



HURRICANE CITY UTAH

Mayor
Nanette Billings

City Manager
Kaden C. DeMille

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

Power Board Meeting Agenda

12/7/2022

3:00 PM

Power Department Meeting Room – 526 W 600 N

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

AGENDA

1. Pledge of Allegiance
2. Prayer
3. Approval of Minutes from November 2022

STAFF REPORTS

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

OLD BUSINESS

1. Capacity Update
2. Solar Policy Update
3. Generation Discussion

NEW BUSINESS

1. Summer Generation Run Report
2. Budget
3. UAMPS Updates





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- 1 The Hurricane City Power Board met on November 2, 2022, at 3:00 p.m. at the Clifton Wilson Substation on
2 526 W 600 N.
3
- 4 In attendance were Chairman Mac Hall, Pam Humphries, Jerry Brisk, Charles Reeve, Dave Imlay, Scott Hughes,
5 Brian Anderson, Jared Ross, Fred Resch, Kaden DeMille and Crystal Wright.
6
- 7 Mac Hall welcomed everyone to the meeting; Dave Imlay led the Pledge of Allegiance and Jerry Brisk offered
8 the prayer. Jerry Brisk motioned to approve minutes from the October 2022 meeting. Pam Humphries
9 seconded the motion. Motion passed with majority. Dave Imlay abstained since he was absent from the
10 meeting.
11
- 12 **Scott Hughes:** Scott Hughes provided an update on employees. We have two applications for the open
13 lineman position. We interviewed one last week and will interview the other one next week. Provided an
14 update on the Distributed Energy Resources (DER) Sub-committee. It's going well and they are beginning to
15 dive into solar policies. Public Power Day was held last month. The event was well attended and successful.
16 Described the Pole Top Rescue annual re-certification training that was just completed. Informed the board
17 about an employee accidental knife injury that occurred last week while terminating wire. Employee is doing
18 well with no major damage.
19
- 20 **Brian Anderson:** Brian Anderson reported most time has been spent on 600 North. Preparing for the
21 January/February outage. Working on digging pole holes ourselves that we can and will contract out the rest.
22 Contracted bids received currently are only for an hourly rate due to the difficulty of the rocky terrain. We
23 changed a feed and removed a pole on the 2800 W Transmission project. Reported on the 1150 W
24 Transmission project that we are trying to get legal descriptions written for easements. There is still discussion
25 about the route for that project. Our biggest priority with that project is the area south of 1300 South. On the
26 Cordero project all the poles have been set. The Cordero group is working on obtaining and providing any
27 missing easements.
28
- 29 **Mike Ramirez:** Scott Hughes reported for Mike Ramirez that he is keeping projects moving along.
30
- 31 **Jared Ross:** Jared Ross reported the switch basement has been installed at the Three Falls Substation.
32 Schweitzer Engineering won the bid for the control panels. A bid for the foundations and control building came
33 in, but that whole process must be redone to follow policy. We'll have more information on this bid by next
34 month. The air permit for Generator #9 has been approved. We are waiting for an updated price from Wheeler
35 on the generator due to some switch gear details. Another issue discovered some studies that are needing to
36 be done to find out about potential transmission costs. Those transmission costs would affect the strike price
37 for the whole plant. Rachel with UAMPS is looking into this issue for us. Generator repairs are continuing.
38 Generator #6 had a cylinder replaced. Generator #7 turbo that was replaced in August had a piece of metal



39 that lodged high in the exhaust that wasn't discovered. The metal piece came back down and damaged the
40 new turbo that had been installed. The Generator #8 rotor has been sent off for repair. The rotor has been
41 sent off to be reconditioned. Generator #2 has a fan that has been ordered. Scott Hughes stated we ran the
42 generators hard this summer. We are making plans to back them down a little for next summer run to help
43 reduce the repair costs. Jared Ross stated the generators are approaching the 10,000-hour mark. The top-ends
44 are recommended to be replaced at that time. The cylinder failure on generator #6 was determined to be a
45 spring. We need to start going through the heads before they cause major damage. Jerry Brisk asked a
46 question about maintenance differences between us and plants who run them all the time. Jared Ross
47 explained that it's harder on the equipment to operate them how we do rather than if they ran all the time. It's
48 hard on equipment during start up and shut down. It's tricky because you may have fewer repairs due to not
49 shutting them off more frequently, but because you're running them more, there will be more repairs due to
50 the increased run hours. He updated the board regarding truck and equipment repairs and maintenance.

51
52 **Generation Resource Possibilities:** Scott Hughes sent back the generation solicitation to UAMPS that was
53 discussed at the last board meeting. We submitted our interest for 12MW. Since then, we have met with
54 Caterpillar to see what we could do about being more proactive. He found there were generators ordered by
55 another entity that started the generators being built in a queue. Once they got to the point in the building
56 process the entity had to commit to those generators, they backed out. Wheeler had the option to continue
57 manufacturing those units. They chose to do so. Scott Hughes stated that in conversation with a neighboring
58 city that they also expressed interest in purchasing some of those available units. We could potentially go in
59 together on a generation plant and purchase some of those generators already in queue. Dave Imlay talked
60 about the prices of power increasing dramatically and he could realistically see \$.30/kwh power prices coming
61 sooner than anticipated due to lack of resources coming online. He expressed a concern with being heavily
62 invested in one fuel source. Mac Hall also had the same concern and asked about the likelihood of being able
63 to get air permits for a larger generation plant. Jared Ross explained we could pay the extra to install Selective
64 Catalytic Reduction (SCR) on the units to ease the permitting process if that was a concern. Charles Reeve
65 asked if they could be compatible with hydrogen fuel. Jared Ross stated it would be more money, but you
66 could buy the unit to be capable of running on natural gas or hydrogen or a mixture of the two. Scott Hughes
67 let Kaden DeMille talk about the budget that would be needed. Kaden asked if the costs of a generation plant
68 are going to outweigh the market exposure costs. Dave Imlay stated in the past that the savings were
69 sometimes used up in the repair and maintenance of the units. The real issue is whether there will be resource
70 availability to provide the power needed. Kaden DeMille stated we would need to go back and run numbers
71 moving the generation plant project up sooner than had been projected originally and see how those change
72 things. Charles Reeve suggested that we get in line if we can while we investigate this further before we must
73 make a big commitment. Kaden DeMille stated it would probably be beneficial to consider the dual-fuel
74 capability with a risk of the future of natural gas.

75
76 **Technical Task Force (TTF) Update:** Scott Hughes reported there was a meeting held with PacifiCorp. The line
77 from St George to Purgatory has a limit of 203MVA and the peak from this last summer hit 193MVA. That was
78 during a period when generators were running in Southern Utah. If they had not, we would have been over the
79 limit of the capacity on that line. Dave Imlay asked a question about whether the Red Butte upgrade to 345kva
80 will be paid for by Rocky Mountain Power. He stated to investigate it with UAMPS because that issue has been
81 controversial in the past. Scott Hughes stated they are going to have another meeting in January to address
82 the issue and potential solutions to the load on that line.
83

84 **UAMPS Updates:** Scott Hughes reported the Hunter project talked about a coal supply issue they are having.
85 They're considering running the plant capacity lower than usual and stockpiling the coal for a higher run
86 availability during the summer. San Juan has officially started decommissioning. They've started the auction
87 process and the layoff of employees. Steel Solar 1A and 1B project is still having problems getting their panels.
88 Muddy Creek project is no longer moving forward. There is a Three Peaks solar project near Cedar City that is a
89 new potential resource project. Sunnyside is a waste coal plant project that has some potential availability.
90 There is 53MW available and a large amount of people interested, so we will probably only get a small amount
91 of it. Dave Imlay wanted to make sure that we were calling back everything from IPP that was available. Scott
92 Hughes confirmed we are calling back everything available.
93

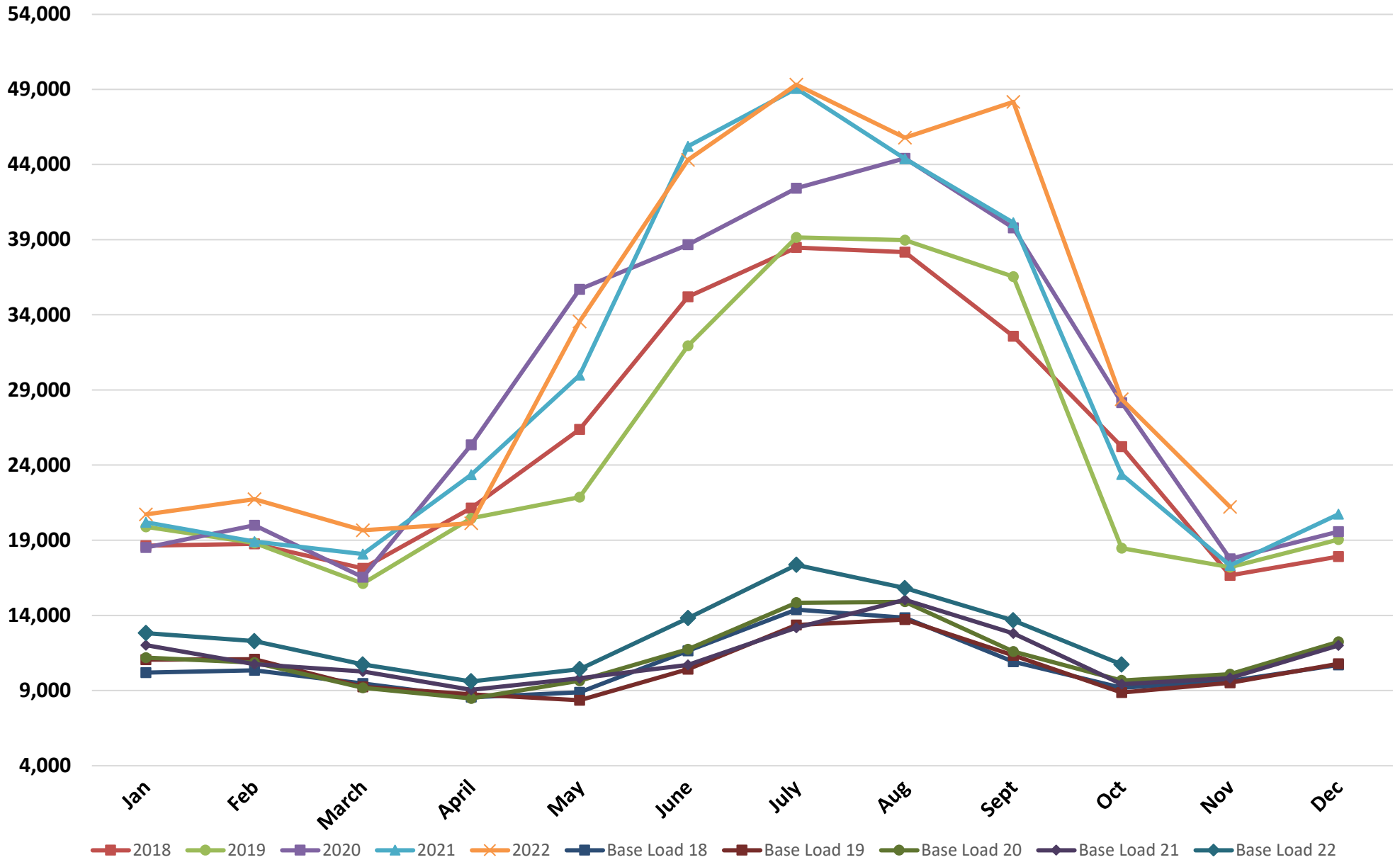
94 **Budget:** Scott Hughes displayed and fielded questions about the slides included in the packet. This month
95 included the high spike in pricing that we saw in September due to that late heat wave. Joseph Prete asked if
96 there are lessons to be learned from the past. Dave Imlay reported some of the history surrounding our Nebo
97 resource purchase. His advice is maybe to look at some of the summer-only HLH block purchases that we've
98 been hesitant to participate in the past. Scott Hughes explained a challenge that a neighboring city had with a
99 block purchase like that this past summer.
100

101 Pam Humphries asked if the increase in impact fees was ever approved. Scott Hughes explained that it
102 required a public notice posting. That has been completed and this item will be presented for approval at the
103 next City Council meeting.
104

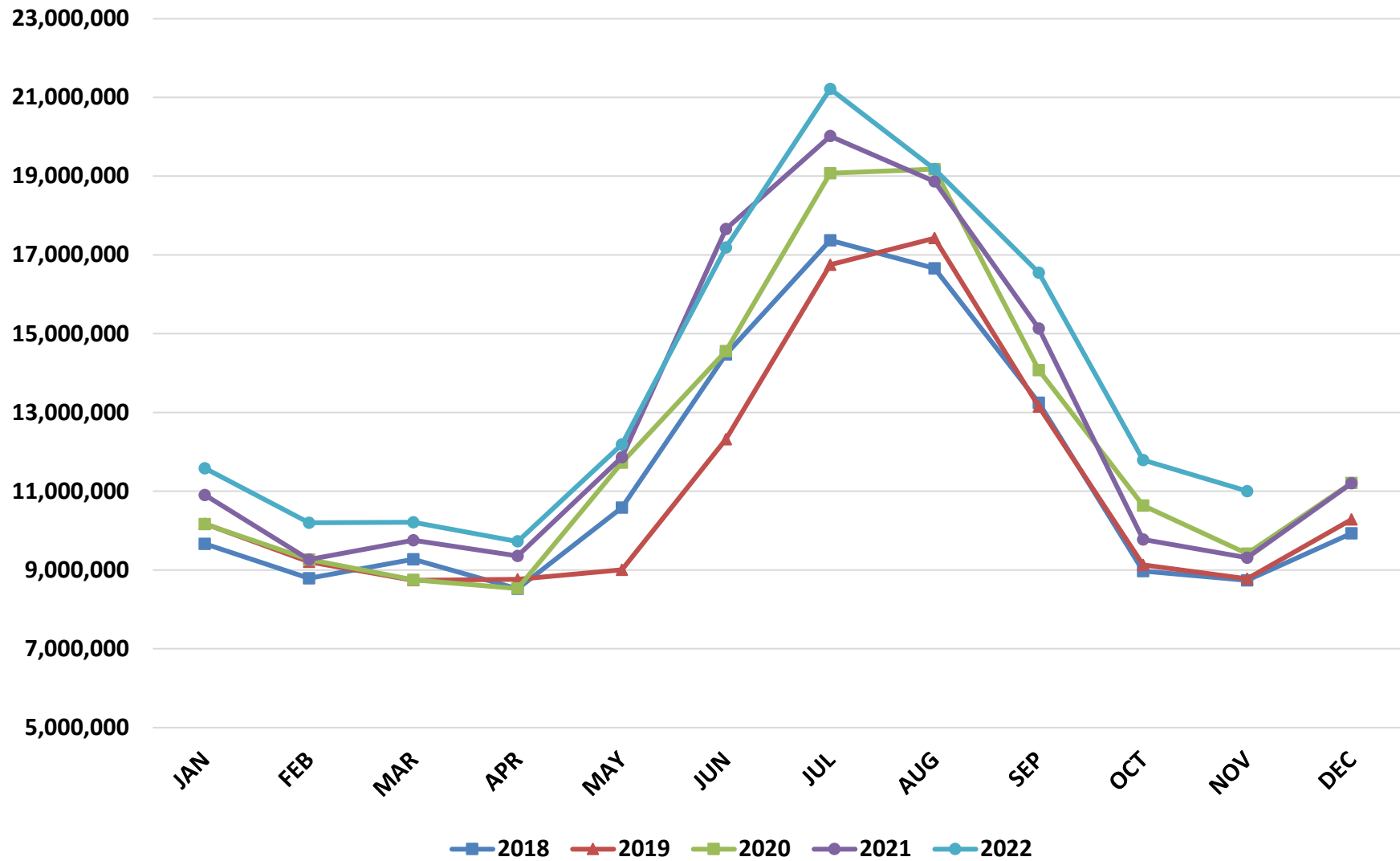
105 The Power Board adjourned at 5:00 p.m. The next Power Board Meeting is scheduled for December 7, 2022, at
106 3:00 p.m.

BUDGET

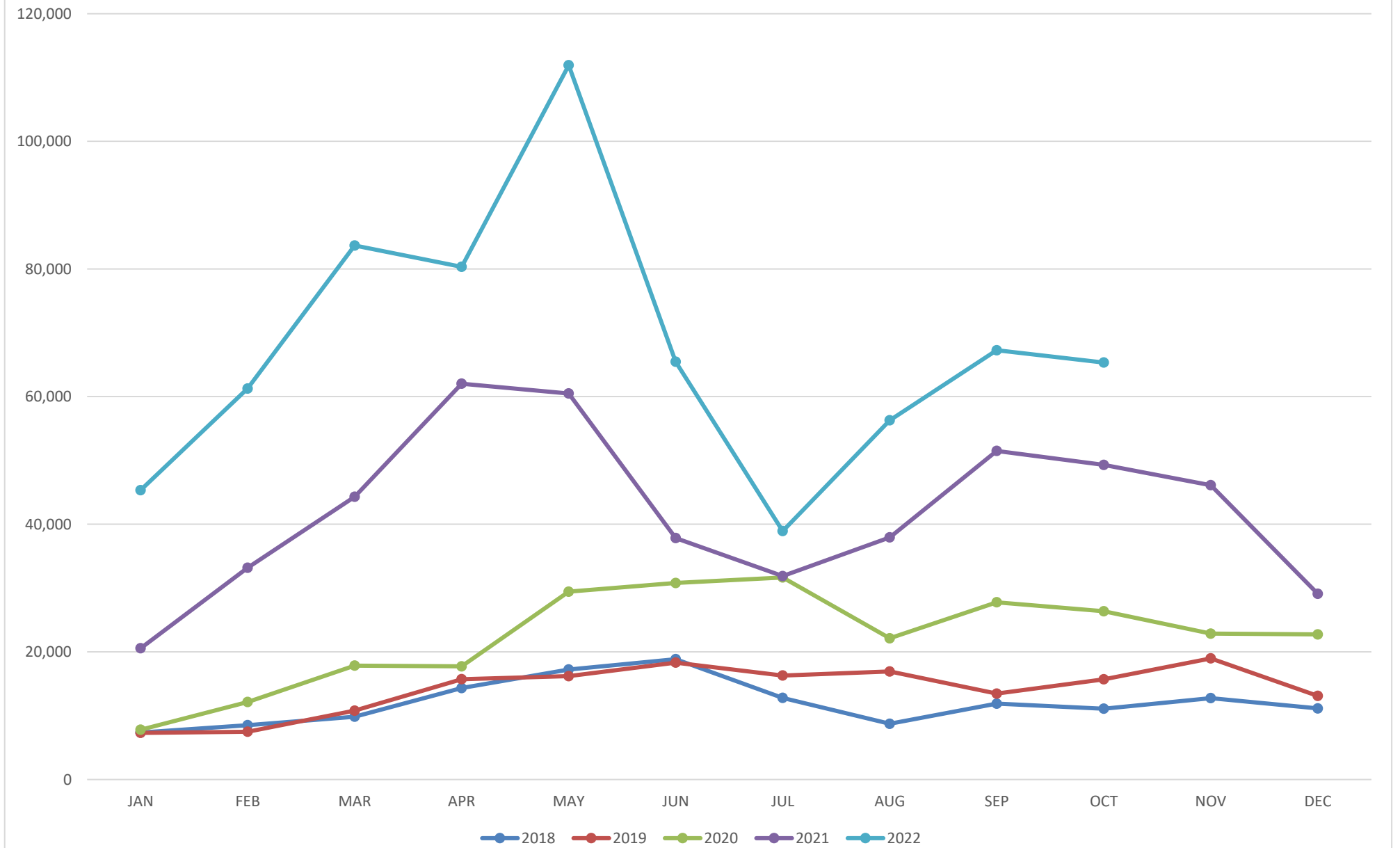
2018 - 2022 KW LOAD



2018 - 2022 KWH LOAD



Solar Kwh



AVERAGE YEARLY POWER PRICES

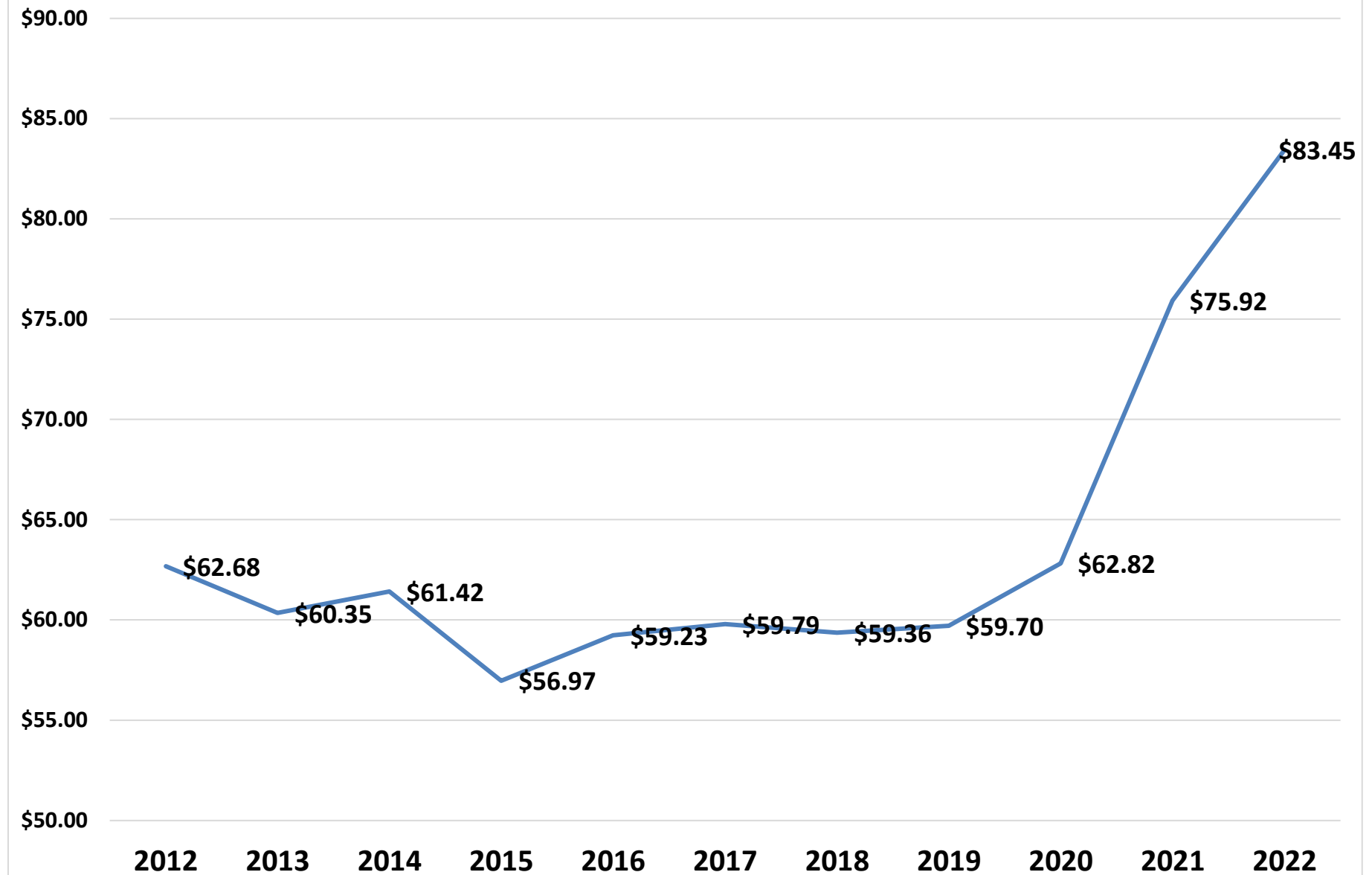
21-22 bdgt amount **\$0.00**
 BDGT Year to Date **\$74.87**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<i>Jan</i>	\$56.66	\$60.76	\$58.36	\$59.86	\$57.87	\$59.07	\$60.62	\$59.75	\$57.76	\$60.14	\$68.25
<i>Feb</i>	\$59.78	\$58.15	\$64.45	\$65.94	\$62.38	\$63.04	\$60.96	\$67.00	\$60.67	\$63.19	\$70.88
<i>Mar</i>	\$57.28	\$63.50	\$60.83	\$62.03	\$61.77	\$60.99	\$60.09	\$65.17	\$64.67	\$63.64	\$67.28
<i>Apr</i>	\$55.43	\$63.77	\$63.75	\$61.88	\$59.71	\$59.49	\$55.02	\$55.44	\$55.92	\$61.86	\$82.63
<i>May</i>	\$53.31	\$60.28	\$61.64	\$64.71	\$65.51	\$60.32	\$58.86	\$58.55	\$58.55	\$59.69	\$72.66
<i>June</i>	\$50.09	\$56.05	\$59.15	\$58.30	\$65.51	\$58.54	\$52.17	\$55.30	\$53.44	\$86.91	\$77.60
<i>Jul</i>	\$51.16	\$55.62	\$56.85	\$56.91	\$56.95	\$58.29	\$67.87	\$54.29	\$55.98	\$81.04	\$85.31
<i>Aug</i>	\$51.57	\$55.49	\$56.84	\$55.27	\$57.67	\$59.00	\$66.55	\$54.58	\$78.40	\$72.03	\$90.89
<i>Sep</i>	\$54.79	\$58.80	\$59.46	\$56.06	\$56.97	\$62.36	\$55.00	\$54.34	\$64.93	\$82.38	\$127.29
<i>Oct</i>	\$62.68	\$60.35	\$61.42	\$56.97	\$59.23	\$59.79	\$59.36	\$59.70	\$62.82	\$75.92	\$83.45
<i>Nov</i>	\$63.37	\$61.65	\$63.03	\$59.68	\$64.18	\$62.14	\$64.60	\$63.80	\$63.60	\$70.47	
<i>Dec</i>	\$56.02	\$58.37	\$60.91	\$57.90	\$61.51	\$58.80	\$61.61	\$58.55	\$60.33	\$70.07	
<i>Yr Avg</i>	\$56.01	\$59.40	\$60.56	\$59.63	\$60.64	\$60.15	\$60.23	\$58.87	\$61.42	\$70.61	\$82.62
<i>Weighted Avg</i>	\$55.22	\$58.80	\$60.34	\$58.99	\$59.55	\$59.90	\$60.56	\$58.11	\$61.98	\$72.46	\$84.87

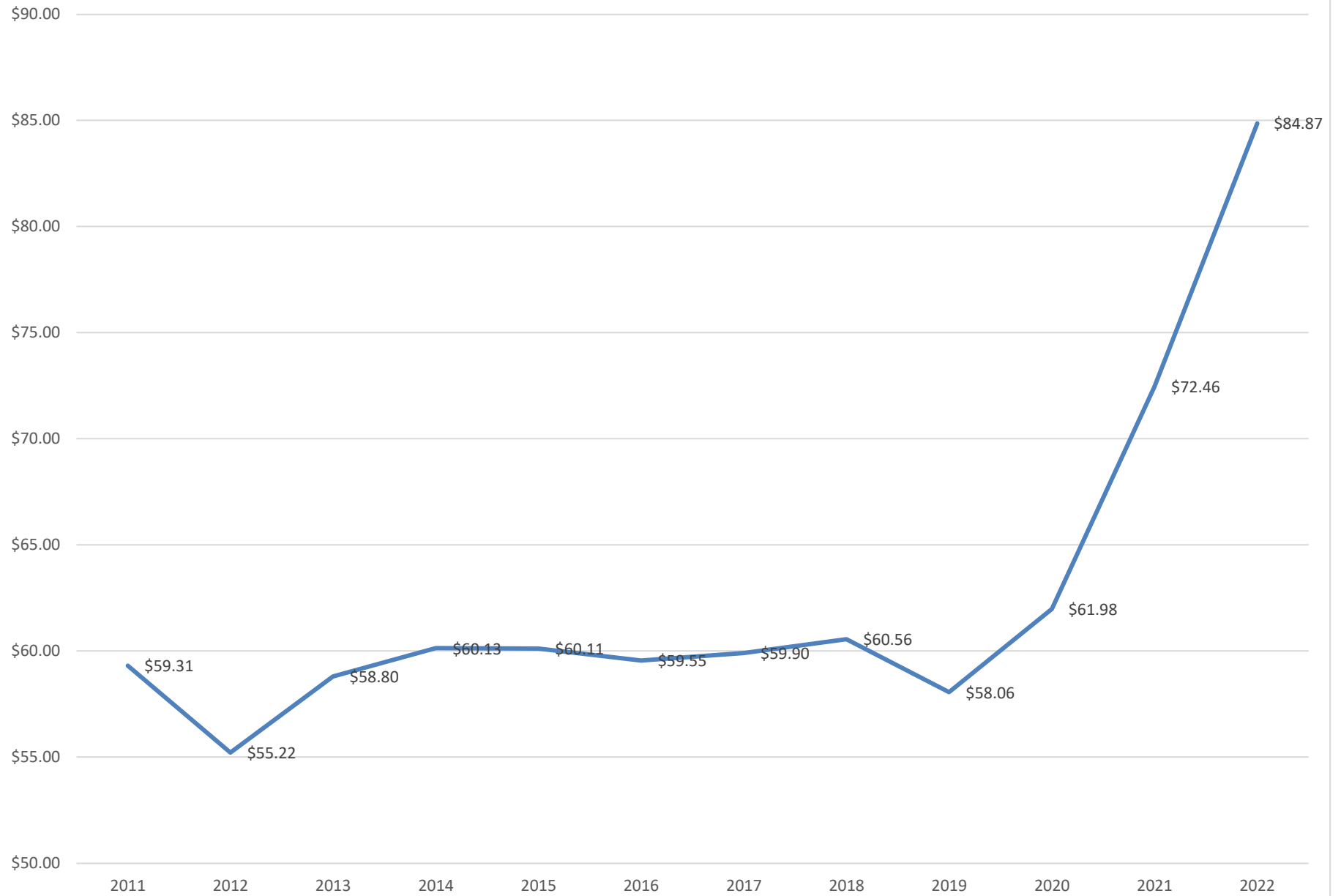
**Cy to
Date**

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.

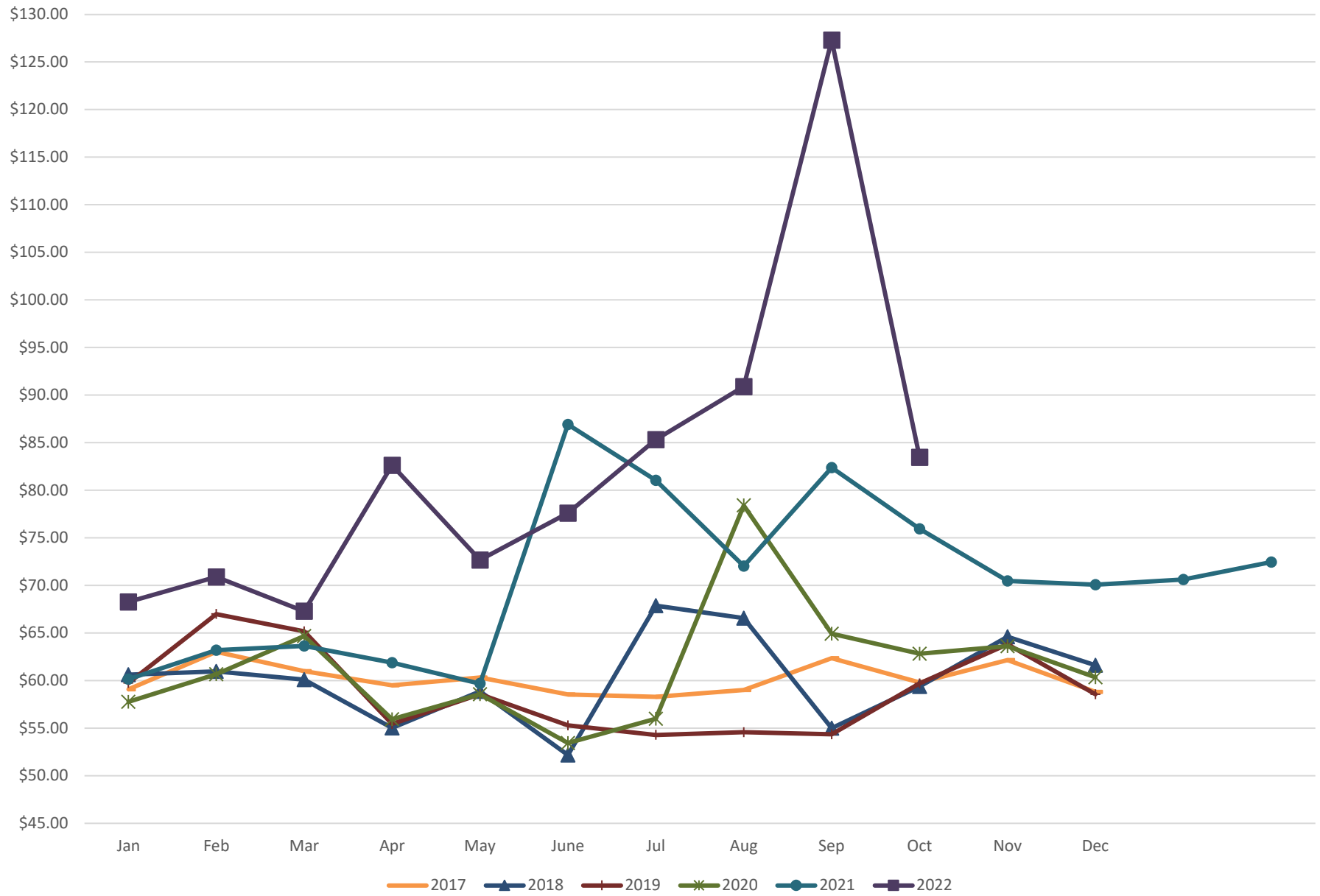
Oct



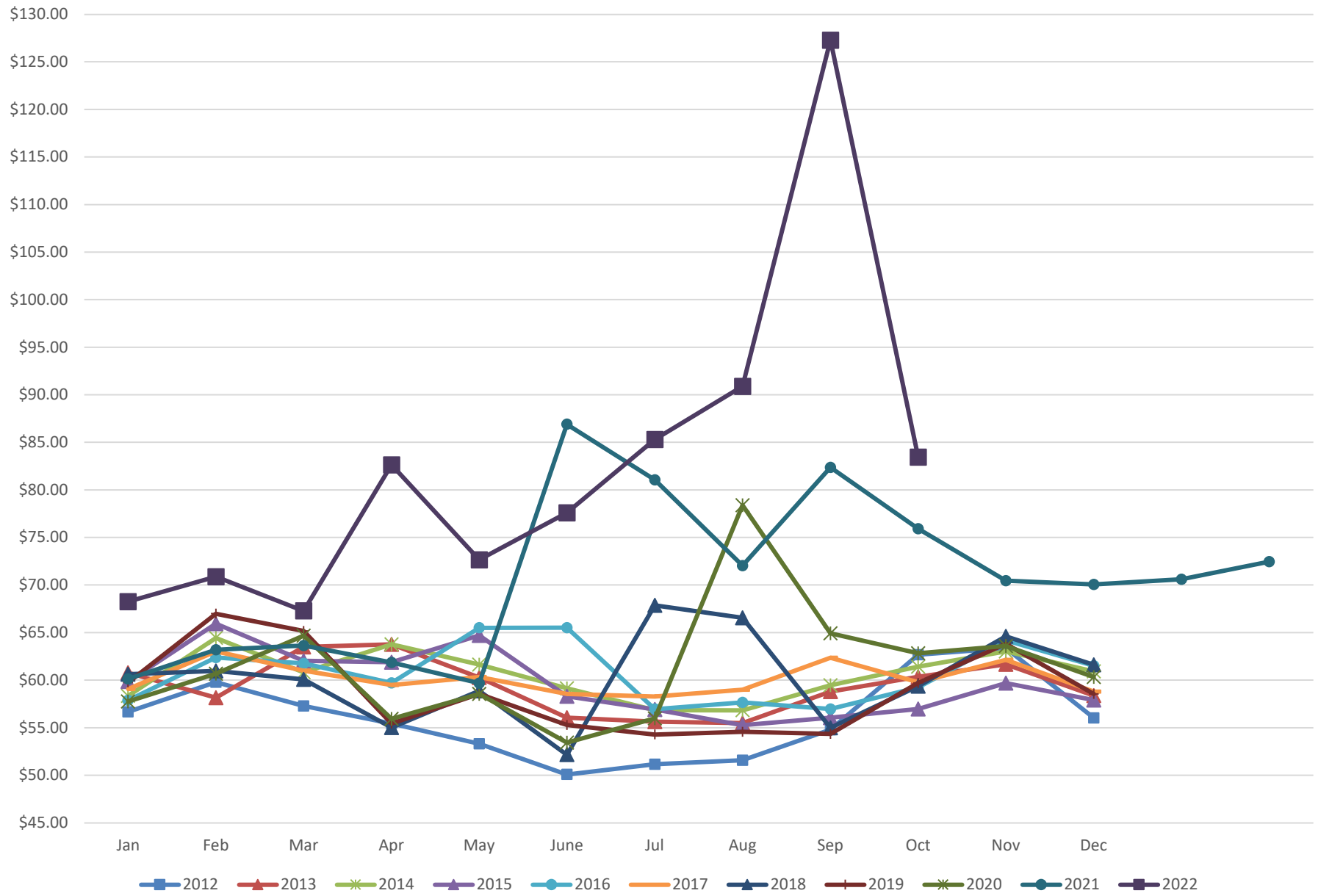
Weighted Average

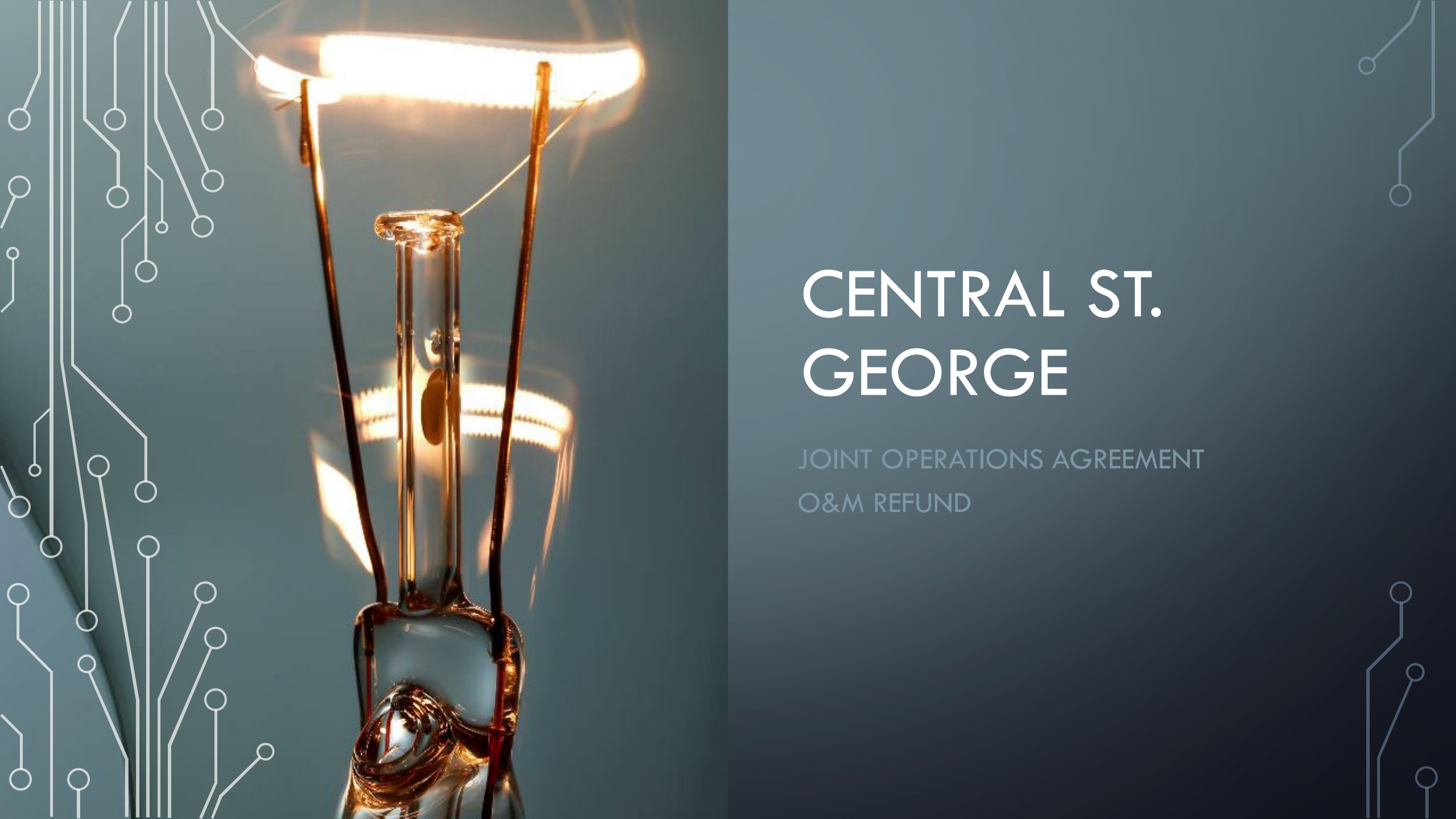


Avg Monthly Price (5 Yrs)



Avg Monthly Price





CENTRAL ST. GEORGE

JOINT OPERATIONS AGREEMENT
O&M REFUND

UAMPS JOA Percentage Share Adjustment
Jan 2009 - May 2022

Calendar Year	Total Invoice	Original Share 56.74%	Revised 49.11%	(Refund) Surcharge	Interest Assessment	Total Refund
2009	53,065.97	30,109.63	26,060.70	(4,048.93)	(2,249.29)	(6,298.22)
2010	73,089.41	41,470.93	35,894.21	(5,576.72)	(2,872.30)	(8,449.03)
2011	107,198.08	60,824.19	52,644.98	(8,179.21)	(3,992.88)	(12,172.10)
2012	161,804.99	91,808.15	79,462.43	(12,345.72)	(5,677.09)	(18,022.81)
2013	124,274.53	70,513.37	61,031.22	(9,482.15)	(4,037.52)	(13,519.67)
2014	123,828.92	70,260.53	60,812.38	(9,448.15)	(3,614.25)	(13,062.40)
2015	44,353.45	25,166.15	12,359.10	(12,807.05)	(4,233.31)	(17,040.37)
2016	134,172.37	76,129.40	65,892.05	(10,237.35)	(2,918.25)	(13,155.61)
2017	145,425.27	82,514.30	71,418.35	(11,095.95)	(2,627.25)	(13,723.20)
2018	124,187.29	70,463.87	34,604.81	(35,859.06)	(6,937.19)	(42,796.25)
2019	124,715.14	70,763.37	34,751.89	(36,011.48)	(4,405.67)	(40,417.14)
2020	263,496.05	149,507.66	129,402.91	(20,104.75)	(1,437.39)	(21,542.14)
2021	282,763.69	160,440.12	138,865.24	(21,574.88)	(881.37)	(22,456.25)
2022	48,130.93	27,309.49	23,637.09	(3,672.40)	(56.99)	(3,729.39)
Totals				(200,443.81)	(45,940.75)	(246,384.56)

4TH CIRCUIT ENERGIZATION CONSTRUCTION

Total Project Costs	\$2,523,781
Costs for Jointly Owned Assets under the JOA	\$935,831
UAMPS Members share calculated at 56.74%	\$540,153
Recalculation of share at 49.11%	\$459,587
REFUND due UAMPS	\$80,566

Seeking:

- Central St. George PMC desire to pursue additional refund for overpayment of the 4th Circuit Energization capital project
- Central St. George PMC acceptance of the refund received for overpayment of the monthly O&M fees

SAND HOLLOW ROAD UPGRADE

Analysis of the Effects of Proposed Grading UAMPS 69 kV Overhead Transmission Poles

This document summarizes the results of an analysis by Intermountain Consumer Professional Engineers, Inc. ("ICPE") of the proposed grading (cuts and fills) required for the construction of the upgraded Sand Hollow Road as shown on the Plan and Profile Drawings for the road that ICPE received on 10/07/22. The analysis assesses the possible adverse effects of the proposed cuts and fills on the existing Utah Association of Municipal Power Systems ("UAMPS") 69 kV Electric Transmission Line that is located adjacent to the proposed road.

Table 2, which is included as Page 3 of this document, summarizes the locations (Stations) of the existing direct embedded wood poles on the existing UAMPS 69 kV transmission line that will be affected by the proposed cuts and fills. It also summarizes the existing and final grades and amount of cut/fill proposed at each pole location for the upgraded and widened Sand Hollow Road. It is noted that Table 2 includes three stations for each pole. One from the original Plan and Profile Drawings for the line, one from the Original Sand Hollow Road Survey and one from a more recent Sand Hollow Road Survey and the Overhead Power Line Plan. These three different survey stations for the pole locations are provided for reference.

The Cut/Fill column of Table 2 summarizes the magnitudes of the proposed cuts and fills along the road that could potentially adversely affect the UAMPS Transmission Line. Cutting or filling around wood poles in electric transmission lines results in several possible adverse effects as follows:

1. Removing backfill (cutting) around poles reduces the depth of the fill around the embedded butt of the pole which reduces the ability of the pole to support the design and NESC specified phase and shield wire conductor loads on the poles due to these wires. Standard embedment depths for wood poles are 10 percent of the total pole height plus two feet.

Acceptable reductions in the embedment depths of poles due to pole hold depths that are less than the standard embedment depths are typically 6 inches (-0.5').

2. Adding backfill (filling) around the ground line of poles impacts the useful life of the pole as the embedded ends of wood poles are specially treated to increase the ability of these ends to withstand the effects of the backfill (wood rotting) on the poles and their useful lives and may compromise NESC required ground clearance.

Allowable increases in the standard embedment depths of poles due to construction tolerance of augured and hand dug depths that exceed the standard embedment depths is typically 2-6 inches (0.25' to 0.5').

3. Adding backfill around wood poles or under the conductors of an electric transmission or distribution line reduces the clearances above ground of the attached conductors. These

reductions in clearance may compromise the NESC required ground clearance of the conductors.

The survey data and Cut/Fill values shown in Table 2 were reviewed to determine which of the poles will require remediation. Possible remediation will include pole replacement and other possible changes such as replacement of adjacent poles. A summary of these results is included in Table 1 at the bottom of this page.

TABLE 1
SAND HOLLOW ROAD UPGRADE
SUMMARY OF POLES REQUIRED REMEDIATION

WOOD POLE STATION ON PLAN AND PROFILE DRAWING	PROPOSED CUT/FILL	REQUIRED REMEDIATION
7+97.07'	10.75'	Replace the existing pole with a taller pole. Also replace both existing adjacent poles to provide clearance over the edge of the proposed fill and/or to eliminate conductor in up lift or down strain on the adjacent poles(s).
67+66.18'	6.0'	Replace the existing pole with the same height pole installed on top of the fill. Additionally, the Pole has a Hurricane City distribution circuit with a three phase URD takeoff that ties to a 15kV pad mount junction at the base of the pole; removal and reconnection of URD junction and takeoff will need to be addressed.
14+03.79'	-0.75'	Replace the existing pole with a pole of the same height and class set to the proper depth to eliminate loss of support strength due to reduction in pole setting depth.
16+82+.54	-1.07'	Replace existing pole with a pole of the same height and class set to the proper depth to eliminate the loss of support strength due to the reduction in pole setting depth.
2+95.08' 28+86.43' 34+62.57'	0.91' 0.70' 0.86'	Replace existing pole with a pole of the same height and class set to the proper depth to eliminate fill above the design setting depth to eliminate fill above the specially treated butt area of the pole.

TABLE 2
SAND HOLLOW ROAD UPGRADE
Proposed Cuts Of Fills

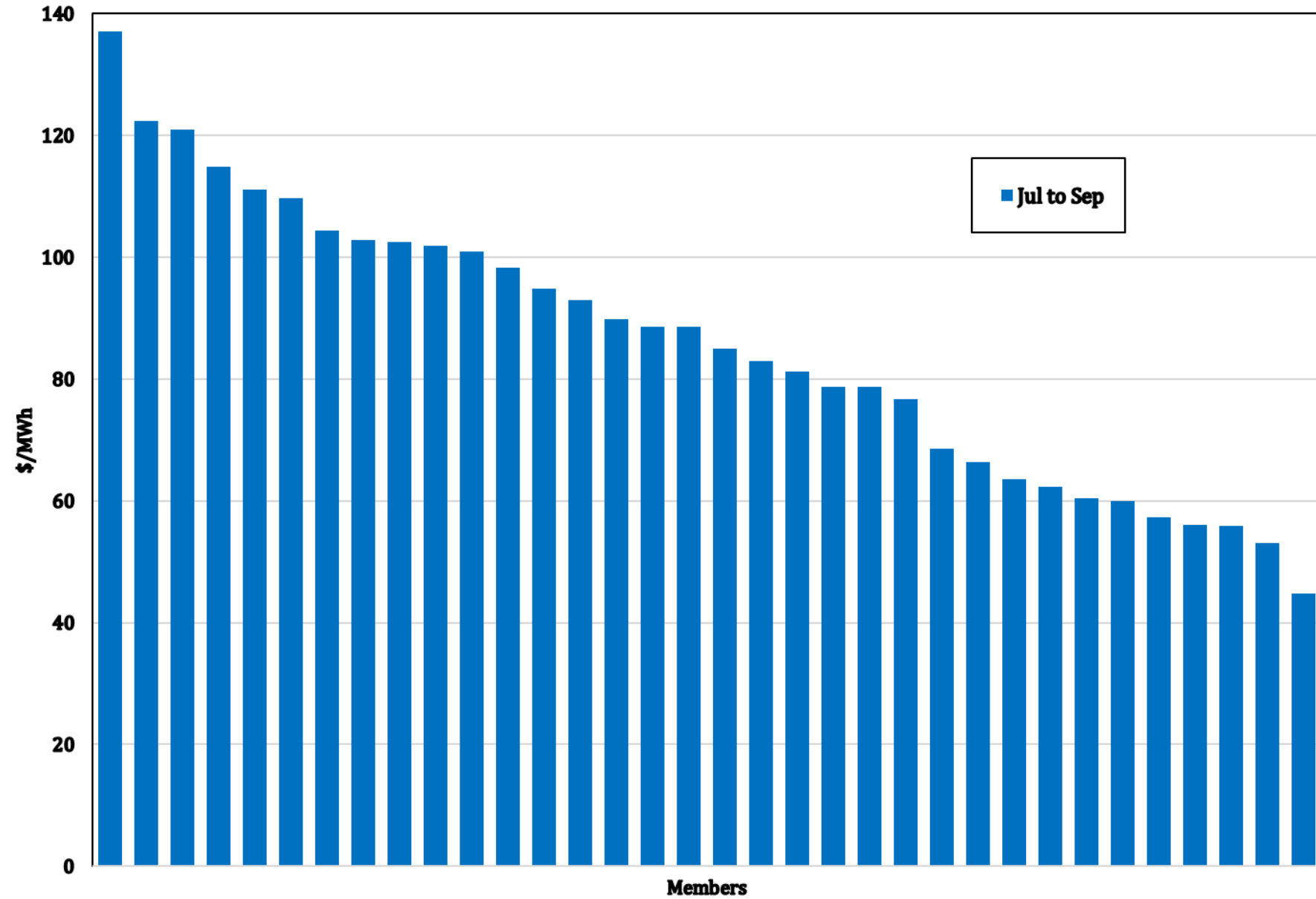
EXISTING WOOD POLE STATIONS ON PLAN AND PROFILE DRAWINGS AND ROAD SURVEY STATIONS			SAND HOLLOW ROAD OHP SHEET	EXISTING OR FINAL GRADES		CUT OR FILL
Plan & Profile Drawings	Original Road Survey	Latest Road Survey		Existing Grade	Final Grade	Proposed Cut/Fil
0+97.41'	64+41.54'	8+32.33'	OHP-1			0.00'
4+67.56'	67+39.96'	12+02.99'	OHP-1			0.00'
7+97.07'	70+39.93'	15+22.48'	OHP-1	2850.29	2861.04	10.75'
11+30.79'	73+63.93'	18+66.21'	OHP-2	2871.54	2871.13	-0.41'
14+03.80	76+36.28'	21+37.22'	OHP-2	2880.39	2879.64	-0.75'
16+82.54'	79+15.02'	24+17.87'	OHP-2	2822.5	2881.43	-1.07'
19+95.74'	82+28.21'		OHP-2	2884.6	2884.01	-0.59'
22+95.08'	85+27.55'		OHP-3	2885.26	2886.17	0.91'
25+86.53'	88+19.00'		OHP-3	2887.09	2887.65	0.56'
28+86.43'	91+18.90'	36+12.85'	OHP-3	2889.46	2889.16	0.70'
31.76.82'	94+09.29'	39+12.24'	OHP-4	2890.02	2890.36	0.34'
34+82.57'	96+92.74'	41+97.99'	OHP-4	2891.19	2892.05	0.86'
37+67.75'	99+73.36'	45+23.97'	OHP-4	2894.43	2894.28	-0.15'
40+64.54'	102+08.25'		OHP-4			0.00'
42+98.51'	103+26.05'		OHP-5			0.00'
45+88.34'	104+91.69'		OHP-5			0.00'
48+78.47'	107+79.11'		OHP-5			0.00'
51+67.02'	125+46.09'		OHP-5			0.00'
54+59.10'	127+48.23'		OHP-6			0.00'
56+98.38'	129+14.20'		OHP-6			0.00'
57+91.34'	129+49.27'		OHP-6			0.00'
63+88.07'	129+58.71'		OHP-6			6.00'
-	-	67+66.18'	OHP-6			6.00'



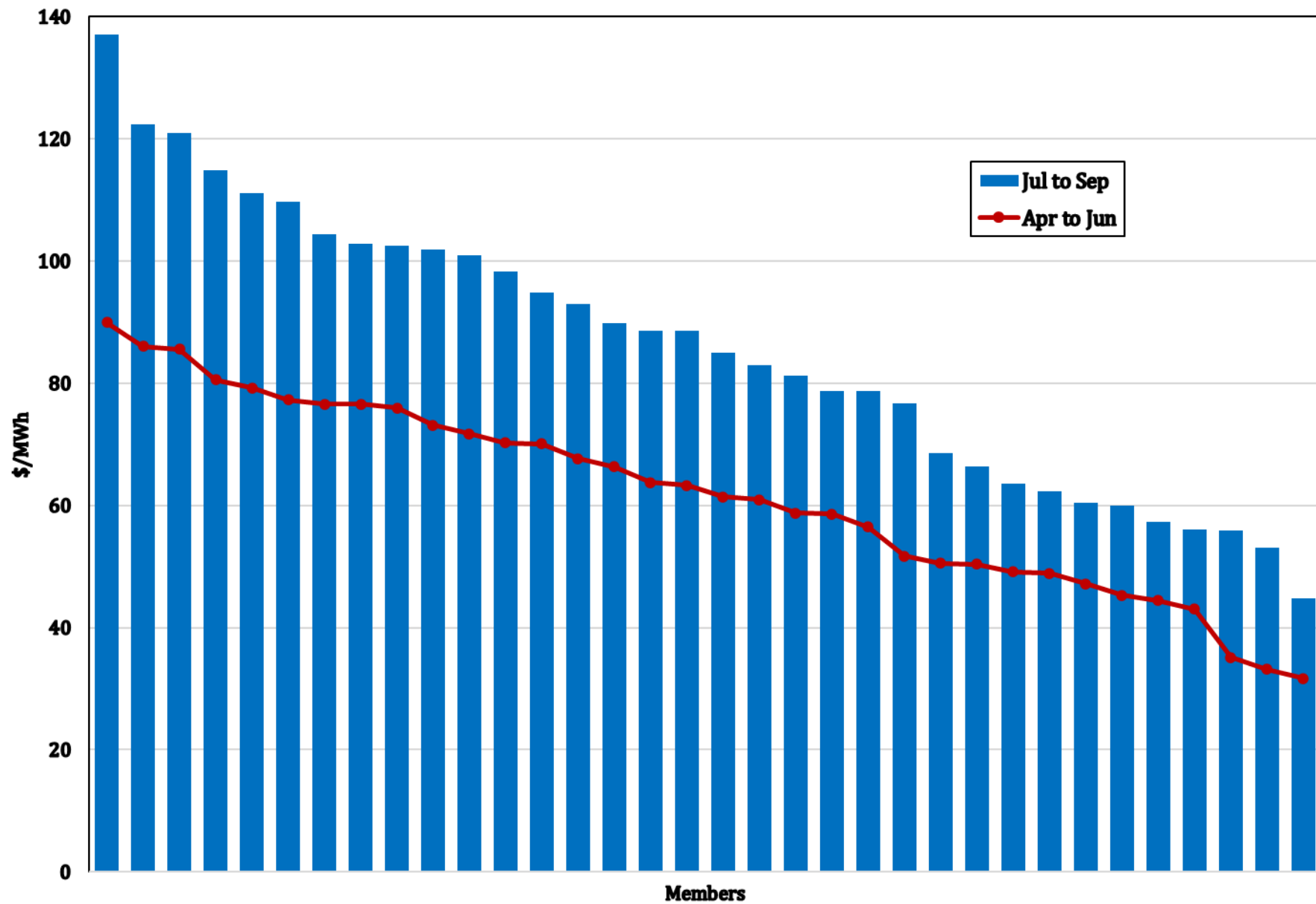
PX and Scheduling Report

October 2022

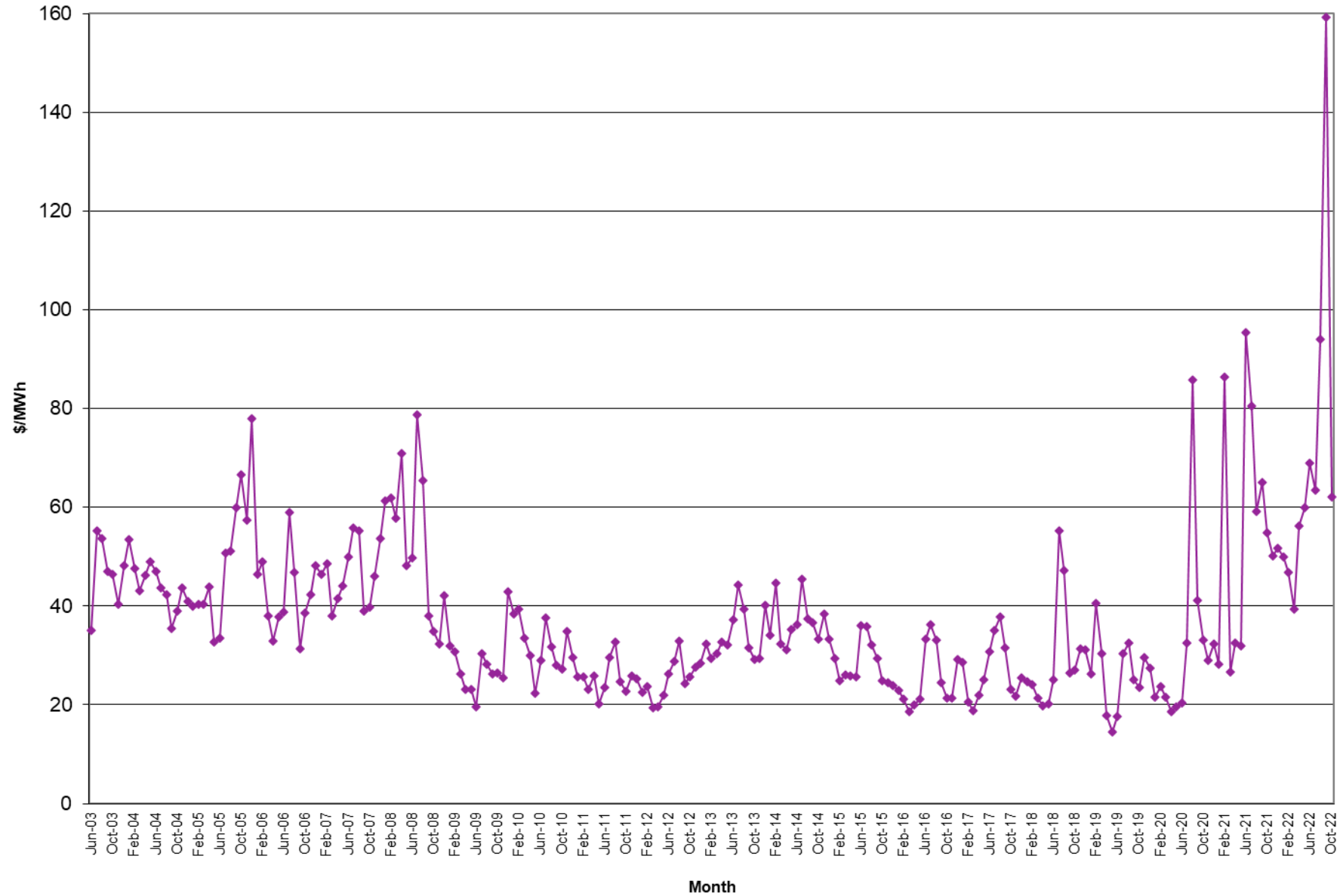
UAMPS Billing - Average Rate by Member - Q3 2022



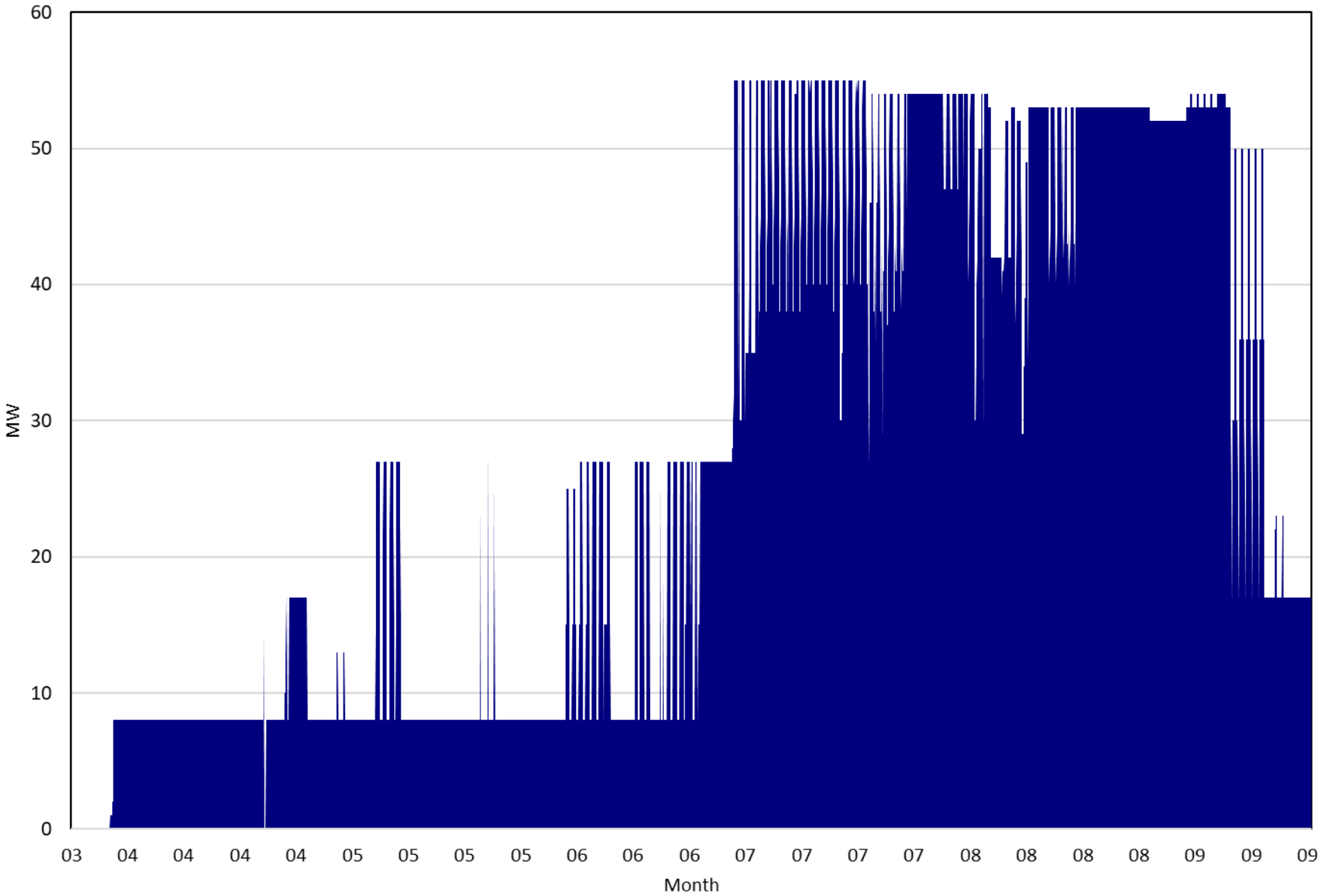
UAMPS Billing - Average Rate by Member - Q2 & Q3 2022



UAMPS Monthly Average Flat Unplanned Pool Price



IPP Summer 2022 Schedule



IPP Compared to Market/Pool

Description	MWh	Dollars	Avg Rate
IPP	121,707	\$7,165,098	58.9
Equivalent at Pool Price	"	\$13,299,562	109.3

- Letters for IPP callback for Summer 2023 have been mailed
- Also covers Summer 2024 and Winter 2024-2025
- Notices due to UAMPS on December 19th
- Projected coal availability will be a consideration