MONTHLY AUDIT REPORT ON THE SOUTHEAST ENERGY EXCHANGE MARKET

January 2023

Prepared by:

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Independent Market Auditor

February 28, 2023

I. OVERVIEW

This is the Auditor report for the month of January 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 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 January 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 January 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. No participants changed the set of eligible counterparties nor did any change maximum price constraints.

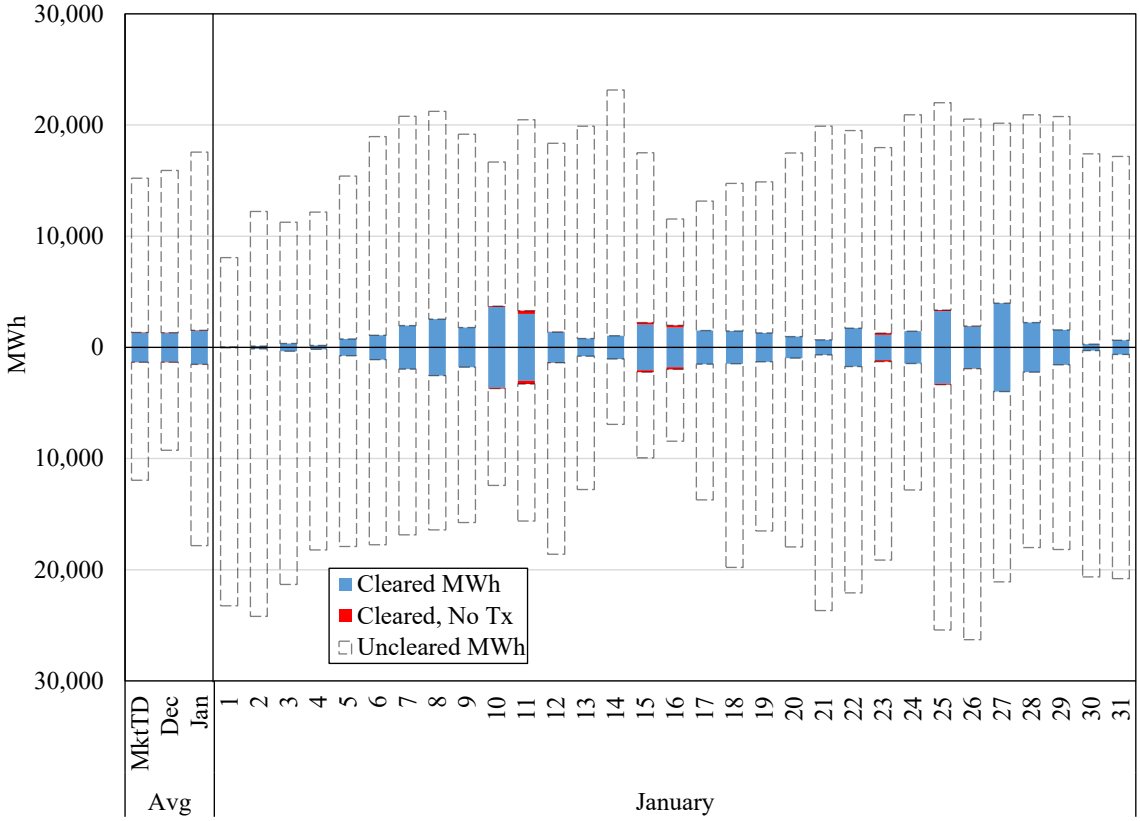
B. Market Activity

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 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 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 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, which is the November – December 2022 average). The January bid and offer quantities as well as the cleared transactions were slightly higher than in December as well as slightly higher than the MktTD average. This indicates that SEEM activity has been increasing.

Figure 1: Daily Bids and Offers
January 2023



There were slight fluctuations in the January activity. We observed similar fluctuations in November and December. While the fluctuation in November and December corresponded to cold-weather and an associated decline in supply, January had relatively mild weather. The lack of demand in early January was likely related to the New Year's holiday. The figure shows the mid-month decline in cleared transaction was the rules to lower supply offer, perhaps cold weather related as temperatures were relatively low in that period. Both bids and offers were near average at the end of the month, even as cleared transactions declined.

Daily cleared transactions ranged as high as 3,985 MWh (on January 27), and as low as 45 MWh (on January 1).[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.

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

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

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: Volumes of Matched Bids and Offers
January 2023

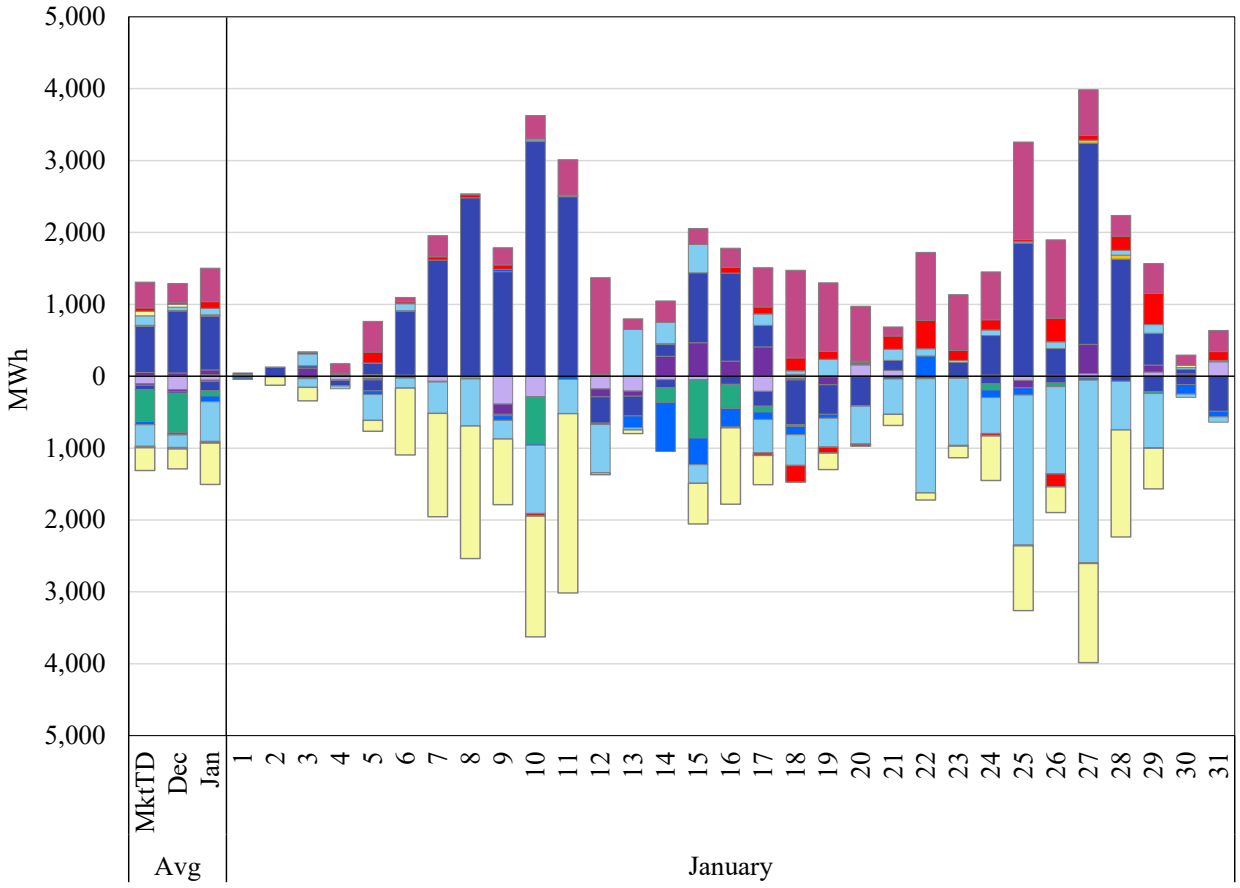
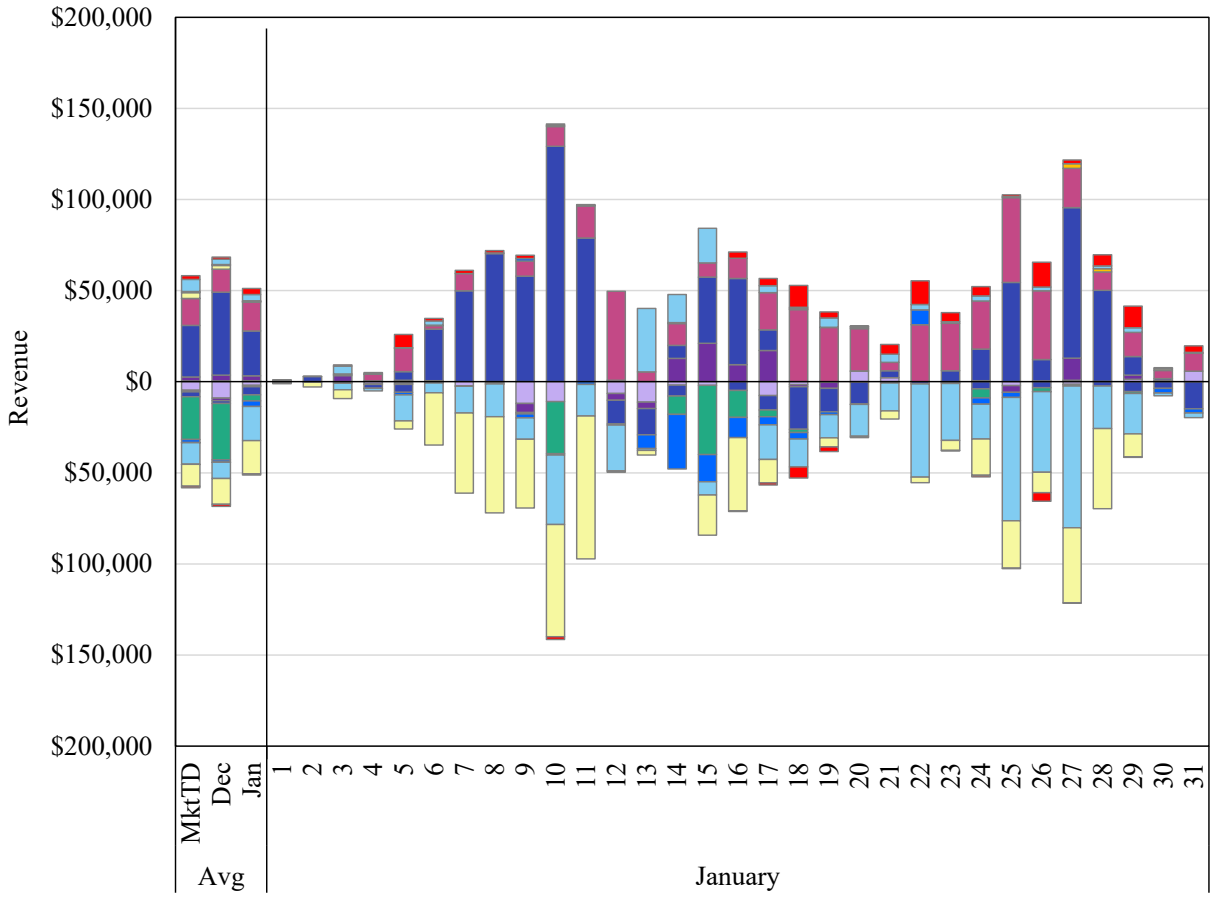


Figure 2 shows certain buyers and sellers comprise significant shares of the transaction activity. About 50 percent of the purchases was by a single participant and the two largest buyers accounted for 81 percent of the volume. On the seller side, the largest seller accounted for 37 percent of the cleared volume and the top two sellers accounted for 75 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. The most active participant has also varied month-to-month. On a two-month basis, the most active seller was involved in 31 percent of the transactions (compared to 42 percent for the most active seller in December and 37 percent in January).

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
January 2023



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 – January 2023

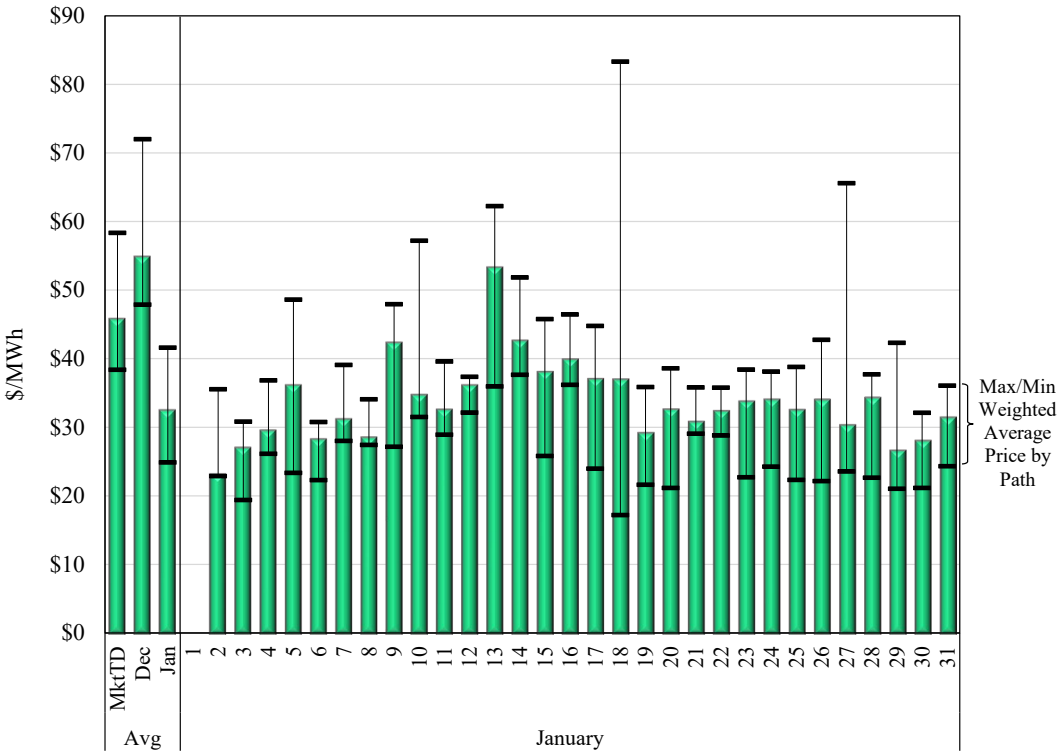
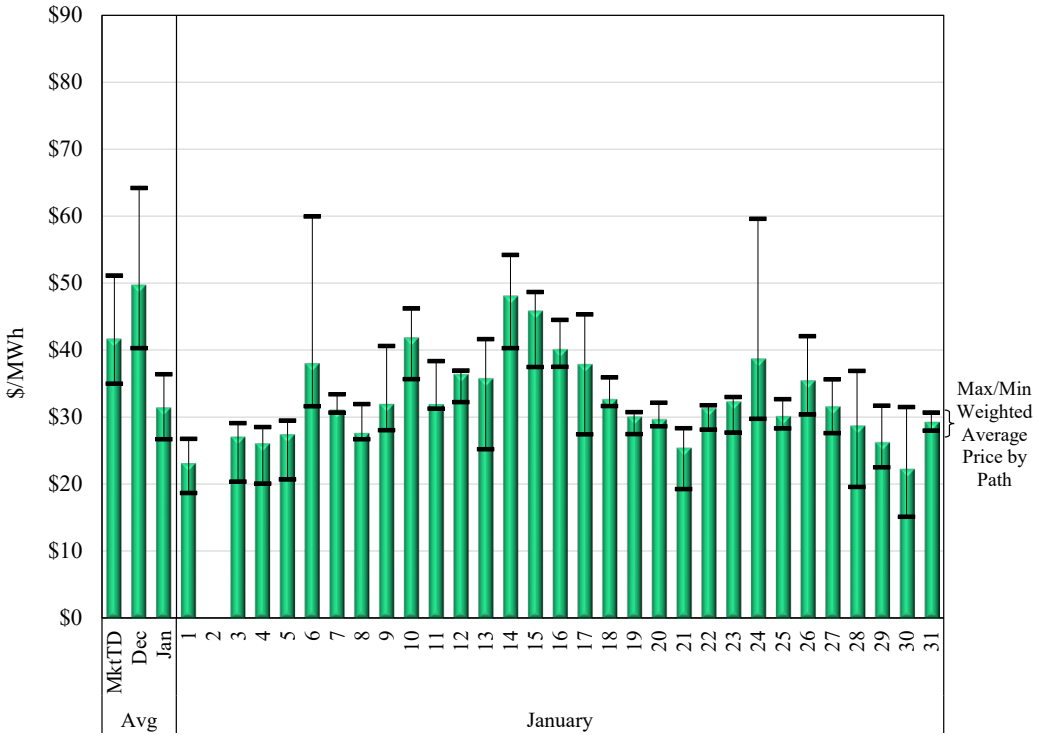


Figure 5: Average SEEM Clearing Prices: System-Wide and by Path
Off-Peak Hours – January 2022



The figures show in the left column the January prices compared to the previous months. It shows the average prices for both peak and off peak have declined relative to December and the Market-to-date average. 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 29 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).

In reporting the usage of each segment, we refer to segment-intervals, which are calculated as the product of all 180 segments and the number of intervals during the month. In January, there were 535,500.[3] 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 model over the intervals. (515,062 segment intervals). The second most common case was case (3), where ATC was not sufficient to clear any SEEM transactions (12,574). The third most common case was case (1), intervals where the segment was partially

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

[3] The number of intervals (4 x 24 x 31). In January, one interval was missing due to a trip of a Hartigen server, resulting in 535,500 segment intervals.

used (7,529). Finally, in a small number of intervals, case (2) prevailed where the segment was completely scheduled in the interval (335).

Table 1: Most Used SEEM Segment Statistics

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/TVA/TVA-DUK//	0	430	430	11,240	4.29%	413	14%	0	0%	262	9%	2300	77%
S/SC/SOCO-SC//	203	1,352	1,843	9,488	0.96%	787	26%	0	0%	0	0%	2188	74%
S/CPL/DUK-CPLE//	479	3,385	6,445	8,415	0.33%	293	10%	0	0%	0	0%	2682	90%
SS/SOCO/SOCO-SC//	0	198	442	8,050	5.65%	611	21%	71	2%	142	5%	2151	72%
S/DUK/TVA-DUK//	0	388	692	7,951	2.75%	210	7%	62	2%	61	2%	2642	89%
S/DUK/SOCO-DUK//	0	1,706	2,195	5,123	0.43%	195	7%	0	0%	128	4%	2652	89%
S/DUK/TVA-CPLE//	0	388	692	4,437	1.54%	176	6%	9	0%	61	2%	2729	92%
SS/SOCO/SOCO-DUK//	0	350	722	4,016	1.58%	201	7%	20	1%	4	0%	2750	92%
S/TVA/TVA-SOCO//	0	2,905	2,944	3,886	0.20%	160	5%	0	0%	200	7%	2615	88%
S/CPL/TVA-DUK//	0	308	308	3,812	1.78%	140	5%	21	1%	97	3%	2717	91%
S/TVA/TVA-CPLW//	0	308	308	3,496	1.69%	144	5%	0	0%	270	9%	2561	86%
S/DUK/CPLW-CPLE//	0	375	1,143	2,918	0.76%	120	4%	0	0%	2	0%	2853	96%
S/CPL/CPLE-SC//	249	4,227	4,428	2,712	0.10%	241	8%	0	0%	0	0%	2734	92%
SS/SOCO/SOCO-SOCO//	39,733	40,676	43,556	2,684	0.01%	166	6%	0	0%	0	0%	2809	94%
S/SC/CPLE-SC//	233	1,552	2,095	2,611	0.22%	235	8%	0	0%	0	0%	2740	92%
SS/SOCO/SOCO-SCEG//	35	141	209	2,564	2.51%	137	5%	35	1%	0	0%	2803	94%
P/LGEE/LGEE-TVA//	0	2,618	2,618	2,269	0.13%	134	5%	0	0%	18	1%	2823	95%
S/MEAG/SOCO-MEAG//	2,693	3,000	3,115	2,120	0.10%	113	4%	0	0%	0	0%	2862	96%
SS/SOCO/TVA-SOCO//	0	737	1,148	2,052	0.34%	98	3%	0	0%	4	0%	2873	97%
SS/SOCO/TVA-DUK/MULTIPATHALIAS/	0	350	722	1,947	0.77%	76	3%	0	0%	8	0%	2891	97%
S/SC/DUK-SC//	220	1,450	2,084	1,735	0.16%	338	11%	0	0%	0	0%	2637	89%
S/AECI/AECI-TVA//	0	421	701	1,702	0.77%	187	6%	2	0%	942	32%	1844	62%
S/SCEG/SOCO-CPLE//	152	672	922	1,436	0.29%	56	2%	0	0%	0	0%	2919	98%
S/CPL/SCEG-CPLE//	0	704	704	1,430	0.28%	54	2%	0	0%	53	2%	2868	96%
S/TVA/LGEE-SOCO//	0	2,905	2,944	1,333	0.07%	104	3%	0	0%	196	7%	2675	90%
S/SCEG/SOCO-SCEG//	0	1,667	2,785	1,324	0.11%	174	6%	0	0%	1	0%	2800	94%
S/DUK/DUK-SC//	1,606	2,589	2,790	1,081	0.06%	257	9%	0	0%	0	0%	2718	91%
SS/SOCO/TVA-SC/MULTIPATHALIAS/	0	198	442	1,074	0.76%	92	3%	1	0%	146	5%	2736	92%
S/TVA/AECI-SOCO//	0	94	473	1,045	1.26%	103	3%	14	0%	480	16%	2378	80%

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 13,000 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 (i.e., unavailable at least 10 percent of the intervals). Like in December, the TVA-AEC segment was the most constrained segment with Unavailable ATC 48 percent of the time. The reverse direction segment AEC-TVA was the second most constrained. These same two segments were somewhat active in intervals when they did have ATC available, indicating greater availability

may increase the cleared transactions in SEEM. Transmission capacity constraints were less limiting to SEEM in January than in December. In December, there were 32,000 segment intervals when ATC was unavailable. In January there were 12,500. The slight increase in SEEM cleared volumes in January supports a hypothesis that the additional ATC has facilitated market liquidity. However, more experience with on-going SEEM operations is needed to make firm conclusions.

Table 2: Most Constrained SEEM Segments

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/AECI/TVA-AECI//	0	571	981	581	0.24%	46	*2%*	0	*0%*	1,442	*48%*	1487	*50%*
S/AECI/AECI-TVA//	0	421	701	1,702	0.77%	187	*6%*	2	*0%*	942	*32%*	1844	*62%*
S/DUK/SC-CPLW//	0	554	554	0	0.00%	0	*0%*	0	*0%*	601	*20%*	2374	*80%*
S/TVA/AECI-LGEE//	0	92	473	10	0.01%	2	*0%*	0	*0%*	532	*18%*	2441	*82%*
S/TVA/AECI-CPLW//	0	94	308	87	0.11%	10	*0%*	6	*0%*	511	*17%*	2448	*82%*
S/TVA/AECI-DUK//	0	94	430	560	0.70%	33	*1%*	39	*1%*	508	*17%*	2395	*80%*
S/MEAG/MEAG-TVA//	0	135	157	25	0.03%	1	*0%*	0	*0%*	508	*17%*	2466	*83%*
S/MEAG/MEAG-DUK//	0	71	150	45	0.10%	8	*0%*	4	*0%*	484	*16%*	2479	*83%*
S/TVA/AECI-SOCO//	0	94	473	1,045	1.26%	103	*3%*	14	*0%*	480	*16%*	2378	*80%*
SS/GTC/GTC-SC//	0	128	298	0	0.00%	0	*0%*	0	*0%*	380	*13%*	2595	*87%*
S/TVA/AECI-TVA//	0	98	473	0	0.00%	0	*0%*	0	*0%*	296	*10%*	2679	*90%*

III. CONCLUSION

We reviewed the operation of SEEM for January 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 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/SCEG/SOCO-CPLE//	152	672	922	1,436	0.29%	56	2%	0	0%	0	0%	2919	98%
S/CPL/SCEG-CPLE//	0	704	704	1,430	0.28%	54	2%	0	0%	53	2%	2868	96%
S/TVA/LGEE-SOCO//	0	2,905	2,944	1,333	0.07%	104	3%	0	0%	196	7%	2675	90%
S/SCEG/SOCO-SCEG//	0	1,667	2,785	1,324	0.11%	174	6%	0	0%	1	0%	2800	94%
S/DUK/DUK-SC//	1,606	2,589	2,790	1,081	0.06%	257	9%	0	0%	0	0%	2718	91%
SS/SOCO/TVA-SC/MULTIPATHALIAS/	0	198	442	1,074	0.76%	92	3%	1	0%	146	5%	2736	92%
S/TVA/AECI-SOCO//	0	94	473	1,045	1.26%	103	3%	14	0%	480	16%	2378	80%
S/DUK/CPLW-DUK//	0	366	1,143	894	0.24%	41	1%	0	0%	1	0%	2933	99%
S/SC/SCEG-SC//	198	1,260	1,693	855	0.09%	108	4%	0	0%	0	0%	2867	96%
S/CPL/CPLE-DUK//	1,632	4,968	7,627	774	0.02%	42	1%	0	0%	0	0%	2933	99%
S/TVA/LGEE-DUK//	0	430	430	707	0.26%	46	2%	0	0%	196	7%	2733	92%
S/DUK/SOCO-CPLE//	0	1,707	2,195	679	0.06%	40	1%	0	0%	129	4%	2806	94%
S/SCEG/DUK-SCEG//	113	326	428	635	0.26%	108	4%	0	0%	0	0%	2867	96%
S/AECI/TVA-AECI//	0	571	981	581	0.24%	46	2%	0	0%	1,442	48%	1487	50%
S/DUK/DUK-SCEG//	115	262	263	579	0.30%	104	3%	0	0%	0	0%	2871	96%
S/TVA/AECI-DUK//	0	94	430	560	0.70%	33	1%	39	1%	508	17%	2395	80%
S/DUK/SOCO-SC//	0	1,708	2,195	556	0.05%	74	2%	0	0%	128	4%	2773	93%
S/SCEG/SCEG-SC//	889	4,234	6,188	544	0.02%	82	3%	0	0%	0	0%	2893	97%
SS/SOCO/TVA-SCEG/MULTIPATHALIAS/	0	141	209	516	0.51%	51	2%	2	0%	4	0%	2918	98%
S/MEAG/DUK-MEAG//	29	140	248	495	0.44%	36	1%	2	0%	0	0%	2937	99%
S/DUK/CPLE-SOCO//	1,643	2,178	2,335	484	0.03%	29	1%	0	0%	0	0%	2946	99%
S/CPL/SC-CPLE//	0	1,652	3,020	395	0.03%	18	1%	0	0%	10	0%	2947	99%
S/SC/SOCO-CPLE//	287	2,261	2,659	395	0.02%	18	1%	0	0%	0	0%	2957	99%
S/CPL/CPLE-SCEG//	0	484	484	384	0.11%	27	1%	0	0%	96	3%	2852	96%
S/DUK/DUK-CPLE//	0	3,112	6,897	381	0.02%	69	2%	0	0%	13	0%	2893	97%
S/DUK/DUK-SOCO//	1,643	2,178	2,335	359	0.02%	84	3%	0	0%	0	0%	2891	97%
SS/SOCO/DUK-SOCO//	122	776	1,141	339	0.06%	73	2%	0	0%	0	0%	2902	98%
S/MEAG/MEAG-SC//	0	41	64	322	1.18%	11	0%	26	1%	268	9%	2670	90%
S/SCEG/SOCO-SC//	1,446	3,811	6,185	311	0.01%	26	1%	0	0%	0	0%	2949	99%
SS/SOCO/SOCO-TVA//	1,297	2,341	2,829	284	0.02%	29	1%	0	0%	0	0%	2946	99%
S/MEAG/MEAG-SOCO//	2,486	2,601	2,908	276	0.01%	24	1%	0	0%	0	0%	2951	99%
SS/SOCO/SCEG-SOCO//	120	164	213	274	0.22%	6	0%	6	0%	0	0%	2963	100%
S/TVA/SOCO-AECI//	0	686	686	249	0.05%	25	1%	0	0%	160	5%	2790	94%
S/SCEG/CPLE-SOCO//	225	475	966	245	0.07%	13	0%	0	0%	0	0%	2962	100%
S/TVA/LGEE-CPLW//	0	308	308	229	0.11%	17	1%	0	0%	200	7%	2758	93%
S/TVA/DUK-AECI//	0	430	430	227	0.07%	15	1%	0	0%	8	0%	2952	99%
S/MEAG/TVA-MEAG//	36	45	201	196	0.33%	13	0%	5	0%	0	0%	2957	99%
S/DUK/CPLE-TVA//	0	692	692	162	0.03%	10	0%	0	0%	2	0%	2963	100%

Appendix A (continued)

Segment	ATC				Loading	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/SCEG/CPLE-SCEG//	181	475	966	139	0.04%	17	1%	0	0%	0	0%	2958	99%
S/CPL/DUK-TVA//	8	308	308	128	0.06%	7	0%	0	0%	0	0%	2968	100%
S/DUK/CPLE-CPLW//	0	554	554	128	0.03%	7	0%	0	0%	1	0%	2967	100%
S/TVA/CPLW-AECI//	0	308	308	105	0.05%	6	0%	0	0%	8	0%	2961	100%
S/DUK/SCEG-DUK//	0	663	664	103	0.02%	22	1%	0	0%	74	2%	2879	97%
S/SC/CPLE-SOCO//	2,759	3,109	3,497	101	0.00%	6	0%	0	0%	0	0%	2969	100%
S/DUK/TVA-SC//	0	388	692	98	0.03%	22	1%	0	0%	64	2%	2889	97%
S/TVA/AECI-CPLW//	0	94	308	87	0.11%	10	0%	6	0%	511	17%	2448	82%
S/SCEG/SOCO-DUK//	253	683	879	85	0.02%	16	1%	0	0%	0	0%	2959	99%
SS/SOCO/SC-SOCO//	355	600	752	78	0.02%	5	0%	0	0%	0	0%	2970	100%
SS/GTC/SOCO-GTC//	11,338	13,670	14,482	69	0.00%	5	0%	0	0%	0	0%	2970	100%
S/DUK/TVA-SCEG//	0	262	263	56	0.03%	8	0%	0	0%	61	2%	2906	98%
S/SCEG/SCEG-SOCO//	870	3,368	6,869	51	0.00%	9	0%	0	0%	0	0%	2966	100%
S/MEAG/MEAG-DUK//	0	71	150	45	0.10%	8	0%	4	0%	484	16%	2479	83%
S/DUK/SOCO-TVA//	0	692	692	40	0.01%	4	0%	0	0%	2	0%	2969	100%
S/DUK/DUK-TVA//	0	692	692	36	0.01%	7	0%	0	0%	2	0%	2966	100%
P/LGEE/TVA-LGEE//	1,019	2,415	2,419	35	0.00%	3	0%	0	0%	0	0%	2972	100%
S/TVA/SOCO-DUK//	0	430	430	35	0.01%	4	0%	0	0%	168	6%	2803	94%
S/MEAG/MEAG-TVA//	0	135	157	25	0.03%	1	0%	0	0%	508	17%	2466	83%
S/TVA/SOCO-LGEE//	0	1,104	2,440	25	0.00%	1	0%	0	0%	188	6%	2786	94%
SS/GTC/TVA-GTC//	0	207	301	24	0.02%	2	0%	0	0%	8	0%	2965	100%
S/MEAG/SC-MEAG//	3	55	104	23	0.05%	0	0%	1	0%	4	0%	2970	100%
S/TVA/CPLW-TVA//	0	308	308	23	0.01%	1	0%	0	0%	8	0%	2966	100%
S/MEAG/SCEG-MEAG//	10	17	23	20	0.16%	2	0%	4	0%	0	0%	2969	100%
S/SCEG/SCEG-DUK//	581	683	879	18	0.00%	6	0%	0	0%	0	0%	2969	100%
S/MEAG/MEAG-SCEG//	12	15	23	17	0.14%	1	0%	5	0%	0	0%	2969	100%
S/TVA/DUK-TVA//	0	430	430	11	0.00%	6	0%	0	0%	8	0%	2961	100%
S/TVA/AECI-LGEE//	0	92	473	10	0.01%	2	0%	0	0%	532	18%	2441	82%
S/CPL/SCEG-DUK//	0	704	704	9	0.00%	2	0%	0	0%	31	1%	2942	99%
S/DUK/CPLE-DUK//	1,006	4,127	7,015	9	0.00%	2	0%	0	0%	0	0%	2973	100%
SS/GTC/DUK-GTC//	0	535	717	9	0.00%	2	0%	0	0%	47	2%	2926	98%
S/SCEG/SCEG-CPLE//	181	672	922	3	0.00%	1	0%	0	0%	0	0%	2974	100%
SS/GTC/SCEG-GTC//	62	85	110	2	0.00%	1	0%	0	0%	0	0%	2974	100%
S/CPL/CPLW-DUK//	0	877	1,652	0	0.00%	0	0%	0	0%	1	0%	2974	100%
S/CPL/CPLW-TVA//	0	308	308	0	0.00%	0	0%	0	0%	1	0%	2974	100%
S/CPL/DUK-CPLW//	0	864	864	0	0.00%	0	0%	0	0%	1	0%	2974	100%
S/CPL/DUK-SC//	848	3,521	4,428	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/CPL/DUK-SCEG//	0	484	484	0	0.00%	0	0%	0	0%	96	3%	2879	97%
S/CPL/SC-DUK//	0	2,867	4,658	0	0.00%	0	0%	0	0%	10	0%	2965	100%
S/CPL/SC-SCEG//	183	484	484	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/CPL/SCEG-SC//	356	704	704	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/CPL/TVA-CPLW//	0	308	308	0	0.00%	0	0%	0	0%	14	0%	2961	100%
S/DUK/CPLE-SC//	0	2,664	2,790	0	0.00%	0	0%	0	0%	3	0%	2972	100%
S/DUK/CPLE-SCEG//	115	262	263	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/DUK/CPLW-SC//	24	372	1,143	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/DUK/CPLW-SCEG//	25	262	263	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/DUK/CPLW-SOCO//	0	384	1,143	0	0.00%	0	0%	0	0%	2	0%	2973	100%
S/DUK/CPLW-TVA//	0	392	692	0	0.00%	0	0%	0	0%	2	0%	2973	100%
S/DUK/DUK-CPLW//	0	554	554	0	0.00%	0	0%	0	0%	13	0%	2962	100%
S/DUK/SC-CPLE//	0	2,920	2,920	0	0.00%	0	0%	0	0%	65	2%	2910	98%
S/DUK/SC-CPLW//	0	554	554	0	0.00%	0	0%	0	0%	601	20%	2374	80%
S/DUK/SC-DUK//	0	2,642	2,920	0	0.00%	0	0%	0	0%	273	9%	2702	91%
S/DUK/SC-SCEG//	115	262	263	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/DUK/SC-SOCO//	0	2,052	2,335	0	0.00%	0	0%	0	0%	2	0%	2973	100%
S/DUK/SC-TVA//	0	692	692	0	0.00%	0	0%	0	0%	2	0%	2973	100%
S/DUK/SCEG-CPLE//	0	663	664	0	0.00%	0	0%	0	0%	122	4%	2853	96%
S/DUK/SCEG-CPLW//	0	554	554	0	0.00%	0	0%	0	0%	126	4%	2849	96%
S/DUK/SCEG-SC//	0	663	664	0	0.00%	0	0%	0	0%	3	0%	2972	100%
S/DUK/SCEG-SOCO//	562	663	664	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/DUK/SCEG-TVA//	0	663	664	0	0.00%	0	0%	0	0%	2	0%	2973	100%

Appendix A (continued)

Segment	ATC				Loading	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/DUK/SOCO-CPLW//	0	554	554	0	0.00%	0	0%	0	0%	129	4%	2846	96%
S/DUK/SOCO-SCEG//	0	262	263	0	0.00%	0	0%	0	0%	108	4%	2867	96%
S/DUK/TVA-CPLW//	0	388	554	0	0.00%	0	0%	0	0%	64	2%	2911	98%
S/DUK/TVA-SOCO//	0	388	692	0	0.00%	0	0%	0	0%	61	2%	2914	98%
S/MEAG/GTC-MEAG//	1,664	2,045	2,270	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/MEAG/MEAG-GTC//	2,401	2,626	2,952	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/CPLE-DUK//	3,545	3,815	4,448	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/CPLE-SCEG//	606	2,854	4,742	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/DUK-CPLE//	2,087	3,555	3,825	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/DUK-SCEG//	541	2,639	3,715	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/DUK-SOCO//	1,111	3,109	3,445	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SC-CPLE//	370	2,597	3,142	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SC-DUK//	781	2,738	3,364	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SC-SCEG//	1,219	3,287	4,765	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SC-SOCO//	976	3,049	3,497	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SCEG-CPLE//	313	2,758	3,557	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SCEG-DUK//	1,070	3,117	4,030	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SCEG-SOCO//	1,191	2,984	3,497	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SOCO-DUK//	915	2,309	2,659	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SC/SOCO-SCEG//	344	1,846	2,534	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/CPLE-DUK//	225	475	685	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/CPLE-SC//	225	475	966	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/DUK-CPLE//	130	326	428	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/DUK-SC//	130	326	428	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/DUK-SOCO//	130	326	428	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/SC-CPLE//	181	672	922	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/SC-DUK//	581	683	879	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/SC-SCEG//	525	5,225	6,140	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/SCEG/SC-SOCO//	2,427	6,083	6,214	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/TVA/AECI-TVA//	0	98	473	0	0.00%	0	0%	0	0%	296	10%	2679	90%
S/TVA/CPLW-DUK//	130	308	308	0	0.00%	0	0%	0	0%	0	0%	2975	100%
S/TVA/CPLW-LGEE//	0	308	308	0	0.00%	0	0%	0	0%	60	2%	2915	98%
S/TVA/CPLW-SOCO//	0	308	308	0	0.00%	0	0%	0	0%	8	0%	2967	100%
S/TVA/DUK-CPLW//	0	308	308	0	0.00%	0	0%	0	0%	76	3%	2899	97%
S/TVA/DUK-LGEE//	0	430	430	0	0.00%	0	0%	0	0%	128	4%	2847	96%
S/TVA/DUK-SOCO//	0	430	430	0	0.00%	0	0%	0	0%	8	0%	2967	100%
S/TVA/LGEE-AECI//	0	686	686	0	0.00%	0	0%	0	0%	8	0%	2967	100%
S/TVA/LGEE-TVA//	0	3,000	3,000	0	0.00%	0	0%	0	0%	8	0%	2967	100%
S/TVA/SOCO-CPLW//	0	308	308	0	0.00%	0	0%	0	0%	160	5%	2815	95%
S/TVA/SOCO-TVA//	0	2,415	2,890	0	0.00%	0	0%	0	0%	8	0%	2967	100%
S/TVA/TVA-AECI//	0	686	686	0	0.00%	0	0%	0	0%	176	6%	2799	94%
S/TVA/TVA-LGEE//	0	935	2,945	0	0.00%	0	0%	0	0%	248	8%	2727	92%
SS/GTC/GTC-DUK//	0	390	567	0	0.00%	0	0%	0	0%	8	0%	2967	100%
SS/GTC/GTC-GTC//	25,585	26,235	26,235	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/GTC/GTC-MEAG//	1,682	2,064	2,089	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/GTC/GTC-SC//	0	128	298	0	0.00%	0	0%	0	0%	380	13%	2595	87%
SS/GTC/GTC-SCEG//	0	72	108	0	0.00%	0	0%	0	0%	60	2%	2915	98%
SS/GTC/GTC-SOCO//	20,000	20,000	20,000	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/GTC/GTC-TVA//	321	644	737	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/GTC/MEAG-GTC//	789	822	1,196	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/GTC/SC-GTC//	162	255	322	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/SOCO/DUK-SC/MULTIPATHALIAS/	0	198	442	0	0.00%	0	0%	0	0%	142	5%	2833	95%
SS/SOCO/DUK-SCEG/MULTIPATHALIAS/	35	141	209	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/SOCO/DUK-TVA/MULTIPATHALIAS/	122	776	1,141	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/SOCO/SC-DUK/MULTIPATHALIAS/	0	350	684	0	0.00%	0	0%	0	0%	4	0%	2971	100%
SS/SOCO/SC-SCEG/MULTIPATHALIAS/	35	141	209	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/SOCO/SC-TVA/MULTIPATHALIAS/	355	600	752	0	0.00%	0	0%	0	0%	0	0%	2975	100%
SS/SOCO/SCEG-DUK/MULTIPATHALIAS/	0	158	213	0	0.00%	0	0%	0	0%	4	0%	2971	100%
SS/SOCO/SCEG-SC/MULTIPATHALIAS/	0	141	213	0	0.00%	0	0%	0	0%	142	5%	2833	95%
SS/SOCO/SCEG-TVA/MULTIPATHALIAS/	120	164	213	0	0.00%	0	0%	0	0%	0	0%	2975	100%