MONTHLY AUDIT REPORT ON THE SOUTHEAST ENERGY EXCHANGE MARKET

December 2022

Prepared by:

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Independent Market Auditor

January 31, 2023

I. OVERVIEW

This is the Auditor report for the month of December 2022 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 various participants. The automated market accepts bids and offers from the SEEM members and clears individual bilateral trades every 15 minutes using available transmission capability (ATC). The cleared trades are matched 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 was created and 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 inquires 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 it 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.

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 participant, 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, applicable 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 result 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. We have developed data processing procedures for each one of the daily screens listed above. We applied the screens to the December 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.

By using this initial map as a basis of comparison, we will take advantage of the lengthy technical process used by SEEM and the SEEM members to develop the map and assume it is accurate. It would not be practicable to replicate this initial map. The SEEM model uses a static path configuration data base to retrieve possible paths associated with the sources and sinks offered and bid in each interval. We saved a snapshot of this data base and compared it to the path configuration data base used at the start of each month. We identify and evaluate any changes. We found no changes in December and therefore can conclude the network map is accurate for the current sources and sinks participating in SEEM.

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. 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. We found one participant that expanded the set of eligible counterparties to one additional buyer and seller. While there are restrictions in the rules concerning trade with affiliates, there are no restrictions regarding expanding the set of trading counterparties as long as the expanding set does not include an affiliate. The changes in December did not involve affiliated entities. Accordingly, we find no need for further analysis of these participant-specific constraints.

B. Market Activity

In this section, we summarize and discuss SEEM operations and outcomes. This discussion is intended to illuminate how the system is operated and the outcomes it is producing. We summarize our results and discussion 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

Figure 1 illustrates daily SEEM bids and offers. Each bar represents a day of SEEM activity. The bids and offers are divided between cleared offers 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 offers and below the bids are the uncleared bids and offers. The figure also shows a volume of transactions depicted in red, which represent a very small volume of cleared matches that failed transmission scheduling.

Figure 1 shows activity was relatively steady with some variation across the month but with an exceptional three-day period with extreme cold weather starting December 24th. During that period there was a notable decline in supply offers, causing transactions decline. We observed similar declines in supply during cold weather events in November. Overall, the cumulative data shown on the left side of the figure indicates activity in offers, bids, and matched transactions were comparable in December compared to November, given that November data includes only three weeks. In December, daily cleared transactions ranged as high as 3,600 MWh, but were zero for many intervals during the cold weather period.[1]

As we discuss further in Table 1 below, the data suggests that the uncleared bids and offers generally fail to clear because the bids and offers do not coincide, rather than due to unavailable transmission capability on the SEEM segments.

Finally, Figure 1 shows that instances when transactions are matched but fail to clear the transmission scheduling process are rare (shown in red). 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.

[1] We report our volumes in MWh. Each match is for 15-minutes, so a match of 4 MW is one MWh.

Figure 1: Daily Bids and Offers
December 2022

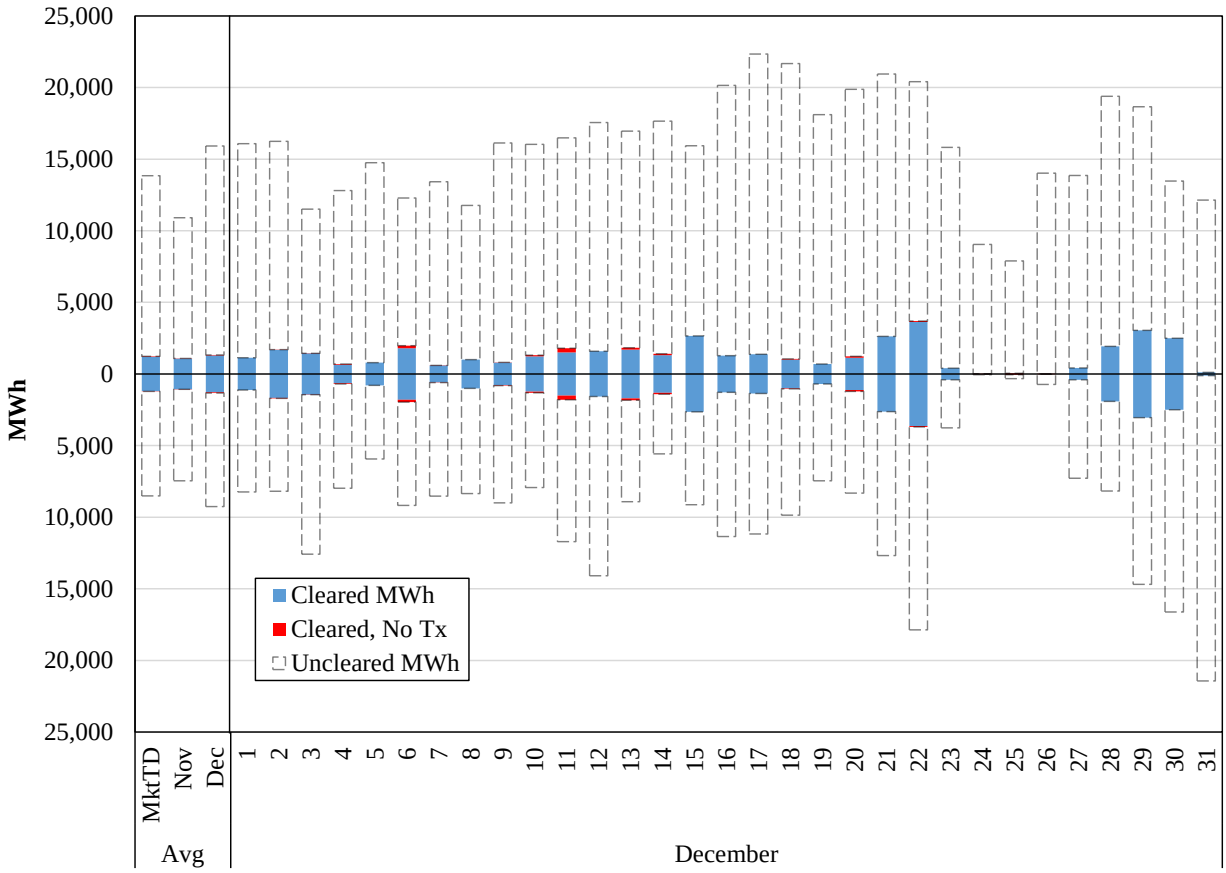


Figure 2 shows more detail on the matched bid and offers by showing the matches by market participant. Like the prior figure, the bars above the x axis are cleared bids and the bars below are cleared offers. The bars in this figure are divided by participant, each color corresponds to a different participant (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 shows that on the buyer side, about 66 percent of the cleared volume was by a single participant and the two largest buyers accounted for 87 percent of the volume. On the seller side, the largest seller accounted for 42 percent of the cleared volume and the top two sellers accounted for 64 percent. These statistics provide a view into the character of SEEM participation and activity but are not a basis for drawing conclusions regarding the performance of the SEEM at this stage of development. We note the concentration of sales volume among the most active participants is lower than in November when 89 percent was among the top two sellers.

Figure 2: Volumes of Matched Bids and Offers
December 2022

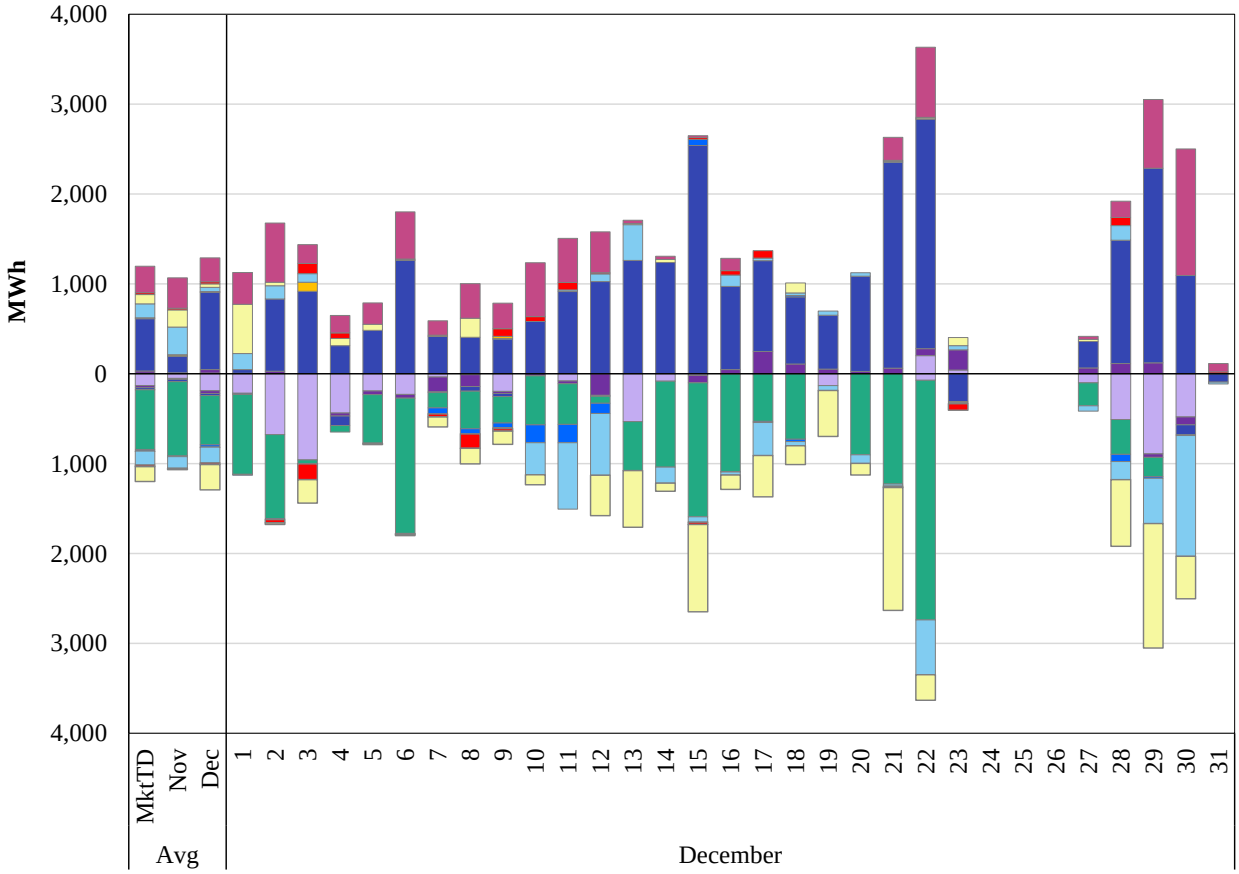
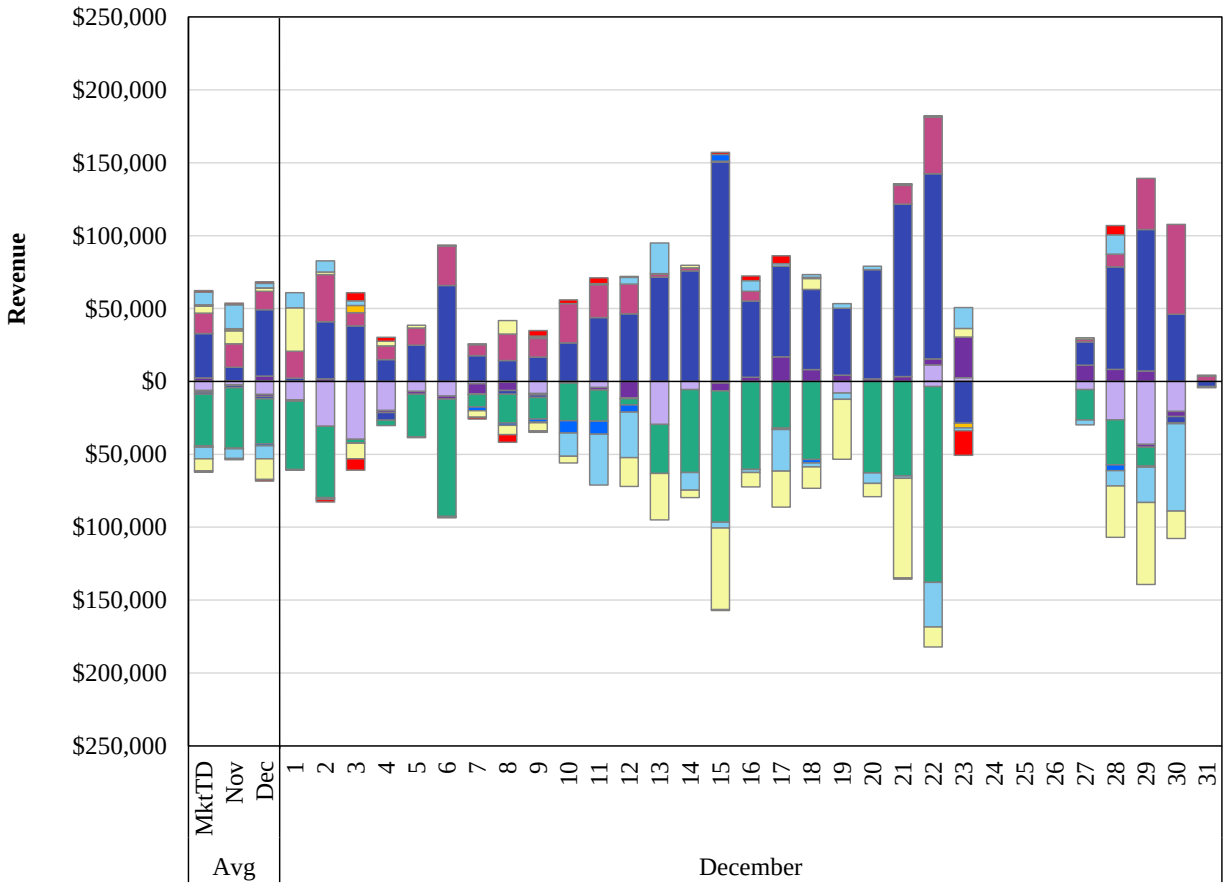


Figure 3 is comparable to Figure 2, but shows the revenues of matched transactions rather than the volumes. These are highly correlated with the transaction volumes shown in Figure 2. This suggests prices are not widely different among different matched transactions.

Figure 3: Revenues of Matched Transactions
December 2022



2. Network Usage

In this subsection, we show the average transaction prices and evaluate the usage of different segments of the SEEM network. In Figure 4 and Figure 5, the bars show the average daily peak and off-peak prices for the month. The vertical lines in the figures show the range of daily weighted average prices for the highest-priced and lowest-priced paths for each day.

Figure 4: Average SEEM Clearing Prices: System-Wide and by Path
Peak Hours – December 2022

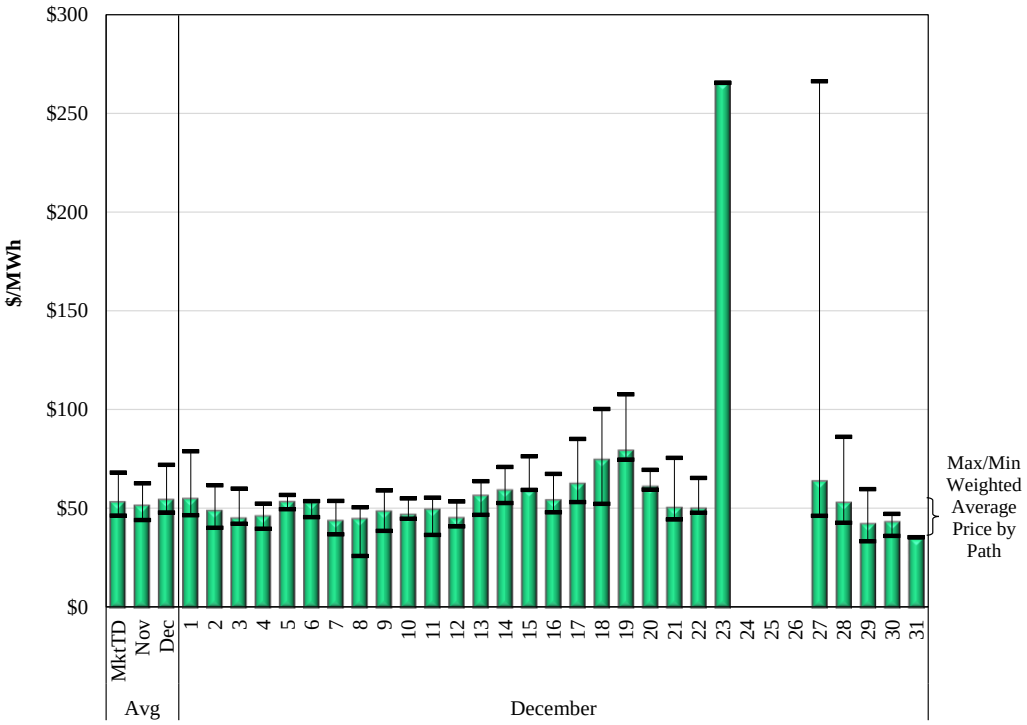
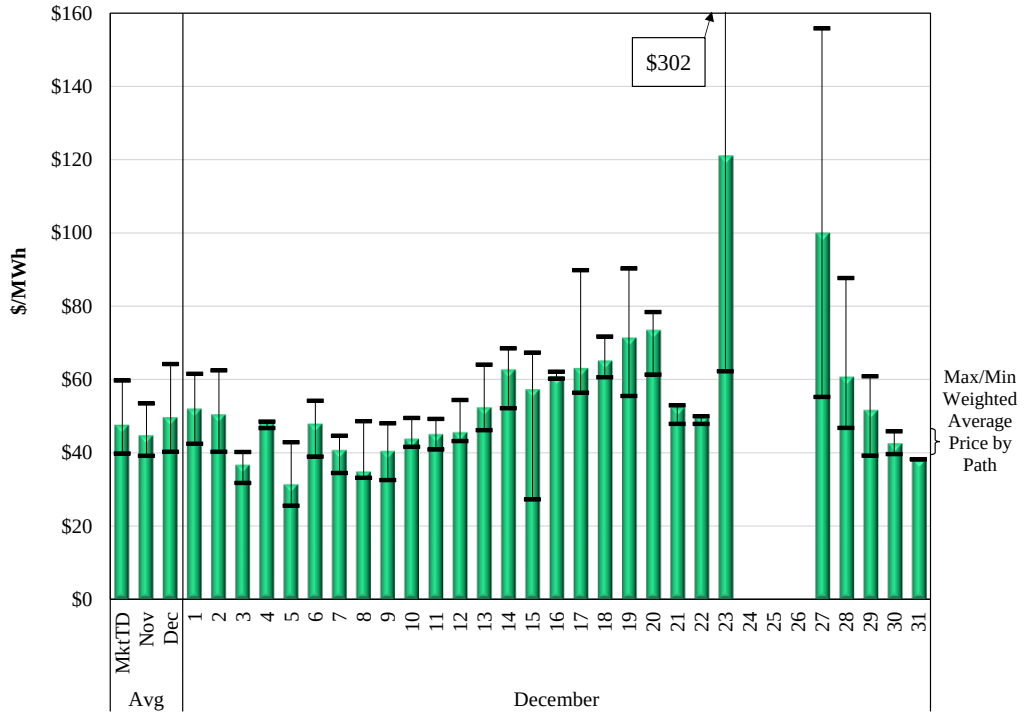


Figure 5: Average SEEM Clearing Prices: System-Wide and by Path
Off-Peak Hours – December 2022



The figures show that prices were slightly higher in on-peak hours, but the highest-priced transactions by path occurred during an off-peak period. The two figures show that the value of transactions can vary significantly by path. This likely is the result of certain paths linking areas where the most beneficial trades occur – paths linking low-cost to high-cost areas. Transmission constraints can contribute to higher prices between such areas. 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 the trading in the SEEM by path segments. We gathered ATC and trading statistics for the 180 SEEM segments available to the model. The 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 "load factor" based on the scheduled transactions and ATC on the segment during each 15-minute interval.

Table 1 shows an excerpt of our statistics. The table displays the 24 segments that had more than 1,000 MWh of transactions scheduled during the month. The full data for all segments with more than 10 MWh scheduled during the month is provided in Appendix A. In addition to the ATC and schedule values, the Table also shows how each segment was utilized by interval during the Month. For each segment, 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 ATC (ATC was less than 4 MW at the start of the interval); and

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

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 model over the intervals (over 490,000 segment intervals). The second most common case was case (3), where ATC was not sufficient to clear any SEEM transactions (over 32,000). The third most common case was case (1), intervals where the segment was partially used about (7,000). Finally, in a small number of intervals, case (2) prevailed where the segment was completely scheduled in the interval (317).

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

Table 1: Most Used SEEM Segment Statistics

Segment	ATC				Loading	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
P/LGEE/LGEE-TVA//	0	2,418	2,618	17,831	1.23%	675	*23%*	25	*1%*	75	*3%*	2187	*73%*
S/DUK/TVA-DUK//	0	374	692	11,621	4.41%	396	*13%*	52	*2%*	177	*6%*	2337	*79%*
S/CPL/DUK-CPLE//	0	2,807	7,043	8,268	0.38%	325	*11%*	0	*0%*	4	*0%*	2633	*88%*
S/TVA/LGEE-DUK//	0	430	430	8,192	4.04%	335	*11%*	4	*0%*	985	*33%*	1638	*55%*
S/CPL/TVA-DUK//	0	308	7,323	7,713	3.55%	352	*12%*	17	*1%*	78	*3%*	2515	*85%*
S/TVA/TVA-DUK//	0	430	430	6,443	3.31%	304	*10%*	0	*0%*	1,058	*36%*	1600	*54%*
S/AECI/AECI-TVA//	0	421	1,099	5,967	2.62%	407	*14%*	9	*0%*	844	*28%*	1702	*57%*
S/SC/SOCO-SC//	0	1,363	1,799	5,356	0.56%	420	*14%*	0	*0%*	6	*0%*	2536	*85%*
S/TVA/LGEE-CPLW//	0	308	308	4,693	2.56%	206	*7%*	1	*0%*	563	*19%*	2192	*74%*
S/DUK/TVA-CPLE//	0	374	692	4,169	1.58%	172	*6%*	1	*0%*	179	*6%*	2610	*88%*
S/DUK/CPLW-DUK//	0	689	1,243	3,996	0.78%	176	*6%*	0	*0%*	18	*1%*	2768	*93%*
S/TVA/LGEE-SOCO//	0	2,919	3,000	3,888	0.23%	305	*10%*	0	*0%*	559	*19%*	2098	*71%*
S/DUK/CPLW-CPLE//	0	711	1,243	3,557	0.67%	184	*6%*	0	*0%*	20	*1%*	2758	*93%*
S/TVA/AECI-DUK//	0	6	430	2,598	4.24%	153	*5%*	74	*2%*	1,470	*49%*	1265	*43%*
SS/SOCO/SOCO-SC//	0	325	496	2,396	1.17%	131	*4%*	20	*1%*	392	*13%*	2419	*81%*
S/DUK/SOCO-DUK//	0	1,861	2,220	2,241	0.21%	111	*4%*	0	*0%*	470	*16%*	2381	*80%*
S/TVA/AECI-SOCO//	0	74	473	1,987	2.40%	151	*5%*	18	*1%*	969	*33%*	1824	*61%*
S/SC/DUK-SC//	0	1,561	2,533	1,789	0.15%	185	*6%*	0	*0%*	2	*0%*	2775	*93%*
S/TVA/TVA-CPLW//	0	308	308	1,738	1.02%	123	*4%*	0	*0%*	719	*24%*	2120	*71%*
SS/SOCO/SOCO-DUK//	0	670	989	1,668	0.36%	104	*3%*	1	*0%*	80	*3%*	2777	*93%*
SS/SOCO/TVA-SOCO//	273	807	1,067	1,399	0.24%	78	*3%*	0	*0%*	0	*0%*	2884	*97%*
S/DUK/TVA-SC//	0	372	692	1,316	0.50%	102	*3%*	3	*0%*	187	*6%*	2670	*90%*
SS/SOCO/TVA-SC/MULTIPATHALIAS/	0	325	496	1,161	0.57%	82	*3%*	0	*0%*	392	*13%*	2488	*84%*
S/TVA/AECI-CPLW//	0	73	308	1,139	1.57%	61	*2%*	28	*1%*	1,125	*38%*	1748	*59%*

Overall, these statistics indicate that many segments remain available for SEEM trades. The data is not sufficient to determine if this idle capability is due a lack of valuable trades being available or due to early-stage inexperience.

Despite the general availability of segment capacity, there are 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. As noted above, these two circumstances (Cases (2) and (3)) occur in over 32,000 segment intervals and almost always because the ATC is insufficient to schedule (<4 MW) rather than because it is filled by a SEEM match. The data cannot reveal the extent to which these instances of insufficient ATC was constraining SEEM matches. This is because we cannot observe if SEEM would have matched a transaction had the ATC been available during that interval.

Some insight can be gained from Table 2. It shows the segments most often unavailable to SEEM. The TVA-AEC segment is the most constrained segment with insufficient ATC 57 percent of the time. AEC-DUK and AEC-CPLW segments also were constrained a large percentage of the time (49 percent and 38 percent, respectively). These same two segments were the ones most often fully scheduled by SEEM. This means, when ATC is available, these were particularly valuable paths for SEEM in December. TVA-AEC, while often unavailable, was scheduled in only 13 intervals when it was available. We will continue to monitor path usage to provide insight into the operation of SEEM.

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/AECI/TVA-AECI//	0	0	1,048	243	0.12%	10	*0%*	3	*0%*	1,708	*57%*	1241	*42%*
S/TVA/AECI-DUK//	0	6	430	2,598	4.24%	153	*5%*	74	*2%*	1,470	*49%*	1265	*43%*
S/TVA/AECI-CPLW//	0	73	308	1,139	1.57%	61	*2%*	28	*1%*	1,125	*38%*	1748	*59%*
S/TVA/AECI-LGEE//	0	73	473	0	0.00%	0	*0%*	0	*0%*	1,125	*38%*	1837	*62%*
S/TVA/TVA-DUK//	0	430	430	6,443	3.31%	304	*10%*	0	*0%*	1,058	*36%*	1600	*54%*
S/DUK/SC-CPLW//	0	157	454	0	0.00%	0	*0%*	0	*0%*	1,011	*34%*	1951	*66%*
S/TVA/LGEE-DUK//	0	430	430	8,192	4.04%	335	*11%*	4	*0%*	985	*33%*	1638	*55%*
S/TVA/AECI-SOCO//	0	74	473	1,987	2.40%	151	*5%*	18	*1%*	969	*33%*	1824	*61%*
S/AECI/AECI-TVA//	0	421	1,099	5,967	2.62%	407	*14%*	9	*0%*	844	*28%*	1702	*57%*
S/TVA/SOCO-DUK//	0	430	430	138	0.06%	10	*0%*	0	*0%*	842	*28%*	2110	*71%*
S/TVA/TVA-CPLW//	0	308	308	1,738	1.02%	123	*4%*	0	*0%*	719	*24%*	2120	*71%*
S/TVA/DUK-CPLW//	0	308	308	0	0.00%	0	*0%*	0	*0%*	654	*22%*	2308	*78%*
S/TVA/DUK-LGEE//	0	430	430	0	0.00%	0	*0%*	0	*0%*	652	*22%*	2310	*78%*
S/TVA/DUK-AECI//	0	430	430	19	0.01%	1	*0%*	0	*0%*	618	*21%*	2343	*79%*
S/TVA/TVA-SOCO//	0	2,910	3,000	577	0.04%	38	*1%*	0	*0%*	607	*20%*	2317	*78%*
S/TVA/TVA-LGEE//	0	1,524	2,964	0	0.00%	0	*0%*	0	*0%*	604	*20%*	2358	*79%*
S/TVA/LGEE-CPLW//	0	308	308	4,693	2.56%	206	*7%*	1	*0%*	563	*19%*	2192	*74%*

III. CONCLUSION

We reviewed the operation of SEEM for December 2022. 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 had 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/CPL/TVA-DUK//	0	308	7,323	7,713	3.55%	352	*12%*	17	*1%*	78	*3%*	2515	*85%*
S/TVA/TVA-DUK//	0	430	430	6,443	3.31%	304	*10%*	0	*0%*	1,058	*36%*	1600	*54%*
S/AECI/AECI-TVA//	0	421	1,099	5,967	2.62%	407	*14%*	9	*0%*	844	*28%*	1702	*57%*
S/SC/SOCO-SC//	0	1,363	1,799	5,356	0.56%	420	*14%*	0	*0%*	6	*0%*	2536	*85%*
S/TVA/LGEE-CPLW//	0	308	308	4,693	2.56%	206	*7%*	1	*0%*	563	*19%*	2192	*74%*
S/DUK/TVA-CPLE//	0	374	692	4,169	1.58%	172	*6%*	1	*0%*	179	*6%*	2610	*88%*
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S/TVA/AECI-SOCO//	0	74	473	1,987	2.40%	151	*5%*	18	*1%*	969	*33%*	1824	*61%*
S/SC/DUK-SC//	0	1,561	2,533	1,789	0.15%	185	*6%*	0	*0%*	2	*0%*	2775	*93%*
S/TVA/TVA-CPLW//	0	308	308	1,738	1.02%	123	*4%*	0	*0%*	719	*24%*	2120	*71%*
SS/SOCO/SOCO-DUK//	0	670	989	1,668	0.36%	104	*3%*	1	*0%*	80	*3%*	2777	*93%*
SS/SOCO/TVA-SOCO//	273	807	1,067	1,399	0.24%	78	*3%*	0	*0%*	0	*0%*	2884	*97%*
S/DUK/TVA-SC//	0	372	692	1,316	0.50%	102	*3%*	3	*0%*	187	*6%*	2670	*90%*
SS/SOCO/TVA-SC/MULTIPATHALIAS/	0	325	496	1,161	0.57%	82	*3%*	0	*0%*	392	*13%*	2488	*84%*
S/TVA/AECI-CPLW//	0	73	308	1,139	1.57%	61	*2%*	28	*1%*	1,125	*38%*	1748	*59%*
S/TVA/LGEE-TVA//	0	3,000	3,000	856	0.04%	81	*3%*	0	*0%*	8	*0%*	2873	*97%*
SS/SOCO/SOCO-SCEG//	0	141	209	847	0.94%	55	*2%*	16	*1%*	164	*6%*	2727	*92%*
S/SC/SCEG-SC//	476	1,328	2,261	777	0.08%	100	*3%*	0	*0%*	0	*0%*	2862	*96%*
S/SCEG/SOCO-SCEG//	0	1,427	2,697	689	0.07%	126	*4%*	0	*0%*	74	*2%*	2762	*93%*
S/CPL/SCEG-CPLE//	0	704	2,753	621	0.14%	41	*1%*	0	*0%*	307	*10%*	2614	*88%*
S/TVA/TVA-SOCO//	0	2,910	3,000	577	0.04%	38	*1%*	0	*0%*	607	*20%*	2317	*78%*
S/SCEG/SCEG-SC//	450	2,223	6,437	513	0.03%	75	*3%*	0	*0%*	0	*0%*	2887	*97%*
S/SCEG/SOCO-CPLE//	0	672	1,072	506	0.10%	26	*1%*	1	*0%*	74	*2%*	2861	*96%*
S/SC/CPLE-SC//	269	1,604	2,064	481	0.04%	38	*1%*	0	*0%*	0	*0%*	2924	*98%*
SS/SOCO/SOCO-SOCO//	38,652	40,833	41,524	406	0.00%	32	*1%*	0	*0%*	0	*0%*	2930	*98%*
SS/SOCO/TVA-SCEG/MULTIPATHALIA	0	141	209	406	0.45%	53	*2%*	1	*0%*	164	*6%*	2744	*92%*
S/CPL/CPLE-SC//	0	3,147	4,428	397	0.02%	29	*1%*	0	*0%*	47	*2%*	2886	*97%*
SS/SOCO/TVA-DUK/MULTIPATHALIAS	0	620	906	362	0.08%	13	*0%*	0	*0%*	80	*3%*	2869	*96%*
S/MEAG/TVA-MEAG//	14	52	152	361	0.64%	21	*1%*	11	*0%*	0	*0%*	2930	*98%*
S/DUK/DUK-CPLE//	0	3,054	6,697	349	0.02%	78	*3%*	0	*0%*	51	*2%*	2833	*95%*
S/CPL/SC-CPLE//	0	1,602	3,133	336	0.03%	11	*0%*	0	*0%*	221	*7%*	2730	*92%*
S/SC/SOCO-CPLE//	0	2,048	2,373	336	0.02%	11	*0%*	0	*0%*	12	*0%*	2939	*99%*
S/MEAG/MEAG-DUK//	0	119	188	326	0.42%	16	*1%*	5	*0%*	103	*3%*	2838	*95%*
S/DUK/SOCO-CPLE//	0	1,876	2,220	325	0.03%	24	*1%*	0	*0%*	464	*16%*	2474	*83%*
S/SCEG/DUK-SCEG//	0	325	477	285	0.12%	55	*2%*	0	*0%*	74	*2%*	2833	*95%*
S/SCEG/CPLE-SCEG//	0	475	1,049	267	0.08%	31	*1%*	0	*0%*	70	*2%*	2861	*96%*
S/SCEG/SOCO-SC//	0	2,685	6,439	264	0.01%	26	*1%*	0	*0%*	4	*0%*	2932	*99%*
S/AECI/TVA-AECI//	0	0	1,048	243	0.12%	10	*0%*	3	*0%*	1,708	*57%*	1241	*42%*
S/MEAG/SOCO-MEAG//	2,808	3,000	3,130	243	0.01%	18	*1%*	0	*0%*	0	*0%*	2944	*99%*

Appendix A (continued)

Segment	ATC				Loading	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/TVA/AECI-TVA//	0	111	473	243	0.22%	25	1%	0	0%	546	18%	2391	80%
S/SCEG/SCEG-DUK//	440	684	945	228	0.04%	38	1%	0	0%	0	0%	2924	98%
S/DUK/TVA-SCEG//	0	261	264	224	0.15%	33	1%	3	0%	204	7%	2722	91%
S/DUK/SCEG-DUK//	0	663	664	224	0.05%	35	1%	0	0%	332	11%	2595	87%
SS/SOCO/SOCO-TVA//	325	1,628	2,297	214	0.02%	12	0%	0	0%	0	0%	2950	99%
S/SC/SOCO-DUK//	0	2,092	2,373	212	0.01%	13	0%	0	0%	5	0%	2944	99%
S/DUK/DUK-SC//	0	2,668	2,880	205	0.01%	54	2%	0	0%	102	3%	2806	94%
S/TVA/LGEE-AECI//	0	686	686	202	0.04%	11	0%	0	0%	75	3%	2876	97%
S/CPL/CPLE-SCEG//	0	484	1,967	179	0.06%	18	1%	0	0%	75	3%	2869	96%
S/DUK/SC-DUK//	0	1,701	2,920	172	0.02%	8	0%	0	0%	465	16%	2489	84%
S/CPL/CPLE-DUK//	570	5,170	8,127	161	0.00%	6	0%	0	0%	0	0%	2956	99%
S/DUK/CPLW-SC//	0	710	1,243	160	0.03%	20	1%	0	0%	83	3%	2859	96%
S/TVA/SOCO-CPLW//	0	308	308	143	0.08%	7	0%	0	0%	511	17%	2444	82%
S/TVA/SOCO-DUK//	0	430	430	138	0.06%	10	0%	0	0%	842	28%	2110	71%
S/DUK/SOCO-SC//	0	1,909	2,220	131	0.01%	21	1%	0	0%	423	14%	2518	85%
SS/GTC/TVA-GTC//	0	218	262	122	0.08%	8	0%	0	0%	12	0%	2942	99%
S/SCEG/SCEG-CPLE//	98	672	1,072	120	0.02%	17	1%	0	0%	0	0%	2945	99%
S/CPL/DUK-TVA//	0	308	6,127	88	0.04%	11	0%	0	0%	4	0%	2947	99%
S/CPL/DUK-SCEG//	0	484	1,742	88	0.03%	13	0%	0	0%	32	1%	2917	98%
S/SCEG/SCEG-SOCO//	481	2,127	5,950	87	0.00%	18	1%	0	0%	0	0%	2944	99%
S/CPL/DUK-SC//	338	2,875	4,428	84	0.00%	11	0%	0	0%	0	0%	2951	99%
S/MEAG/MEAG-SC//	0	67	79	84	0.21%	7	0%	3	0%	366	12%	2586	87%
S/MEAG/MEAG-SOCO//	2,326	2,601	2,793	73	0.00%	3	0%	0	0%	0	0%	2959	99%
S/DUK/CPLE-CPLW//	0	454	454	72	0.03%	6	0%	0	0%	144	5%	2812	94%
S/MEAG/DUK-MEAG//	0	106	231	67	0.08%	10	0%	0	0%	4	0%	2948	99%
S/TVA/CPLW-TVA//	0	308	308	66	0.03%	9	0%	0	0%	8	0%	2945	99%
S/DUK/CPLE-TVA//	2	692	692	64	0.01%	3	0%	0	0%	40	1%	2919	98%
S/MEAG/MEAG-SCEG//	1	15	23	51	0.48%	0	0%	16	1%	95	3%	2851	96%
S/TVA/DUK-TVA//	0	430	430	46	0.02%	3	0%	0	0%	531	18%	2428	82%
S/TVA/SOCO-TVA//	0	2,440	3,000	46	0.00%	11	0%	0	0%	32	1%	2919	98%
S/DUK/TVA-SOCO//	0	377	692	41	0.01%	4	0%	0	0%	84	3%	2874	97%
S/MEAG/MEAG-TVA//	0	112	147	41	0.07%	1	0%	1	0%	170	6%	2790	94%
S/DUK/SC-CPLE//	0	1,914	2,920	40	0.00%	3	0%	2	0%	170	6%	2787	94%
S/DUK/SOCO-SCEG//	0	261	264	32	0.02%	5	0%	0	0%	370	12%	2587	87%
SS/SOCO/DUK-SOCO//	0	686	996	32	0.01%	2	0%	0	0%	49	2%	2911	98%
S/DUK/CPLE-SOCO//	0	2,094	2,335	30	0.00%	1	0%	0	0%	4	0%	2957	99%
S/DUK/DUK-SCEG//	0	261	264	29	0.02%	15	1%	0	0%	122	4%	2825	95%
S/DUK/DUK-SOCO//	0	2,078	2,335	28	0.00%	7	0%	0	0%	23	1%	2932	99%
S/MEAG/MEAG-GTC//	2,222	2,570	2,871	26	0.00%	1	0%	0	0%	0	0%	2961	100%
S/SCEG/SC-SCEG//	920	5,017	6,214	24	0.00%	3	0%	0	0%	0	0%	2959	99%
S/SC/DUK-SCEG//	449	2,409	4,029	23	0.00%	3	0%	0	0%	0	0%	2959	99%
S/TVA/CPLW-AECI//	0	308	308	22	0.01%	2	0%	0	0%	95	3%	2865	96%
S/MEAG/SCEG-MEAG//	9	18	25	19	0.14%	3	0%	2	0%	0	0%	2957	99%
S/TVA/DUK-AECI//	0	430	430	19	0.01%	1	0%	0	0%	618	21%	2343	79%
SS/GTC/GTC-SCEG//	0	72	108	12	0.02%	1	0%	0	0%	134	5%	2827	95%
SS/GTC/SCEG-GTC//	0	85	118	12	0.02%	1	0%	0	0%	4	0%	2957	99%
SS/SOCO/SCEG-SOCO//	4	158	213	11	0.01%	3	0%	0	0%	0	0%	2959	99%
S/DUK/SCEG-CPLW//	0	454	454	10	0.00%	4	0%	0	0%	408	14%	2550	86%