trade group that represents more than 2,000 not-for-profit, community-owned electric utilities.

APPA's eReliability Tracker service enables electric utilities to monitor power outage and restoration data. Annually, the Reliability Team at APPA compares this data with national statistics compiled by the U.S. Energy Information Administration for all types of electric utilities.

"It's encouraging to see year after year that public power's track record for providing highly reliable service is backed up by data," said APPA Director of Research and Development Paul Zummo. "These utilities are the best of the best when it comes to keeping the lights on. And these communities should be proud of their local power providers and appreciate the hard work that goes into earning this recognition."

Across the nation, public power customers experience significantly fewer power outages. On average, public power customers have their lights out for less than half the duration experienced by customers of other utilities.

"Receiving this esteemed designation is a true honor for us," said Hurricane City Power Director Scott Hughes. "At the Power Department, our foremost mission is to provide our customers with not just energy, but with peace of mind, knowing they can rely on us for safe and reliable service. This recognition underscores our commitment to delivering value and assurance to our community."

The recognition received by Hurricane City Power and Washington City highlights their commitment to delivering reliable electricity to their communities. It showcases their dedication and hard work in ensuring uninterrupted power supply, which is crucial for the smooth functioning of homes, businesses, and essential services.

"Reliable power is the lifeblood of our growing community," said Washington City Power Director Rick Hansen. "It fuels our economy, supports our infrastructure, and makes daily life safer and more comfortable for everyone. As Washington City expands, we are committed to continuing to provide dependable electricity to ensure our continued success and prosperity."

Hurricane City Power, Washington City, Brigham City, Mt. Pleasant City, and Logan City Light & Power are among the five Utah Associated Municipal Power Systems (UAMPS) members recognized by the APPA. This recognition highlights their outstanding reliability in providing electricity and underscores their leadership in the industry and dedication to keeping customers satisfied.

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May 2024

Project Meeting Overview Report

CARBON FREE POWER PROJECT (CFPP)

1. Discussed in Executive Session:
 - a. Project wind down status, timeline and Department of Energy interactions.

FIRM POWER SUPPLY PROJECT

1. Discussed in Executive Session:
 - a. Steel 1A & 1B Project including Commercial Operation Dates (COD), status updates, battery energy storage system (BESS) and next steps.
 - b. Red Mesa Tapaha Project including the current status of the project and next steps.
 - c. Red Mesa economic curtailment updates including outages.
 - d. Prepay for solar including details regarding the prepay, different scenarios and next steps.
2. Details about the Steel 1A & 1B Ribbon Cutting Ceremony scheduled for May 21, 2024.
3. Discussed the Operations Report including output and scheduling from each resource for the month of April.

GOVERNMENT AND PUBLIC AFFAIRS PROJECT (GPA)

1. Discussed Federal & State Legislation including Executive Branch and Congressional Updates:
 - a. 2024 presidential election observations.
 - b. 2024 congressional election updates.
 - c. Progress being made in Congress and current bills.

- d. IRA updates including Congressional letter.
- e. Utah State Convention including candidate vote percentages and primary election date on June 25th.
- f. State updates including special session and related bills.
- g. GPA topics for future UAMPS memos.

HORSE BUTTE PROJECT (HBW)

1. Discussed in Executive Session:
 - a. Landowner Lease Agreements including active agreements, updated amendments and next steps.
2. Discussed plant operations including plant maintenance/upgrades, photos of the site and site updates.
3. Discussed the Operations Report including production output for the month of April.

HUNTER PROJECT

1. Discussed in Executive Session:
 - a. Long-term strategy including recent activities and next steps.
 - b. Economic Dispatch for the summer season including dispatch and balancing.
2. Discussed the Operations Report including plant scheduled output for the month of April.

INTERMOUNTAIN POWER PROJECT (IPP)

1. Discussed legislative update referring to the Government and Public Affairs Project (GPA).
2. Discussed IPP updates including the board meeting being held at the plant.
3. Discussed IPP Economic Dispatch including the summer 2024 operating plan overview, operating parameters, inventory and planned usage.
4. Discussed the Operations Report including scheduled output for the month of April.

NEBO PROJECT (PAYSON)

1. Discussed UAMPS Hedging Policy including market participation and prepay analysis.
2. Discussed plant operation including April statistics, operational item highlights, plant maintenance/safety highlights, regulatory items and plant water updates.
3. Discussed the details of the 2024 Spring Outage including highlights and completed maintenance.
4. Discussed the details of the 20-Year Celebration at the Nebo Power Plant on May 14th.
5. Discussed the Operations Report for the month of April including Nebo energy breakdown and Nebo sales margins.

POOL PROJECT

1. Guest Speaker:
 - a. Randy Howard, GM of Northern California Power Agency (NCPA), discussed the West-Wide Pathways Initiative including regional markets, pathways initiative overview, differences from the status quo market governance, the implementation of the pathways and next steps.
2. Discussed PX & Scheduling Report including monthly and yearly average gas pricing for Nebo and market buying and selling average pricing.
3. Discussed optimizing the UAMPS energy portfolio including project updates for the ETRM and tagger software, economic dispatch asset optimization, EIM monthly average pricing and current market outlook.
4. Discussed the Operations Report for the month of April including load peak and energy, along with Pool information.

RESOURCE PROJECT

1. Discussed in Executive Session:
 - a. Geothermal update including project details, the current status of the project and next steps.
 - b. New wind project identified by the Resource Procurement Plan including project details and next steps.

- c. Natural Gas Study including the current status of the project, potential project site characteristics and the next phase of work.
 - d. Fremont Solar update including the status of the project, results of the system impact study, and next steps.
2. **Approved resolution to authorize the creation of the new wind study project and approval of a \$120k budget for the development and execution of the new wind energy project PPA.**

BOARD OF DIRECTORS MEETING

1. **Approved using the UAMPS EIM fund to cover the increased costs of \$95,000 for more comprehensive financial health reports for the UAMPS members (40).**
2. Discussed the Operations Report:
 - a. Natural Gas storage including regional storage and natural gas consumption.
 - b. Industry News including CAISO EDAM schedule, PacifiCorp Stakeholder Process and EDAM developments.
 - c. Seasonal Outlook including May forecast, prior month, summer outlook, precipitation forecast and La Niña update.
 - d. Average residential electricity prices.
 - e. PacifiCorp Wildfire Mitigation including Public Safety Power Shutoff (PSPS), the criteria for a PSPS and communication factors.
3. Discussed the FY23 Audit Risk Assessment including background, recommended measures, assessment and score.
4. **Approved the FY23 Audit Risk Assessment.**
5. Discussed the history of the Nebo Project in honor of the project's 20th anniversary.
6. Approved all action items for the Project Meetings.
7. Discussed next month's board meeting location and details.
8. Discussed Steel 1A & 1B Ribbon Cutting Ceremony details.
9. Discussed Lehi Power's open house on May 15th.
10. Discussed an electrical license class hosted by Lehi.