MONTHLY AUDIT REPORT ON THE SOUTHEAST ENERGY EXCHANGE MARKET

June 2023

Prepared by:

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I. OVERVIEW

This is the Auditor report for the month of June 2023 on the Southeast Energy Exchange Market (SEEM). SEEM is a regional energy market that uses a centralized intra-hour energy exchange to create bilateral trades among its trading participants. It has operated since November 2022 when the initial 18 members began trading. SEEM expanded in June to include six new members: Seminole Electric Cooperative; Tampa Electric Company; Duke Energy Florida; Florida Power Corporation; TEA Gainesville Regional Utilities; and TEA JEA.[1] Participation in SEEM as measured in terms of both bids and offers and cleared transactions has increased since its opening, controlling for new members. In June, 48,000 MWh of energy was traded. Since market opening, monthly energy trades have averaged 41,000 MWh.

The automated market accepts bids and offers from the SEEM members and clears individual bilateral trades every 15 minutes using available transmission capability (ATC) of the SEEM members under a transmission service designed for SEEM called Non-Firm Energy Exchange Transmission Service (NFEETS). The trades are cleared to maximize the trading benefit among all participants. The 15-minute trading extends the prevailing hour-ahead bilateral trading in the region and allows for fuller utilization of the transmission system.

SEEM is governed by the SEEM Membership Board. The automated architecture of SEEM was developed and is operated by Hartigen and who also serves as the SEEM Administrator. Our auditing role is directed by the Membership Board in accordance with elements specified in the Market Rules as developed by the Membership Board and approved by the Federal Energy Regulatory Commission (FERC). The results of our auditing are reported to the Membership Board through submission of this Monthly Report. We also have a duty under the Market Rules to respond to inquiries made by regulators and other oversight authorities, including FERC. We received no such inquiries during the period of this report.

The SEEM auditing framework is based on the provisions of the SEEM Market Rules Section VI.D. (Auditing Process). These duties are in four main categories. The first duty is to analyze SEEM input, constraints, and matching results to determine if SEEM operates in accordance with the SEEM Rules (SEEM Rules Sections VI.D.1, VI.D.1.4). This is the main day-to-day auditing work and represents most of the activities reported herein.

[1] The market opened in November 2022 with 18 members: Alabama Power Company; Georgia Power Company; Mississippi Power Company; Associated Electric Cooperative, Inc.; Dalton Utilities; Dominion Energy South Carolina, Inc.; Duke Energy Carolinas, LLC; Duke Energy Progress, LLC; Louisville Gas & Electric Company and Kentucky Utilities Company; North Carolina Municipal Power Agency Number 1; PowerSouth Energy Cooperative; North Carolina Electric Membership Corporation; Tennessee Valley Authority; Georgia System Operations Corporation; Georgia Transmission Corporation; Municipal Electric Authority of Georgia; Oglethorpe Power Corporation; and South Carolina Public Service Authority.

A second auditing responsibility is ensuring participants have access to SEEM data in accordance with the SEEM Rules (Sections VI.D.2). Access to SEEM data involves allowing each SEEM participant to review its own bids and offers and to view matches made by the system. We are in receipt of the bid and offer data and have verified that this data is available daily.

A third area of responsibility is to report to the Membership Board regarding (1) the reliability and accuracy of the SEEM System, and (2) any complaints received from a Participant to the Membership Board and to investigate further any such complaint at the Board's direction (SEEM Rules Sections VI.D.3, VI.D.1.5). Section II of this report fulfils our duty to report on the reliability and accuracy of the SEEM system to the Board. Regarding reporting on complaints from participants, we did not receive any during the period of this report.

Finally, we have the duty to respond to written questions from Participants, FERC, NERC, state commissions in the region, Tennessee Valley Authority's Inspector General, and any other applicable regulators that oversee the electric operations of any Member regarding the integrity of the matching process (SEEM Rules Sections VI.D.6). We did not receive any such requests during the period of this report.

In the remainder of the report (Section II), we provide the results of our analysis of the first main area of responsibility: to analyze of input, constraints, and matching results to determine whether SEEM operates in accordance with the SEEM Rules. This is in two main parts. First, we review various daily screens that ensure specific inputs, constraints, and energy exchanges have met certain validation metrics. Second, we review the economic activity in SEEM to provide insight into its functioning and performance.

II. AUDITING RESULTS

In this section, we discuss the results of our monthly auditing. In subsection A, we show the results of our daily screening. In subsection B, we present an overview of the economic activity.

A. Market Operation Screens

We calculate screens, metrics, and other analyses on a daily basis using market data and other data to meet the auditing obligations in the Market Rules. The screens and metrics are developed in accordance with specific Market Rules requirements and are divided into three main categories:

- Verification of bid/offer parameters;
- Evaluation of SEEM matching; and
- Verification of SEEM System Constraints.

The following three subsections describe the screens used for our auditing. Unless otherwise indicated, these screens are calculated daily for all fifteen-minute intervals.

1. Bid/Offer Parameters

The following screens audit the information provided in participant bids and offers.

- Offers (bids) from a participant must have Participant-Specific Constraints identifying at least three other non-affiliated Participants that can be matched as counterparties;
- All offers and bids properly must include a source or sink;
- Each offer and bid must a delivery interval;
- Bids and offers must be 4 MW increments;
- "All or Nothing Selection" must be indicated; and
- The Network Map must be accurate (monthly).

2. Matching

The following screens are used to audit the SEEM matches:

- Match price must not exceed the bid price and must be greater than the offer price;
- Buyer and seller must be distinct participants;
- Participant-specific constraints must be check for any changes (monthly);
- SEEM benefit calculation must be verified;
- Any maximum offer price declared must bind the transaction; and
- Each match must have a NERC Tag.

3. Constraints

The following screens audit the SEEM constraints.

- Transaction volume must not exceed offer or bid volume;
- The SEEM algorithm must only make energy exchanges that yield positive benefits to both buyer and seller; and
- Transaction volume over each segment must not exceed the segment ATC.

We have data transfer and storage architecture in place to receive data from the SEEM market to support the calculation of these screens. With the exception of screening the Network Map and the Participant-specific constraints, the screens are calculated daily and we have developed data processing procedures for each of the daily screens. We applied the screens to the June SEEM data and found that in all intervals the screens have indicated that requirements have been met.

For the monthly audit of the system map, we use the initial map developed by Hartigen and the SEEM working groups as a basis for comparing subsequent maps. This map is an electronic file of all sources, sinks, balancing areas, and SEEM transmission segments that comprise the SEEM system. A SEEM segment is an interface between two balancing areas and in many cases is synonymous with the path used by the system. In some cases, the segments are strung together to allow SEEM matches across multiple systems, forming a multi-segment path. The SEEM model allows any number of SEEM segments to be linked in order to find a beneficial trade.

This map was updated at the end of June to reflect the newly-joined members. This new map will be used as a basis of comparison. SEEM members and consultants engaged in a lengthy technical process to develop the new map and we will assume it is accurate. It would not be practicable to replicate this initial map. The SEEM model uses a static path configuration database to retrieve possible paths associated with the sources and sinks offered and bid in each interval. We will save a snapshot of this database and compare it to the path configuration database each month going forward at the start of each month and evaluate any changes. In previous months, we found the map does not change.

In a similar fashion, we evaluate changes to participant-specific constraints. These are counterparties and balancing areas acceptable to each participant for trades in SEEM, as well as any maximum price constraints. In each interval SEEM uses a set of participant-specific constraints for all participant bids and offers. We check each participant for any excluded sellers or buyers and any max price constraints and identify any constraints that changed during the month. There were a number of changes to these constraints due to the addition of new participants who have to designate their initial trading partners. Aside from the new participants, there were three instances when existing participants temporarily changed their trading partners to

allow potential matches with specific counterparties. No participants changed any maximum price constraints.

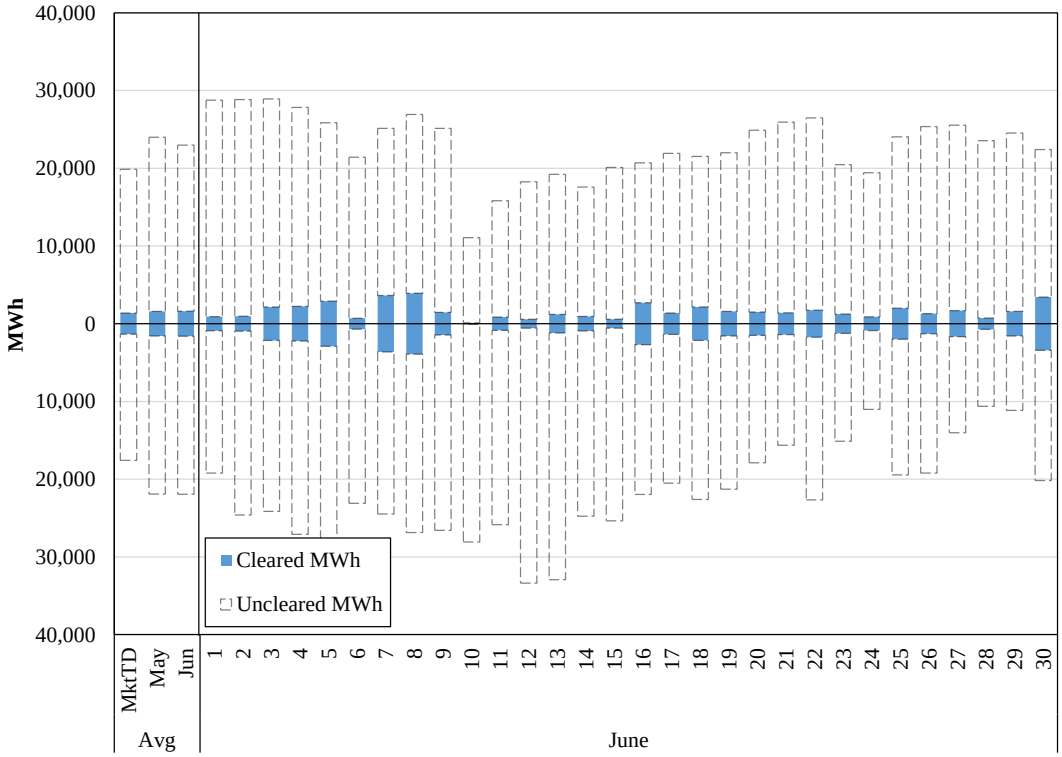
B. Market Activity

In this section, we summarize and discuss SEEM operations and outcomes to illuminate any potential operating or market issues. Our evaluation is in two main areas. First, is an overall review of the market trading, including volumes, prices, and characteristics of participation. Second is an evaluation of network usage, focusing on the key transmission paths and constraints.

1. Market Outcomes

SEEM cleared over 48,000 MWh of energy in June, averaging approximately 1,600 MWh per day. Figure 1 illustrates daily SEEM bids and offers for June. Each bar represents the daily total MWh volume of SEEM activity. The bids and offers are divided between cleared bids to buy (blue bar above the x axis) and cleared offers to sell (blue bars below the x axis). The transparent bar stacked above the bids and below the offers are the uncleared bids and offers. The figure also shows activity relative to the previous month and relative to the market to date (MktTD). MktTD is the monthly average of all months since SEEM began in November 2022 (i.e., the November 2022 – June 2023 average).

Figure 1: Daily Bids and Offers
June 2023



The average daily bid and offer quantities were higher in June than in May and higher than the MktTD average. This continues the overall trend of increased participation since the SEEM opening in November. Average cleared volumes were also slightly higher in June and higher than the MktTD average. As the left-side monthly and MktTD bars show, total liquidity (bids and offers) has increased more than cleared activity. Only a small part of the June volume arises from SEEM clearing bids and offers from the new members who joined operations on June 28. Trades involving new members totaled less than 1,000 MWh (out of the month's total of 48,000 MWh). Trades that were only among new traders totaled 8 MWh, something that is not unexpected given these new traders participated only three days in June.

Like in previous months, we evaluated the uncleared bids and offers and found a notable volume of uncleared bids and offers with economic overlap in the sense that in an interval there are uncleared bids whose price is greater than some uncleared offer prices in the same interval. Some of this is possible due to transmission constraints and the cost of transmission losses that may render a trade uneconomic. We found a much smaller volume of uncleared economic bids and offers when considering the average cost of losses. In particular, many of the uncleared economic bids/offers could not settle at a price that would pay for average transmission losses. About 12,500 MWh of bids/offers could settle at a price that could pay the average $2/MWh losses. In May, the amount was 5,000 MWh. Without a complex simulation, there is not a straightforward way to determine why this amount did not clear, but among the possibilities is transmission constraints and the need to use segments that had higher-than-average cost of losses. Counterparty constraints could also explain unmatched bids and offers. With 12,500 MWh of uncleared economic bid-offer pairs, this means that 80 percent of economic matches were cleared. Relative to uncleared offers, about one percent of the uncleared offers were economic.

There are also rare instances when transactions are matched but fail to clear the transmission scheduling process. These instances are attributable to occasional delays in approving transmission service requests (TSRs), so the tag is denied for being late. It may also result from insufficient ATC when the TSR is processed. SEEM downloads ATC values from OASIS twice an hour, so it is possible that real-time changes occur that result in insufficient ATC by the time the TSR is submitted. These failed transactions were less than 1/10 percent of the total bid/offered quantities.

Figure 2 shows more detail on the matched bids and offers by showing the matches by market participant. Like the prior figure, the bars above the x axis are cleared bids and the bars below are cleared offers. The bars in this figure are divided by participant, each color corresponds to a different participant (whether the participant is a buyer or seller). We do not reveal the identity of the participants in order to respect commercial sensitivity.

Figure 2: Volumes of Matched Bids and Offers
June 2023

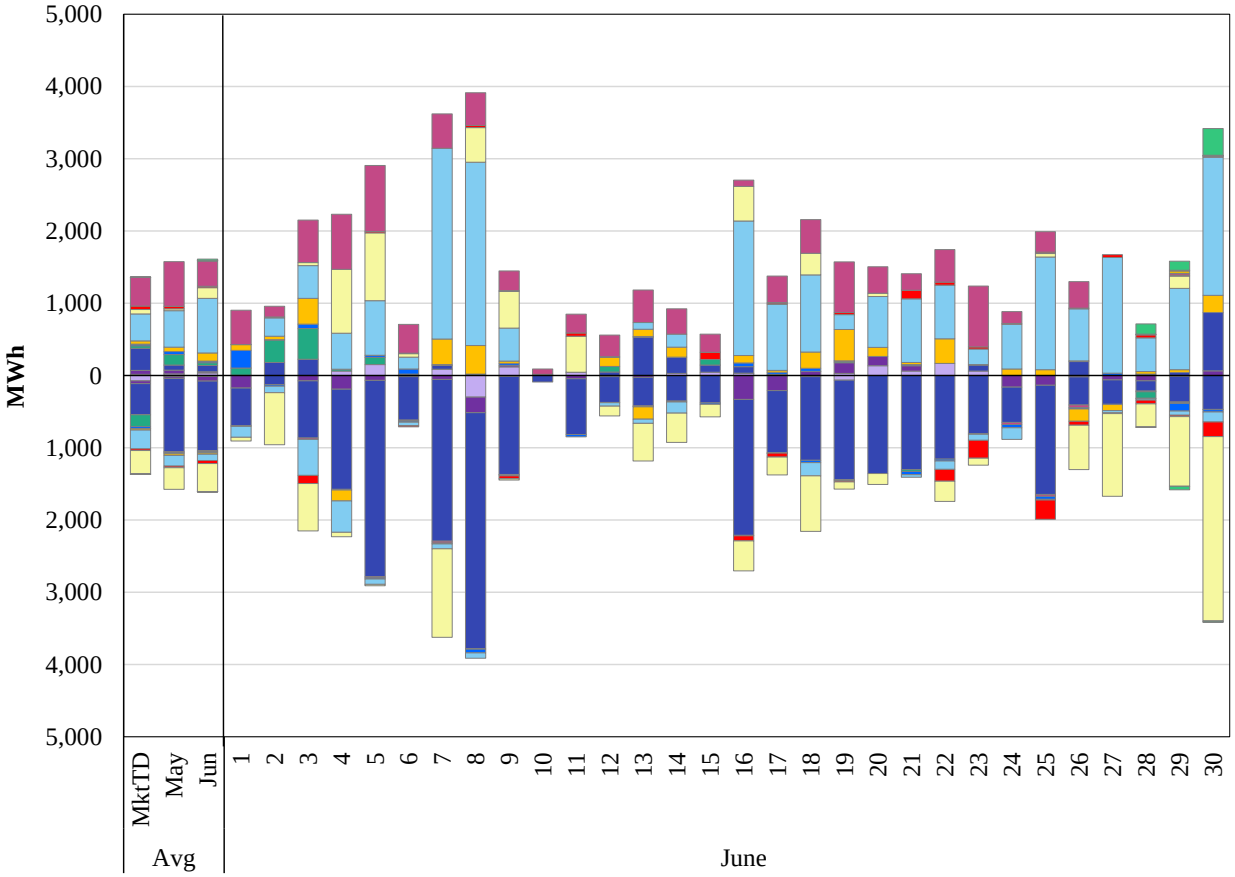
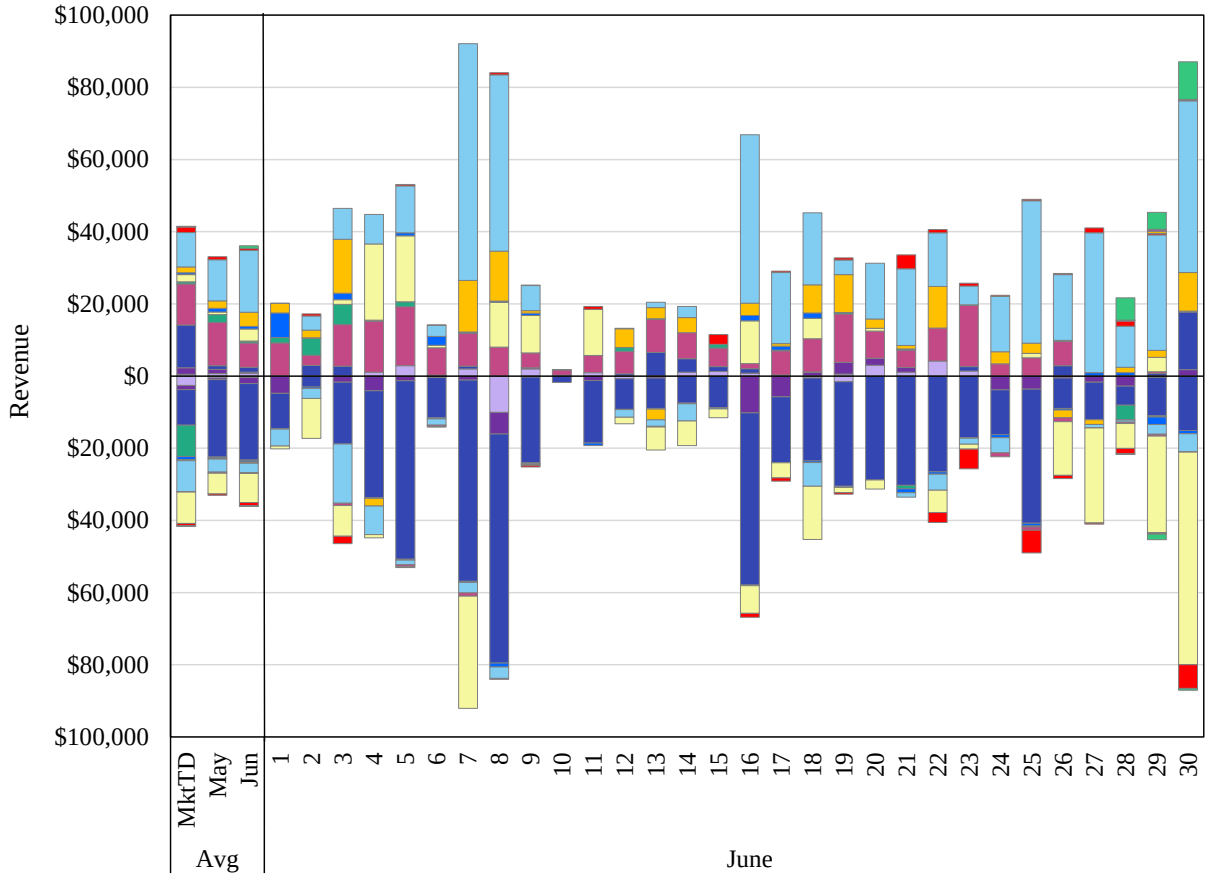


Figure 2 shows certain buyers and sellers comprise significant shares of the transaction activity. About 65 percent of the sales were made by a single participant and the two largest sellers accounted for 85 percent of the volume. On the buyer side, the largest buyer accounted for 40 percent of the cleared volume and the top two buyers accounted for 70 percent. Our findings in previous months indicate that the most active participants vary from month-to-month, both in identity and sales share, as can be observed by the left bar charts showing monthly and Market-to-Date (MktTD) averages.

Figure 3 is similar to Figure 2, but shows the revenues of matched transactions rather than the volumes. These are highly correlated with the transaction volumes shown in Figure 2.

Figure 3: Revenues of Matched Transactions
June 2023



2. Network Usage

In this subsection, we report on the usage of the SEEM network. Figure 4 shows the average daily peak-hour prices for June and the prices on the highest-priced and lowest-priced paths for each day. Figure 5 is the same figure but for off-peak hours.

The figures show in the left column the June prices compared to the previous period. It shows the average prices for are roughly equal to the prices in May but are lower than the average since market opening. This downward price trend is likely the result of lower natural gas prices.

Figure 4: Average SEEM Clearing Prices: System-Wide and by Path
Peak Hours – June 2023

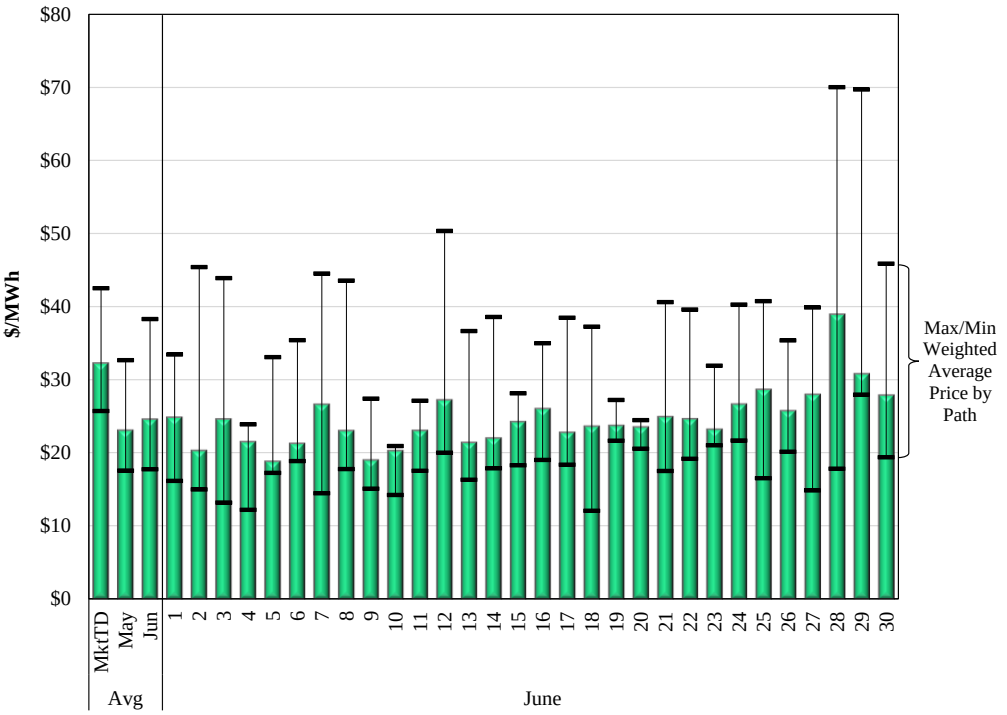
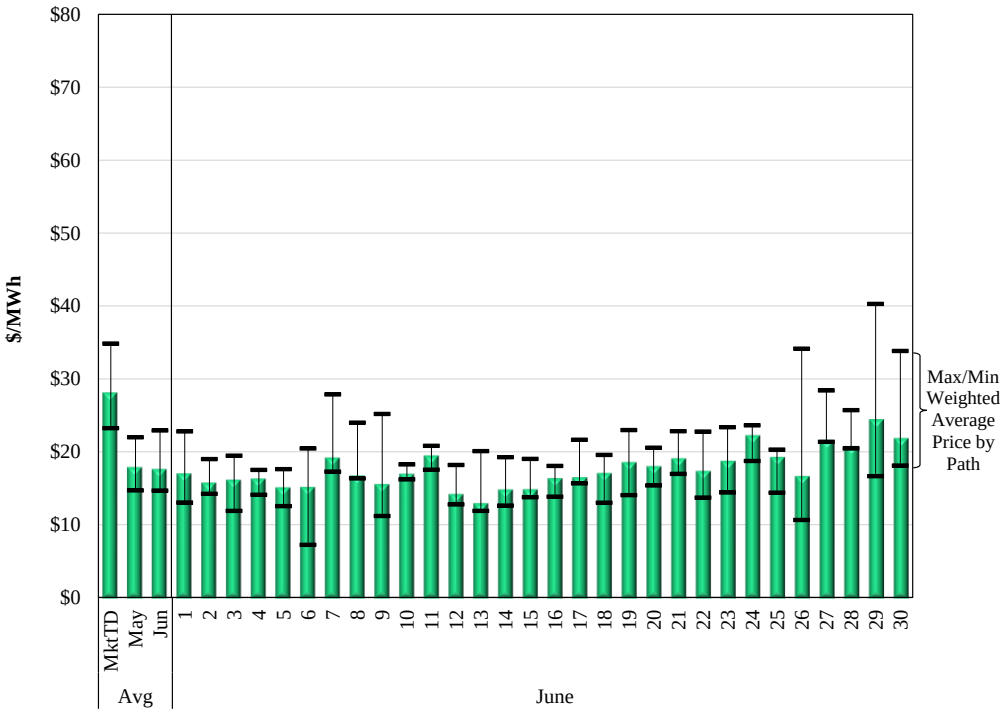


Figure 5: Average SEEM Clearing Prices: System-Wide and by Path
Off-Peak Hours – June 2022



The two figures show that the value of transactions can vary significantly by path, mainly because transmission constraints can contribute to higher prices between different locations. If a constraint prevents higher total flows between two (beneficial trading) areas, the average transaction price will be higher than if sufficient transmission capability was available to allow all beneficial trades to clear between the areas.

Accordingly, we evaluate SEEM transactions by path segments. We gathered ATC and trading statistics for all SEEM segments available to the model. The SEEM segments increased in June because of the addition of new participants. The number of segments increased from 180 to 240. The path data includes the median, maximum, and minimum ATC values over all intervals for each segment, as well as the total MWh that cleared over each segment. We calculate a "loading factor" based on the scheduled transactions and ATC on the segment during each 15-minute interval. It is the portion of the path used in that interval relative to the maximum amount that could have been used based on the ATC.

Table 1 shows an excerpt of our statistics. The table displays the 21 segments that had more than 1,000 MWh of transactions scheduled during the month. The full data for all segments with at least 20 MWh scheduled during the month is provided in Appendix A. In addition to the ATC and schedule volumes, the Table also shows how each segment was utilized by interval during the month, *to wit*, the interval was either:

(1) Partially used (MWs cleared were less than ATC);

(2) Fully Used, ATC was used up for the interval;[2]

(3) Unavailable, no ATC;[3] and

(4) Uncleared (no schedules on the segment).

In reporting the usage of each segment, we refer to a "segment-intervals" which is an observation in a single interval on one segment. During the month, total segment intervals is the product of all 240 segments and the number of intervals during the month. In June, there were 575,545.[4] Of this total, the most common case in the data was case (4), where ATC was available, but the segment was not used because there were no beneficial transactions that could be cleared by the SEEM

[2] ATC less the MW schedule was less than 4 MW (i.e., no additional SEEM transaction could be cleared).

[3] ATC was less than 4 MW at the start of the interval.

[4] The maximum number of segment intervals in a month is (240 segments x 4 intervals x 24 hours x #days in the month). This is the maximum because occasionally the system requires shutting down for short periods to perform upgrades and other patches. In June, SEEM operated in all intervals, except 4. In addition, for most of the month, segments associated with new members were not used and maximum value would be reduced by the 60 new segments that were not posted in 27 days.

model over the intervals. These cases represent 515,690 segment intervals or 90 percent of all segment-intervals. The second most common case was case (3), where ATC was not sufficient to clear any SEEM transactions (54,380). The third most common case was case (1), intervals where the segment was partially used (5,491). Finally, in a small number of intervals, case (2) prevailed where the segment was completely scheduled in the interval (84).

Table 1: Most Utilized SEEM Segment Statistics

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/CPL/CPLE-DUK//	355	4,275	7,077	15,999	0.005055	451	16%	0	0%	0	0%	2425	84%
S/DUK/CPLE-SOCO//	0	2,066	2,335	11,609	0.008028	347	12%	0	0%	1	0%	2528	88%
SS/SOCO/DUK-SOCO//	1	734	1,020	11,543	0.022352	309	11%	25	1%	4	0%	2538	88%
SS/SOCO/TVA-SOCO//	960	1,254	1,362	8,347	0.009225	228	8%	0	0%	0	0%	2648	92%
S/TVA/TVA-SOCO//	0	2,905	3,000	8,336	0.004708	223	8%	1	0%	376	13%	2276	79%
S/CPL/CPLE-SC//	0	2,096	4,319	8,303	0.005558	494	17%	0	0%	16	1%	2366	82%
S/SC/CPLE-SC//	0	1,894	2,842	7,880	0.005755	481	17%	0	0%	9	0%	2386	83%
S/DUK/CPLE-TVA//	0	692	692	3,606	0.007530	123	4%	3	0%	1	0%	2749	95%
S/TVA/DUK-TVA//	0	333	355	3,476	0.015052	105	4%	2	0%	20	1%	2749	95%
S/DUK/DUK-SOCO//	0	1,968	2,335	2,685	0.002044	146	5%	0	0%	32	1%	2698	94%
S/TVA/TVA-DUK//	0	333	355	2,335	0.011840	63	2%	0	0%	456	16%	2357	82%
SS/SOCO/SOCO-SOCO//	40,479	43,556	43,556	2,260	0.000072	112	4%	0	0%	0	0%	2764	96%
S/DUK/TVA-DUK//	0	692	692	2,112	0.004388	55	2%	2	0%	23	1%	2796	97%
SS/GTC/DUK-GTC//	0	516	645	1,832	0.005092	85	3%	0	0%	4	0%	2787	97%
S/SC/DUK-SC//	357	1,800	2,628	1,317	0.000995	154	5%	0	0%	0	0%	2722	95%
SS/SOCO/SCEG-SOCO//	1	143	208	1,242	0.011830	91	3%	13	0%	3	0%	2769	96%
SS/GTC/SOCO-GTC//	2,393	13,296	14,594	1,136	0.000119	54	2%	0	0%	0	0%	2822	98%
P/LGEE/TVA-LGEE//	0	731	1,424	1,134	0.002237	57	2%	0	0%	828	29%	1991	69%
S/SC/SOCO-SC//	0	1,712	2,233	1,114	0.000946	66	2%	0	0%	7	0%	2803	97%
S/AECI/TVA-AECI//	0	0	619	1,084	0.009146	80	3%	0	0%	1,981	69%	815	28%
S/SCEG/SCEG-SOCO//	0	2,140	5,782	1,054	0.000604	102	4%	0	0%	2	0%	2772	96%

These statistics indicate that among these most utilize segments, ATC remains available for SEEM trades. For example, many of the top paths have over 80 percent of their intervals uncleared. There are, however, numerous instances when segments are constrained. A constrained segment is one where either ATC is insufficient (less than 4 MW) prior to SEEM matching, or the segment is completely used by SEEM in at least one interval during the hour. These two circumstances (Cases (2) and (3)) occur in over 54,000 segment-intervals and almost always because the ATC is insufficient to schedule (i.e., ATC < 4 MW) rather than because it is filled by a SEEM match.

Further insight on constrained segments can be gained from Table 2. It shows the segments most often unavailable to SEEM (i.e., unavailable at least 20 percent of the intervals). Like in previous months, paths that are unavailable due to no ATC, are generally unused when they are available.

The incidence of transmission capacity constraints increased slightly between May and June, as measured by the percentage of constrained segment intervals (7 percent in May and 9 percent in June). Because trading volumes were slightly higher in June, the increased frequency of transmission constraints does not appear to significantly affect liquidity. Moreover, as we explained above, only a small portion of economic exchanges were uncleared.

Table 2: Most Constrained SEEM Segments

Segment	ATC				Loading	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/TVA/CPLW-AECI//	0	0	276	101	0.001951	9	0%	0	0%	2,092	73%	775	27%
S/TVA/AECI-CPLW//	0	0	276	0	0.000000	0	0%	0	0%	2,076	72%	800	28%
S/TVA/TVA-CPLW//	0	0	276	0	0.000000	0	0%	0	0%	2,076	72%	800	28%
S/TVA/LGEE-CPLW//	0	0	276	0	0.000000	0	0%	0	0%	2,064	72%	812	28%
S/TVA/SOCO-CPLW//	0	0	276	0	0.000000	0	0%	0	0%	2,044	71%	832	29%
S/TVA/DUK-CPLW//	0	0	276	0	0.000000	0	0%	0	0%	2,000	69%	876	30%
S/TVA/CPLW-LGEE//	0	0	276	0	0.000000	0	0%	0	0%	1,984	69%	892	31%
S/AECI/TVA-AECI//	0	0	619	1,084	0.009146	80	3%	0	0%	1,981	69%	815	28%
S/TVA/CPLW-SOCO//	0	0	276	0	0.000000	0	0%	0	0%	1,968	68%	908	32%
S/TVA/CPLW-TVA//	0	0	276	693	0.011061	27	1%	0	0%	1,968	68%	881	31%
S/TVA/CPLW-DUK//	0	0	276	0	0.000000	0	0%	0	0%	1,964	68%	912	32%
S/CPL/CPLW-TVA//	0	0	276	0	0.000000	0	0%	0	0%	1,944	68%	932	32%
S/CPL/DUK-TVA//	0	0	276	794	0.012168	31	1%	4	0%	1,911	66%	930	32%
S/CPL/TVA-CPLW//	0	0	276	0	0.000000	0	0%	0	0%	1,908	66%	968	34%
S/CPL/TVA-DUK//	0	0	276	0	0.000000	0	0%	0	0%	1,908	66%	968	34%
P/LGEE/TVA-LGEE//	0	731	1,424	1,134	0.002237	57	2%	0	0%	828	29%	1991	69%
S/MEAG/MEAG-TVA//	0	122	177	61	0.000988	4	0%	0	0%	702	24%	2170	75%
S/MEAG/MEAG-SC//	0	67	78	216	0.006007	16	1%	6	0%	606	21%	2248	78%

III. CONCLUSION

We reviewed the operation of SEEM for June 2023. We have developed operational procedures to validate the market rules and constraints of SEEM. All of our screens have been validated and we conclude the SEEM operated within the rules and constraints. We also have evaluated the SEEM outcomes and have not identified significant operating issues.

Appendix A

SEEM Path Usage

Segment	ATC				Loading	Partially Used		Fully Used		Unavailable		Uncleared	
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S/DUK/TVA-DUK//	0	692	692	2,112	0.004388	55	2%	2	0%	23	1%	2796	97%
SS/GTC/DUK-GTC//	0	516	645	1,832	0.005092	85	3%	0	0%	4	0%	2787	97%
S/SC/DUK-SC//	357	1,800	2,628	1,317	0.000995	154	5%	0	0%	0	0%	2722	95%
SS/SOCO/SCEG-SOCO//	1	143	208	1,242	0.011830	91	3%	13	0%	3	0%	2769	96%
SS/GTC/SOCO-GTC//	2,393	13,296	14,594	1,136	0.000119	54	2%	0	0%	0	0%	2822	98%
P/LGEE/TVA-LGEE//	0	731	1,424	1,134	0.002237	57	2%	0	0%	828	29%	1991	69%
S/SC/SOCO-SC//	0	1,712	2,233	1,114	0.000946	66	2%	0	0%	7	0%	2803	97%
S/AECI/TVA-AECI//	0	0	619	1,084	0.009146	80	3%	0	0%	1,981	69%	815	28%
S/SCEG/SCEG-SOCO//	0	2,140	5,782	1,054	0.000604	102	4%	0	0%	2	0%	2772	96%
S/TVA/TVA-LGEE//	0	1,079	2,585	984	0.001321	51	2%	0	0%	436	15%	2389	83%
S/DUK/DUK-SC//	0	1,691	2,880	977	0.000828	133	5%	0	0%	31	1%	2712	94%
S/TVA/DUK-AECI//	0	332	355	954	0.004965	69	2%	4	0%	152	5%	2651	92%
SS/SOCO/SOCO-SC//	-617	250	671	833	0.004736	40	1%	0	0%	441	15%	2395	83%
S/CPL/DUK-TVA//	0	0	276	794	0.012168	31	1%	4	0%	1,911	66%	930	32%
S/CPL/CPLE-SCEG//	0	297	502	789	0.003788	67	2%	0	0%	21	1%	2788	97%
S/DUK/CPLE-CPLW//	0	414	554	784	0.002717	31	1%	2	0%	103	4%	2740	95%
S/DUK/DUK-TVA//	0	692	692	764	0.001605	61	2%	0	0%	9	0%	2806	97%
S/MEAG/MEAG-SOCO//	2,301	2,601	2,797	719	0.000381	43	1%	0	0%	0	0%	2833	98%
S/TVA/CPLW-TVA//	0	0	276	693	0.011061	27	1%	0	0%	1,968	68%	881	31%
F/JEA/SOCO-JEA//	24	409	743	650	0.018373	68	2%	2	0%	0	0%	253	9%
SS/SOCO/SC-SOCO//	235	400	815	473	0.001503	24	1%	0	0%	0	0%	2852	99%
S/MEAG/DUK-MEAG//	59	137	228	438	0.004209	28	1%	3	0%	0	0%	2845	99%
S/SC/CPLE-SOCO//	1,614	3,350	3,801	426	0.000177	15	1%	0	0%	0	0%	2861	99%
S/SCEG/CPLE-SCEG//	225	475	623	405	0.001198	44	2%	0	0%	0	0%	2832	98%
S/SCEG/SCEG-DUK//	0	684	884	399	0.000825	58	2%	0	0%	2	0%	2816	98%
S/AECI/AECI-TVA//	0	501	1,112	395	0.001172	30	1%	0	0%	153	5%	2693	94%
S/DUK/SOCO-DUK//	0	1,982	2,220	360	0.000289	48	2%	1	0%	200	7%	2627	91%
SS/GTC/GTC-SOCO//	20,000	20,000	20,000	352	0.000024	11	0%	0	0%	0	0%	2865	99%
S/SCEG/CPLE-SOCO//	225	475	623	348	0.001028	21	1%	0	0%	0	0%	2855	99%
S/DUK/SOCO-SC//	0	1,957	2,220	339	0.000274	29	1%	0	0%	203	7%	2644	92%
SS/SOCO/SOCO-DUK//	110	864	1,091	333	0.000601	63	2%	0	0%	0	0%	2813	98%
S/CPL/DUK-CPLE//	0	3,400	6,816	308	0.000123	24	1%	0	0%	1	0%	2851	99%
S/CPL/SCEG-CPLE//	0	517	517	251	0.000694	40	1%	0	0%	65	2%	2771	96%
S/DUK/SCEG-TVA//	0	663	664	250	0.000556	25	1%	2	0%	3	0%	2846	99%
S/TVA/AECI-SOCO//	0	343	387	244	0.001152	18	1%	0	0%	380	13%	2478	86%
S/DUK/TVA-CPLE//	0	692	692	227	0.000465	9	0%	0	0%	4	0%	2863	99%
S/SC/SCEG-SC//	252	1,346	1,966	225	0.000229	24	1%	0	0%	0	0%	2852	99%

Appendix A (continued)

Segment	ATC				Loading	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/SCEG/SCEG-SC//	2,847	6,159	6,389	225	0.000053	24	1%	0	0%	0	0%	2852	99%
S/MEAG/MEAG-SC//	0	67	78	216	0.006007	16	1%	6	0%	606	21%	2248	78%
S/SCEG/SCEG-CPLE//	0	672	922	193	0.000397	35	1%	0	0%	2	0%	2839	99%
S/TVA/SOCO-TVA//	0	2,532	2,940	187	0.000117	13	0%	0	0%	68	2%	2795	97%
S/MEAG/MEAG-DUK//	0	76	146	178	0.003113	13	0%	4	0%	105	4%	2754	96%
S/DUK/SCEG-DUK//	0	663	664	171	0.000385	31	1%	0	0%	90	3%	2755	96%
S/SC/SC-SOCO//	1,260	2,980	3,751	163	0.000076	45	2%	0	0%	0	0%	2831	98%
SS/GTC/GTC-DUK//	0	472	686	163	0.000514	7	0%	1	0%	44	2%	2824	98%
SS/GTC/TVA-GTC//	11	296	322	153	0.000710	11	0%	0	0%	0	0%	2865	99%
S/TVA/DUK-LGEE//	0	333	355	150	0.000677	6	0%	0	0%	120	4%	2750	95%
S/TVA/AECI-TVA//	0	343	387	147	0.000608	10	0%	0	0%	32	1%	2834	98%
SS/SOCO/SOCO-FL//	417	1,373	1,541	138	0.000188	17	1%	0	0%	0	0%	2231	77%
P/LGEE/LGEE-TVA//	0	1,048	1,623	124	0.000176	13	0%	0	0%	213	7%	2650	92%
S/TVA/LGEE-SOCO//	0	2,648	2,828	121	0.000071	13	0%	0	0%	248	9%	2615	91%
SS/GTC/SCEG-GTC//	0	81	114	107	0.001820	11	0%	0	0%	2	0%	2863	99%
S/MEAG/MEAG-GTC//	2,301	2,670	3,052	102	0.000053	11	0%	0	0%	0	0%	2865	99%
SS/GTC/MEAG-GTC//	6,849	8,794	9,153	102	0.000016	11	0%	0	0%	0	0%	2865	99%
S/TVA/CPLW-AECI//	0	0	276	101	0.001951	9	0%	0	0%	2,092	73%	775	27%
S/DUK/DUK-SCEG//	0	262	263	83	0.000464	13	0%	0	0%	62	2%	2801	97%
S/DUK/SOCO-CPLE//	0	2,000	2,220	81	0.000063	15	1%	0	0%	184	6%	2677	93%
S/SCEG/DUK-SCEG//	125	325	547	78	0.000323	12	0%	0	0%	0	0%	2864	99%
SS/SOCO/SOCO-SCEG//	0	143	229	78	0.000783	7	0%	0	0%	479	17%	2390	83%
S/MEAG/SOCO-MEAG//	2,620	3,000	3,280	75	0.000035	4	0%	0	0%	0	0%	2872	100%
SS/GTC/SC-GTC//	0	151	309	71	0.000578	17	1%	0	0%	2	0%	2857	99%
SS/SOCO/DUK-FL/MULTIPATHALIAS/	0	714	1,020	71	0.000183	7	0%	0	0%	4	0%	2237	78%
SS/SOCO/TVA-FL/MULTIPATHALIAS/	417	1,182	1,362	71	0.000110	9	0%	0	0%	0	0%	2239	78%
F/JEA/JEA-SOCO//	0	159	429	65	0.004180	12	0%	0	0%	99	3%	212	7%
S/SCEG/SOCO-CPLE//	0	672	922	64	0.000132	6	0%	0	0%	2	0%	2868	100%
S/MEAG/MEAG-TVA//	0	122	177	61	0.000988	4	0%	0	0%	702	24%	2170	75%
SS/GTC/GTC-SC//	0	280	366	60	0.000351	3	0%	0	0%	446	15%	2427	84%
SS/SOCO/FL-SOCO//	0	349	538	59	0.000354	10	0%	0	0%	476	17%	1762	61%
SS/SOCO/DUK-TVA/MULTIPATHALIAS	1	714	1,020	57	0.000111	6	0%	0	0%	4	0%	2866	100%
S/MEAG/TVA-MEAG//	60	101	224	48	0.000506	3	0%	1	0%	0	0%	2872	100%
S/TVA/DUK-SOCO//	0	333	355	40	0.000172	2	0%	0	0%	4	0%	2870	100%
F/FPC/SOCO-FPC//	1	200	432	40	0.001924	7	0%	0	0%	96	3%	330	11%
S/MEAG/MEAG-JEA//	0	152	217	38	0.000579	4	0%	2	0%	258	9%	1984	69%
S/SCEG/CPLE-DUK//	225	475	623	36	0.000106	2	0%	0	0%	0	0%	2874	100%
S/MEAG/SC-MEAG//	10	32	66	31	0.001207	5	0%	1	0%	0	0%	2870	100%
S/TVA/SOCO-AECI//	0	314	622	29	0.000122	4	0%	0	0%	416	14%	2456	85%
SS/SOCO/SOCO-TVA//	577	2,566	3,511	29	0.000016	4	0%	0	0%	0	0%	2872	100%
S/DUK/SC-DUK//	0	1,964	2,920	23	0.000016	7	0%	0	0%	56	2%	2813	98%
S/SC/SC-DUK//	1,033	2,599	3,699	22	0.000012	6	0%	0	0%	0	0%	2870	100%
SS/SOCO/SCEG-FL/MULTIPATHALIAS/	91	167	208	20	0.000228	5	0%	0	0%	0	0%	2243	78%