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**MONTHLY AUDIT REPORT ON THE  
SOUTHEAST ENERGY EXCHANGE MARKET**

**FOR  
April 2024**

Prepared by:

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## I. OVERVIEW

This is the Auditor report for the month of April 2024 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 every 15 minutes. It uses available transmission capability (ATC) of the SEEM members under a transmission service designed for SEEM, called Non-Firm Energy Exchange Transmission Service (NFEETS). It has operated since November 2022 and now has 24 members.<sup>1</sup>

Trading volumes declined in April from the all-time high in March of 107,000 MWh to 71,000 MWh. This was close to the 12-month rolling average of 71,200 MWh. Trading among SEEM members relies on individual transmission segments connecting the members and trades may span multiple segments. Transmission availability on individual segments varied widely. For many segments capacity is available in every interval. For other segments, availability is zero in many intervals. Considering all intervals and segments, 8 percent of the time availability was zero. Due to transmission constraints, transmission loss costs, and participant-specific constraints, about 18,000 MWh of potential economic exchanges were left uncleared in April, roughly what it has been in recent months. As explained herein, these are uncleared offers and bids in the same interval where the offer price was less than the bid price by more than the average cost of losses.

SEEM is governed by the SEEM Membership Board. The automated architecture of SEEM was developed and is operated by Hartigen, 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

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<sup>1</sup> The initial 18 members are: 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. The Florida member joining in June 2023 are: Seminole Electric Cooperative; Tampa Electric Company; Duke Energy Florida; Florida Power Corporation; TEA Gainesville Regional Utilities; and TEA JEA.

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). the purpose of Section II of this report is to fulfil our responsibility to report on the reliability and accuracy of the SEEM system to the Board. Regarding complaints from participants to the Board, we were not directed by the Board to investigate any such complaints 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 received no inquiries in April.

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 have 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 SEEM data that supports the calculation of these screens. Apart from screening the network map and the participant-specific constraints (described below), the screens are calculated daily, and we have developed data processing procedures for each of the daily screens. We applied the screens to the April SEEM data and found that in all intervals the screens have indicated that requirements have been met.

For the monthly audit of the network 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 linked 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. To monitor the map over time, we use the SEEM model's static path configuration database that is used by the model to assess possible paths associated with the sources and sinks offered and bid in each interval. We save a snapshot of this database and compare it to the path configuration database used at the start of each month. We identify and evaluate any changes. We found no changes in April and therefore we 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. 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 changes to participant-specific constraints among a number of participants in April to temporarily restrict trading partners. We find it consistent with our observations in prior months.

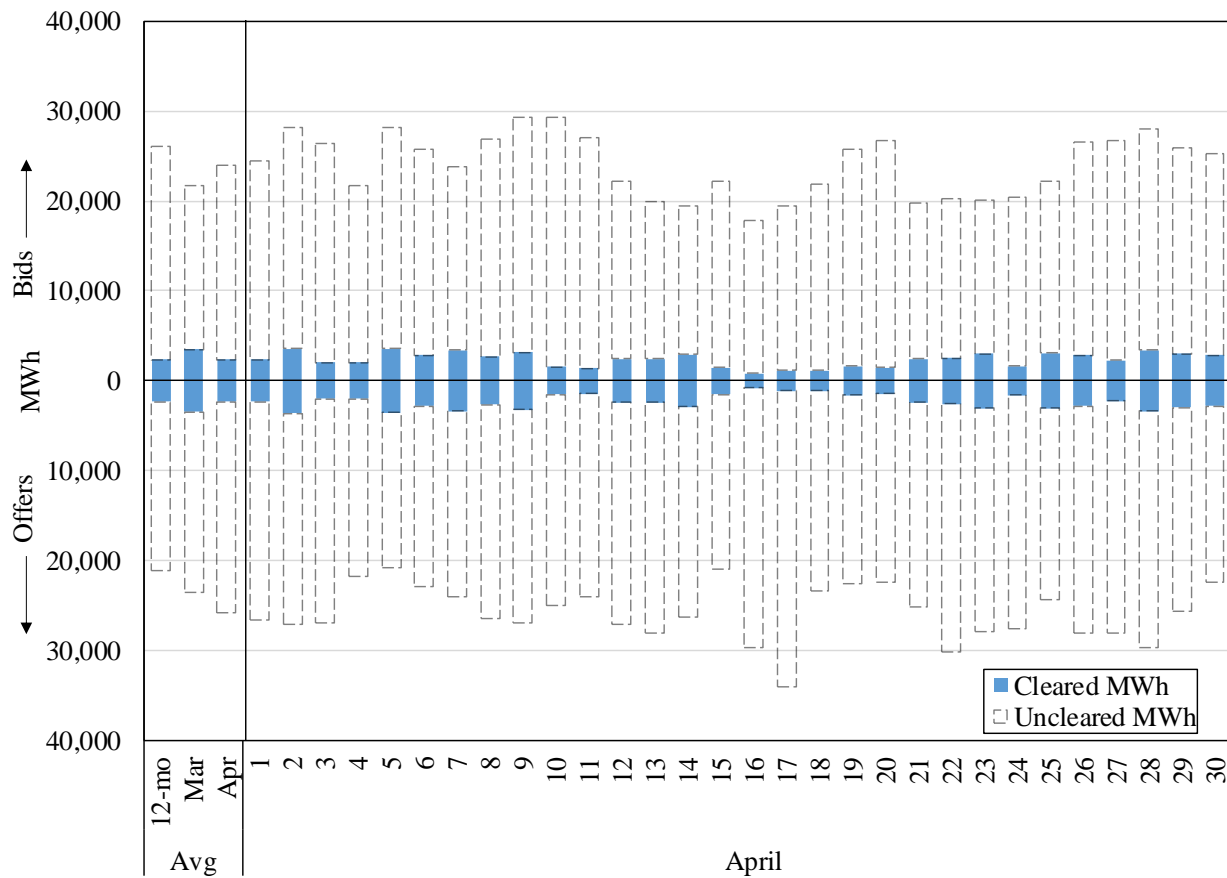
**B. Market Activity**

In this section, we summarize and discuss SEEM operations and outcomes to illuminate any potential operating or market issues. Our evaluation is in two principal 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 71,000 MWh of energy in April, which is down from March’s an all-time high. Figure 1 shows the daily SEEM bids and offers for April. 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 left side columns show activity relative to the previous month and relative to the 12-month rolling average.

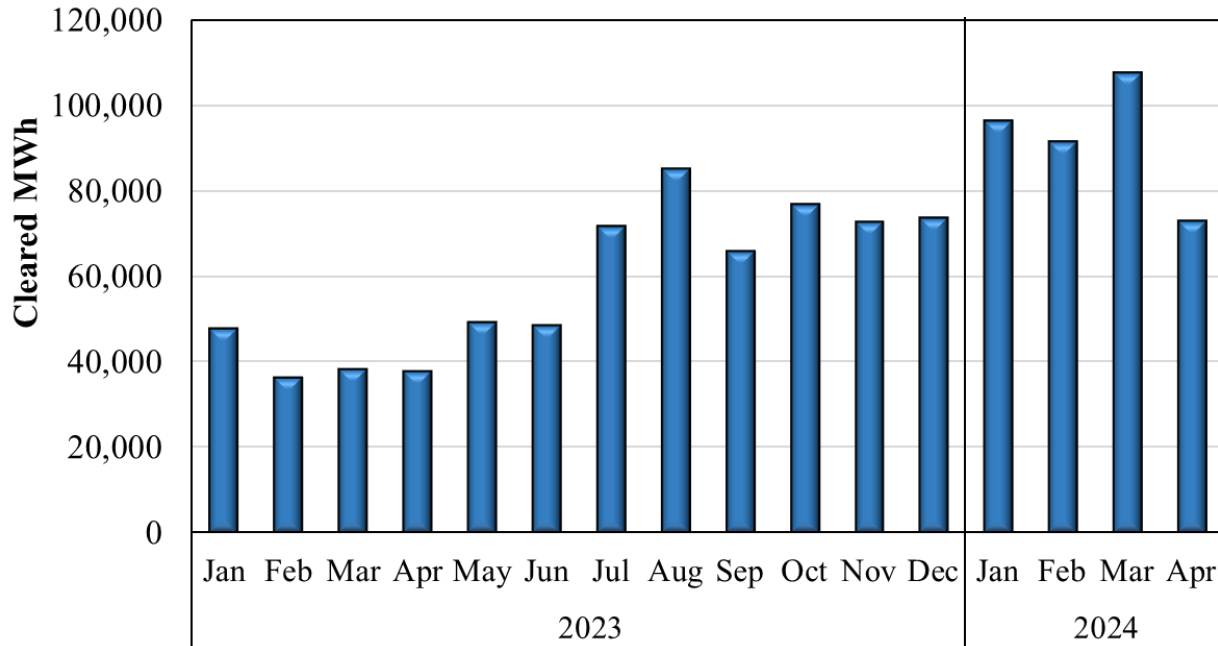
**Figure 1: Daily Bids and Offers**  
April 2024



As the left-side monthly and the 12-month average bars show, total liquidity (cleared and uncleared bids and offers) was higher than March and roughly equal to the 12-month average.

Figure 2 shows the cleared trades on an historical monthly basis. It shows a general increase in cleared volumes, especially in July during the Florida participants’ first full month of trading. Volumes continued to increase in the first four months of 2024. The increase indicates increased interest and confidence in the market.

**Figure 2: Volume of Cleared Trades**  
January 2023 -April 2024



Our next evaluation is a monthly comparison of bids, offers, and prices and is shown in Figure 3. It shows the monthly total activity in the SEEM market, including both cleared and uncleared bids and offers. The purpose is to summarize the trends in market liquidity. The dark green bars are the cleared bids and offers. The rest of the bar segments are various categories of uncleared bids and offers:

- The red segment shows uncleared economic bids and offers. These transactions appear to be profitable, but do not clear because of the cost of losses or a constraint (explained more below).
- The light green bars show bids and offers that were not cleared but were within the indicated cleared bid-offer spread – i.e., from the lowest cleared offer to the highest cleared bid. Bids and offers in this group do not clear because there are not sufficient counterparties to clear all of them – i.e., the counterparty bids/offers that could be economic have already been matched to another bid/offer with greater savings.
- The light blue bars show bids/offers within \$10 of the overlap range (\$10 or less outside the cleared bid-offer range).

- The dark blue bars show bids/offers greater than \$10 of the overlap range – i.e., offers to sell that are >\$10 higher than this highest bid or offers to buy energy <\$10 less than the lowest supply offer. Participants likely do not expect these to clear.

Because the uncleared bids and offers in the blue bars are unlikely to clear, a movement of these quantities closer to the expected clearing range signals an improvement in market liquidity.

**Figure 3: Bid and Offer Evaluation**

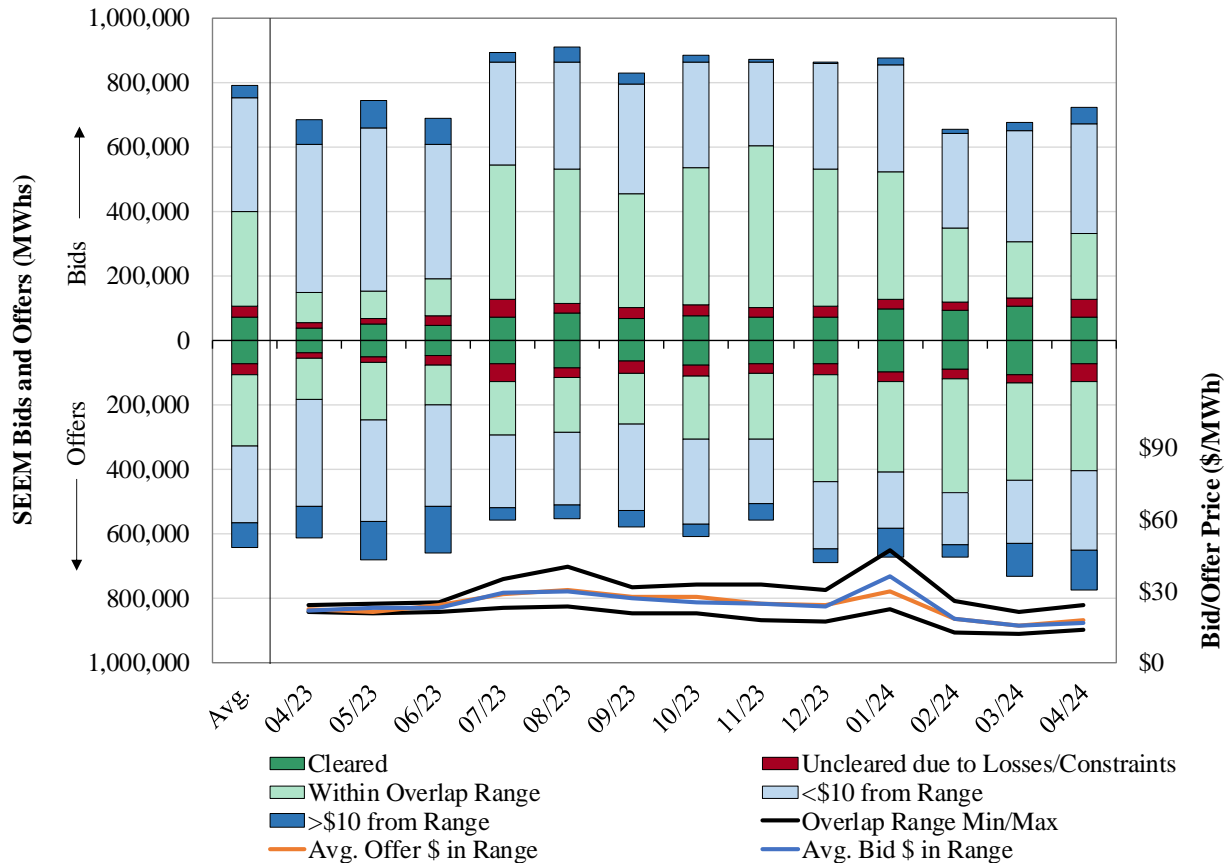


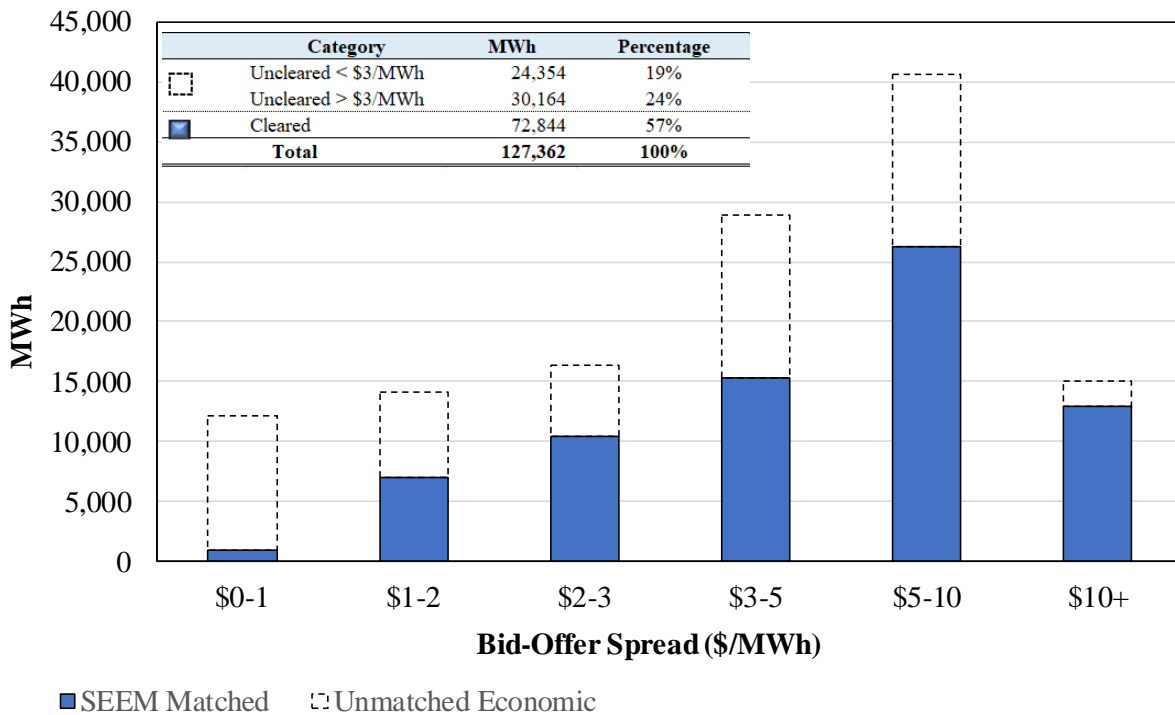
Figure 3 shows that, not surprisingly, bid and offer volume increased substantially when Florida participants joined fully in July. Since the end of 2023, liquidity declined slightly, even though cleared matches increased. Overall, these trends are positive.

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 were uncleared bids whose bid price was greater than some uncleared offer prices in the same interval. Of course, most economic uncleared matches have a small bid-offer spread, and likely are not matched due to transmission losses that render the trade uneconomic. However, there are some economic uncleared matches with substantial spreads. Figure 4 shows a summary of the cleared and uncleared matches. Each stacked bar shows the SEEM matches (blue bar) and the economic



unmatched (transparent bar) at the given bid-offer spread. For example, the first blue bar shows SEEM matches where bids exceed offers by up to \$1 – there are very few because that spread would not pay most transmission loss cost. The transparent box shows considerable uncleared economic bids and offers that did not clear at spreads up to \$1.

**Figure 4: Cleared and Uncleared Economic Matches**  
April 2024



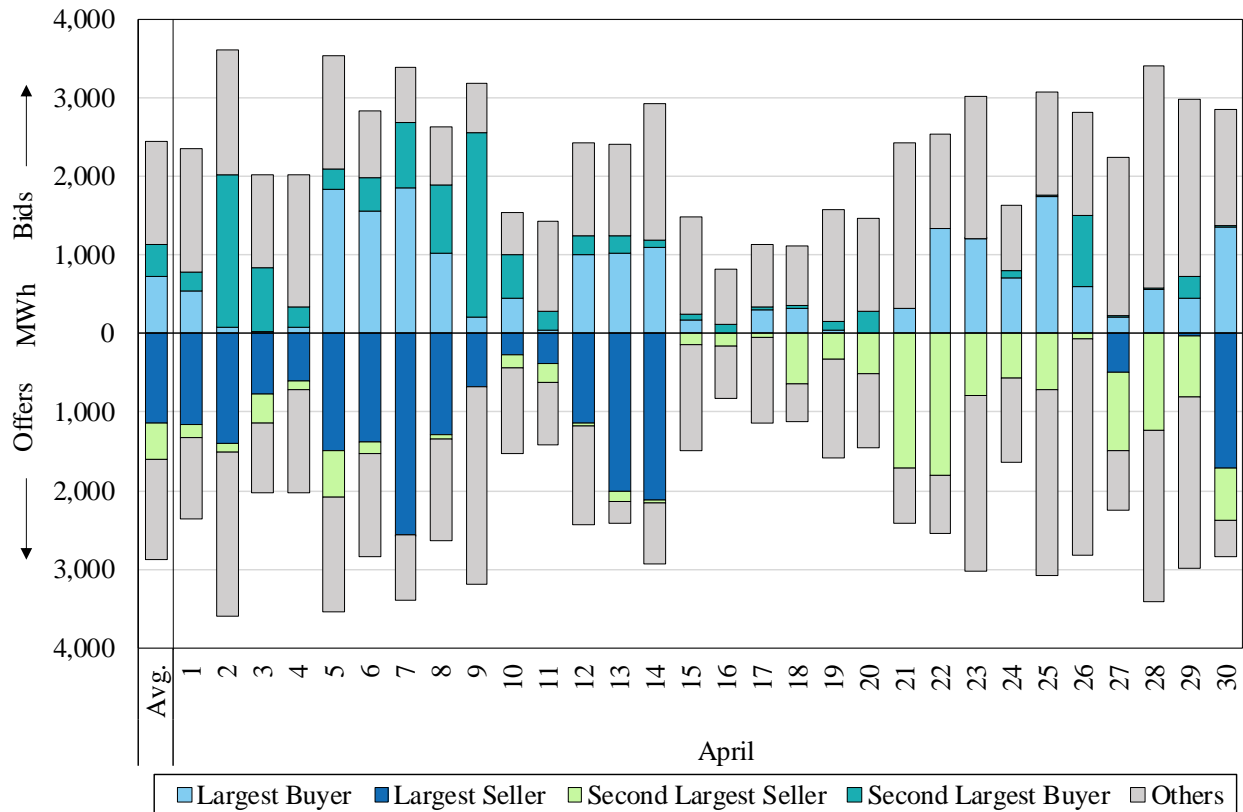
To understand why economic bids and offers may not have cleared, it is useful to examine the bid-offer spread. Average loss charges are roughly \$2 per MWh, although some potential economic matches would incur higher loss costs. Therefore, in the inset table, we divide totals between bid-offer spreads above and below \$3 per MWh. Those below \$3 are very likely to have not cleared because of the costs of losses, well most of those that did not clear at spreads above \$3 likely did not clear because of transmission constraints or participant constraints.

Figure 4 shows that over the entire period, 57 percent of the economic transactions cleared. It also shows that the costs of transmission losses were likely the most significant factor that prevented transactions from clearing, because in each of the periods most of the uncleared economic transactions were those with spreads less than \$3 per MWh. However, this share fell from 26 percent in the first period to 16 percent in the last period while uncleared economic transactions with larger price spreads rose from 5 percent of all economic transactions to 11 percent. This trend indicates that transmission constraints have likely begun to play a slightly larger role in preventing economic transactions from clearing as market activity increases. This is consistent with expectations since higher activity will generate more network flows and associated

transmission congestion. It raises no significant concerns as transmission capability has generally been available to SEEM participants, as we discuss in Subsection C below.

Figure 5 shows more detail on the matched bids and offers by showing the matches by the largest market participants. 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 the top two participants and then all the rest.

**Figure 5: Volumes of Matched Bids and Offers**  
April 2024

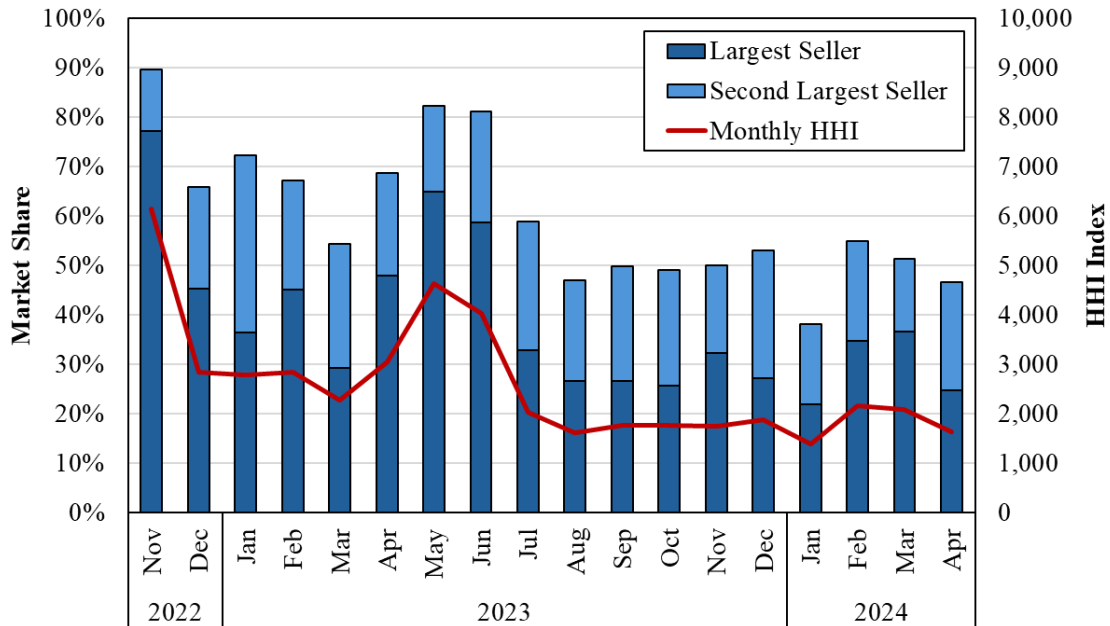


The figure shows certain buyers and sellers comprise significant shares of the transaction activity. For the month, 39 percent of the sales were made by a single seller and 30 percent of the purchases were made by a single buyer.

In the next figures, we present a time series of market shares and concentration. Economists measure market shares to get a general view of the competitiveness of a market. It is not determinative of the existence of market power, but it is useful for an overall view. Figure 5 shows the monthly share of matched transaction of the largest two sellers along with the

Herfindahl Hirschmann Index (HHI), defined below. The bars in this figure stack the two top sellers during the month.

**Figure 6: Seller Market Share Statistics**  
November 2022 – April 2024

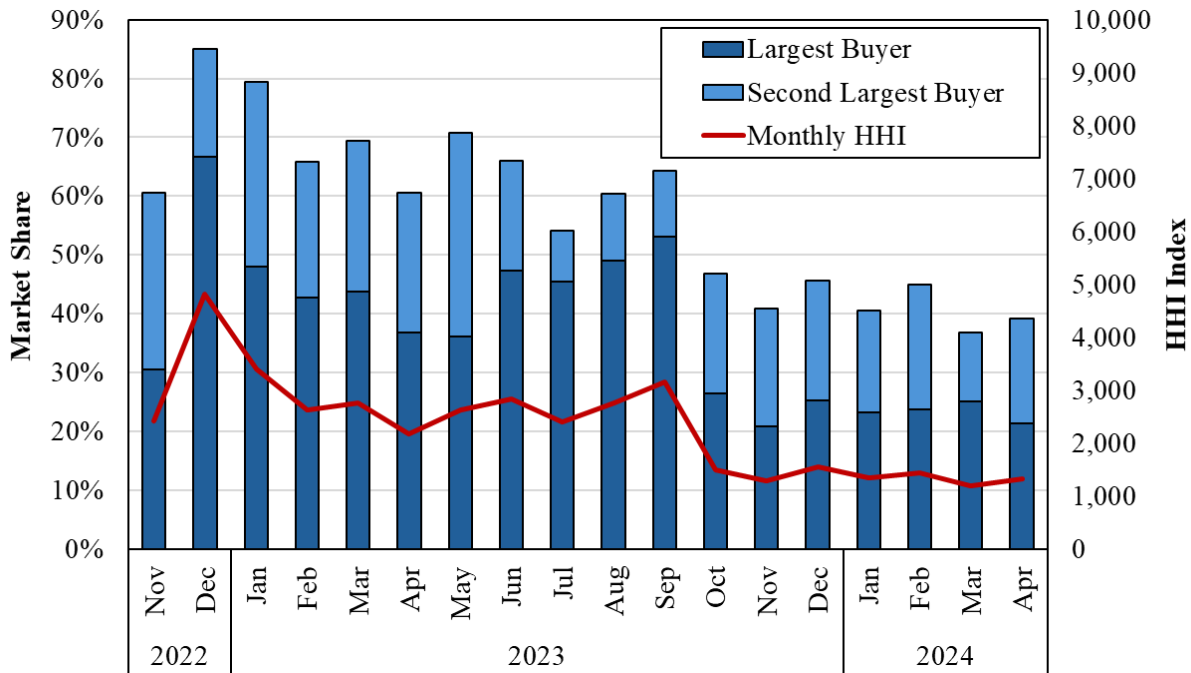


Not surprisingly, the share of the top seller, as well as the share of the top two, declined once the Florida participants full joined in July 2023. The chart also shows the HHI has declined. The HHI is a measure of market concentration and is used to determine market competitiveness, often on a relative basis over time or as a result of structural changes like a merger or divestiture. It is calculated by squaring the market share of each firm competing in a market and then summing the resulting numbers. It can range from close to 0 to 10,000, with lower values indicating a less concentrated market. A single-seller monopoly market would have an HHI of 10,000 = 100 x 100. A perfectly competitive market where no firm has an appreciable market share, the HHI is close to 0. The US antitrust agencies (FTC and DOJ) consider markets with:

- HHI greater than 1800 to be highly concentrated;
- one with an HHI between 1000 and 1800 to be moderately concentrated; and
- one with an HHI less than 1000 to be unconcentrated.

The HHI indicates that the SEEM market has highly-concentrated in most months. However, the HHI has come down since July and has remained close to 1800. Although this is close to the highly-concentrated range, it has been falling and the correlation of prices with fuel prices indicates that the market has performed competitively. Figure 7 shows the buyer concentration.

**Figure 7: Buyer Market Share Statistics**  
November 2022 – April 2024

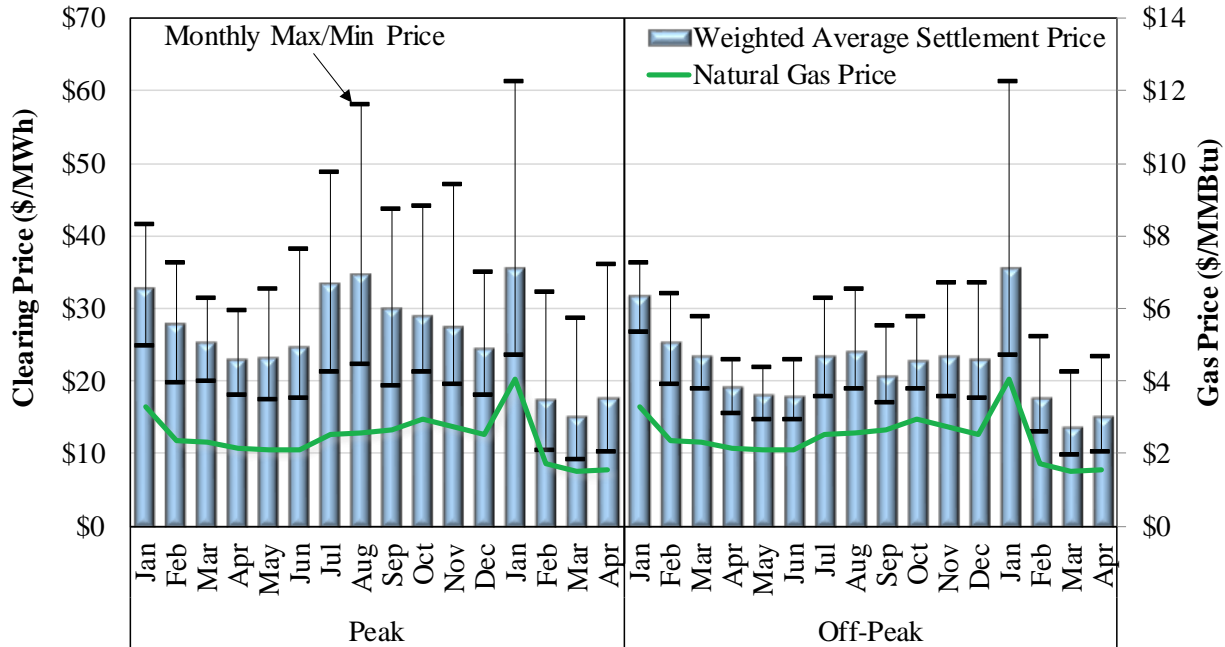


The statistics show a trend similar to the seller market shares. The entry of Florida participants coincided with a decline in buyer concentration, although there was a two-month lag in the decline in the share of the largest buyers. These declines, together with the uptrend in matched trades are indicative of a market evolving to greater liquidity and competitiveness.

## 2. Network Usage

In this subsection, we report on the usage of the SEEM network. Figure 8 shows monthly SEEM clearing prices, natural gas costs, and average daily minimum and maximum prices in peak and off-peak hours during the month. The figure shows that prices are correlated with natural gas costs, which is the marginal fuel in many hours and strongly influences the value of power. The superimposed lines over the bars show the price spread over each month. Lower natural gas prices resulted in relatively lower settlement prices in April.

Figure 8: Monthly Clearing Prices and Natural Gas Costs



The figure shows that April prices rose slightly, relative to March and but compared to the previous 12-month period prices were lower. The figure also shows that the value of transactions can vary significantly, 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. SEEM trades among participants using ATC. We gathered ATC and trading statistics for all SEEM segments available to the model. There are 240 segments used in SEEM for which an ATC value is posted. There are another 111 segments for which no ATC is posted. These are segments that were available on an unlimited basis.<sup>2</sup> We calculate total segment (MWh) usage and for segments with ATC values, we report the median, maximum, and minimum ATC values over all intervals for each segment. For these “ATC segments,” we are also able to 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.

In addition to schedule volumes and the ATC statistics, we also calculate how each segment was utilized by interval during the month, *to wit*, the interval was either:

<sup>2</sup> It is not unusual for transmission paths to have no ATC value posted, and not just for the SEEM transmission service (NFEETS).

- (1) Partially used (MWs cleared were less than ATC or total MWs cleared on a segment without ATC);
- (2) Fully Used, ATC was used up for the interval;<sup>3</sup>
- (3) Unavailable, no ATC;<sup>4</sup> and
- (4) Uncleared (no schedules on the segment).

In reporting the usage of each segment, we refer to a “segment-interval” which is an observation in a single interval on one segment. Table 1 shows an excerpt of our statistics. The table displays the 23 segments that had at least 2,000 MWh of transactions scheduled during the month. When ATC is listed as “None” this means there was no ATC posted. The full data for all segments is provided in Appendix A.

**Table 1: Statistics for Most Utilized SEEM Segments**  
April 2024

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
F/FPC/FPC-SOCO//	0	38	289	20,215	29.53%	649	23%	238	8%	1,336	46%	657	23%
S/TVA/SOCO-TVA//	0	2,117	2,940	18,893	1.34%	566	20%	0	0%	48	2%	2,266	79%
F/TEC/TEC-FPC//	206	1,510	2,650	10,710	1.02%	459	16%	0	0%	0	0%	2,421	84%
SS/SOCO/FL-TVA/MULTIPATHALIAS/	204	548	1,150	8,811	2.12%	392	14%	0	0%	0	0%	2,488	86%
SS/SOCO/FL-SOCO//	204	548	1,150	8,336	2.00%	668	23%	0	0%	0	0%	2,212	77%
F/FPC/TEC-SOCO//	0	38	289	8,135	11.88%	220	8%	79	3%	1,336	46%	1,245	43%
F/JEA/SOCO-JEA//	11	495	820	7,534	2.10%	1,059	37%	12	0%	0	0%	1,809	63%
S/MEAG/FPC-TVA//	None	None	None	5,521	0.00%	305	11%	0	0%	0	0%	2,575	89%
P/LGEE/TVA-LGEE//	1,023	1,421	1,424	4,932	0.49%	249	9%	0	0%	0	0%	2,631	91%
SS/SOCO/SOCO-SOCO//	40,945	44,230	44,230	4,745	0.01%	255	9%	0	0%	0	0%	2,625	91%
SS/SOCO/SOCO-TVA//	419	1,377	2,298	4,400	0.45%	179	6%	0	0%	0	0%	2,701	94%
SS/GTC/GTC-TVA//	0	515	616	4,287	1.25%	155	5%	7	0%	20	1%	2,698	94%
S/CPL/CPL-SEEG//	0	4,375	7,005	3,953	0.13%	210	7%	0	0%	107	4%	2,563	89%
S/TVA/SOCO-LGEE//	0	0	2,254	3,803	2.67%	186	6%	27	1%	2,155	75%	512	18%
S/SC/SOCO-SC//	0	0	1,574	3,414	2.26%	313	11%	13	0%	1,639	57%	915	32%
S/SC/DUK-SC//	0	2,279	3,250	3,226	0.20%	379	13%	0	0%	37	1%	2,464	86%
SS/SOCO/SOCO-FL//	394	1,126	1,470	2,900	0.36%	432	15%	0	0%	0	0%	2,448	85%
F/FPC/TEC-FPC//	55	1,559	2,699	2,575	0.24%	290	10%	0	0%	0	0%	2,590	90%
SS/GTC/SOCO-GTC//	13,293	13,915	14,719	2,404	0.02%	104	4%	0	0%	0	0%	2,776	96%
S/CPL/CPL-SC//	0	2,538	4,311	2,341	0.13%	171	6%	0	0%	42	1%	2,667	93%
S/SC/SEEG-SC//	981	1,793	2,556	2,264	0.18%	253	9%	0	0%	0	0%	2,627	91%
S/MEAG/SOCO-JEA//	None	None	None	2,105	0.00%	374	13%	0	0%	0	0%	2,506	87%
SS/SOCO/TVA-SOCO//	726	955	1,559	2,070	0.27%	79	3%	0	0%	0	0%	2,801	97%

The “Uncleared” category indicates that among these most utilized segments, many of them have over 90 percent of their intervals uncleared. There are, however, numerous instances when segments are constrained. A constrained segment is one where either (1) the segment is completely used by SEEM (“Fully Used” column in the table) or (2) ATC is insufficient (less than 4 MW) prior to SEEM matching (the “Unavailable” column in the table).

<sup>3</sup> ATC less the MW schedule was less than 4 MW (i.e., no additional SEEM transaction could be cleared).

<sup>4</sup> ATC was less than 4 MW at the start of the interval.

Table 2 show the summary usage for all segments. During the month, total segment intervals is the product of all 351 segments and the number of intervals during the month. In April, there were 1,010,880 segment intervals.<sup>5</sup> The two circumstances (Cases (2) and (3)) when a segment is constrained occurred in more than 88,000 segment-intervals and almost always because the ATC was insufficient to schedule (i.e.,  $ATC < 4$  MW) rather than because it is fully used by a SEEM match. The most common case in the data was “Uncleared” (Case 4), where ATC was available or there was no ATC posted, but the segment was not used because no beneficial transactions were cleared by the SEEM model over that segment. These cases represent over 906,000 segment intervals or 90 percent of all segment-intervals. The second most common case was case “Unavailable” (Case 3), where ATC was not sufficient to clear any SEEM transactions (88,870 or about 9 percent of the time). The third most common case was “Partially Used” (Case 1), where the segment was partially used (14,828 or about 1.5 percent of the time). Finally, in a small number of intervals, the Segment ATC was “Fully Used” (Case 2), where the segment was completely scheduled in the interval (788).

**Table 2: Summary of All Segments**  
April 2024

Segment	Case 1 Partially Used		Case 2 Fully Used		Case 3 Unavailable		Case 4 Uncleared	
	Intervals	%	Intervals	%	Intervals	%	Intervals	%
	All Segments	14,828	1.5%	788	0.1%	88,870	8.8%	906,394

Measuring transmission capacity congestion by adding Case 2 and 3, the percentage of constrained segment intervals was stable (9 percent in April, higher than the 6 percent in March). Overall, these results indicate that transmission was generally available to facilitate economic transactions in the SEEM region. As we discussed above, transmission loss costs were a larger factor in preventing economic trades from being consummated than transmission constraints.

Further insight on constrained segments can be gained from Table 3. It shows the segments most often unavailable to SEEM (i.e., unavailable in at least 1,000 intervals). All segments shown reported ATC of 0 in one or more intervals during the month ( $ATC_{Min}=0$ ). In most intervals there was at least some cleared trades. Like in previous months, these frequently-unavailable paths are in many intervals unused when they are available (as indicated by the “Uncleared” column). Overall, the evaluation of individual segments indicates the system is largely unconstrained for SEEM activity.

<sup>5</sup> The maximum number of segment intervals in a month is (361 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 April, SEEM operated in all intervals.

**Table 3: Most Constrained SEEM Segments**  
April 2024

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/DUK/DUK-SCEG//	0	0	204	0	0.00%	0	0%	0	0%	2,556	89%	324	11%
S/DUK/CPLW-SCEG//	0	0	204	0	0.00%	0	0%	0	0%	2,537	88%	343	12%
S/DUK/CPLW-SCEG//	0	0	204	0	0.00%	0	0%	0	0%	2,537	88%	343	12%
S/DUK/SOCO-SCEG//	0	0	208	231	1.76%	24	1%	1	0%	2,534	88%	321	11%
S/DUK/TVA-SCEG//	0	0	204	0	0.00%	0	0%	0	0%	2,534	88%	346	12%
S/TVA/AECI-LGEE//	0	0	342	0	0.00%	0	0%	0	0%	2,429	84%	451	16%
S/TVA/TVA-LGEE//	0	0	2,827	713	0.48%	36	1%	3	0%	2,155	75%	686	24%
S/TVA/SOCO-LGEE//	0	0	2,254	3,803	2.67%	186	6%	27	1%	2,155	75%	512	18%
S/TVA/CPLW-LGEE//	0	0	276	159	0.37%	24	1%	0	0%	2,155	75%	701	24%
S/TVA/DUK-LGEE//	0	0	355	257	0.48%	30	1%	0	0%	2,155	75%	695	24%
S/DUK/SC-SCEG//	0	0	214	16	0.04%	2	0%	0	0%	2,088	73%	790	27%
F/FPC/SEC-SOCO/SSO-SOCO/	0	0	281	0	0.00%	0	0%	0	0%	1,752	61%	1,128	39%
S/SCEG/SOCO-SCEG//	0	0	1,550	151	0.12%	32	1%	0	0%	1,736	60%	1,112	39%
S/SC/SOCO-SC//	0	0	1,574	3,414	2.26%	313	11%	13	0%	1,639	57%	915	32%
S/DUK/DUK-CPLE//	0	0	4,011	15	0.01%	2	0%	1	0%	1,559	54%	1,318	46%
S/MEAG/MEAG-SCEG//	0	3	12	1	0.04%	0	0%	1	0%	1,536	53%	1,343	47%
S/DUK/CPLW-CPLE//	0	0	1,243	0	0.00%	0	0%	0	0%	1,523	53%	1,357	47%
S/SCEG/CPLW-SCEG//	0	0	454	82	0.08%	10	0%	0	0%	1,476	51%	1,394	48%
S/DUK/DUK-SC//	0	5	2,323	372	0.16%	63	2%	0	0%	1,432	50%	1,385	48%
S/DUK/CPLW-SC//	0	21	1,243	0	0.00%	0	0%	0	0%	1,412	49%	1,468	51%
S/DUK/DUK-SOCO//	0	40	2,143	596	0.19%	100	3%	0	0%	1,401	49%	1,379	48%
S/DUK/TVA-SC//	0	41	692	0	0.00%	0	0%	0	0%	1,397	49%	1,483	51%
S/DUK/CPLW-SC//	0	33	2,724	84	0.03%	8	0%	1	0%	1,397	49%	1,474	51%
S/DUK/CPLW-SOCO//	0	72	1,243	0	0.00%	0	0%	0	0%	1,389	48%	1,491	52%
S/DUK/CPLW-SOCO//	0	91	2,288	1,944	0.44%	133	5%	1	0%	1,380	48%	1,366	47%
S/DUK/DUK-TVA//	0	102	692	181	0.08%	20	1%	0	0%	1,367	47%	1,493	52%
S/SC/CPLW-SC//	0	66	2,713	1,113	0.38%	96	3%	5	0%	1,352	47%	1,427	50%
S/SC/CPLW-SCEG//	0	64	3,744	0	0.00%	0	0%	0	0%	1,340	47%	1,540	53%
S/SC/SOCO-SCEG//	0	94	2,271	91	0.03%	11	0%	0	0%	1,339	46%	1,530	53%
F/FPC/TEC-SOCO//	0	38	289	8,135	11.88%	220	8%	79	3%	1,336	46%	1,245	43%
F/FPC/FPC-SOCO//	0	38	289	20,215	29.53%	649	23%	238	8%	1,336	46%	657	23%
F/FPC/SEC-SOCO/SSN-SOCO/	0	38	289	0	0.00%	0	0%	0	0%	1,336	46%	1,544	54%
F/FPC/GVL-SOCO//	0	38	267	0	0.00%	0	0%	0	0%	1,336	46%	1,544	54%
S/SCEG/CPLW-SC//	0	88	518	47	0.04%	13	0%	0	0%	1,334	46%	1,533	53%
S/TVA/AECI-TVA//	0	7	344	0	0.00%	0	0%	0	0%	1,244	43%	1,636	57%
S/DUK/SOCO-SC//	0	261	2,220	1,477	0.29%	143	5%	2	0%	1,236	43%	1,499	52%
S/TVA/AECI-CPLW//	0	7	276	0	0.00%	0	0%	0	0%	1,232	43%	1,648	57%
S/TVA/AECI-DUK//	0	7	344	27	0.05%	8	0%	0	0%	1,224	43%	1,648	57%
S/TVA/AECI-SOCO//	0	7	344	230	0.39%	29	1%	12	0%	1,224	43%	1,615	56%
S/AECI/TVA-AECI//	0	259	909	892	0.32%	61	2%	0	0%	1,186	41%	1,633	57%



### III. CONCLUSION

We reviewed the operation of SEEM for April 2024. We have developed operational procedures to validate the market rules and constraints of SEEM. All 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 -- April 2024

Segment	ATC			Loading		Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
F/FPC/FPC-SOCO//	0	288	370	41,219	0.204934	1,345	45%	132	4%	4	0%	1491	50%
P/LGEE/TVA-LGEE//	0	1,419	1,424	32,026	0.031832	1,035	35%	1	0%	8	0%	1928	65%
SS/SOCO/FL-TVA/MULTIPATHALIAS/	393	976	1,284	22,939	0.032112	884	30%	0	0%	0	0%	2088	70%
S/TVA/SOCO-LGEE//	0	714	2,533	18,928	0.03558	725	24%	14	0%	720	24%	1513	51%
F/TEC/TEC-FPC//	0	1,754	2,702	13,757	0.010926	940	32%	0	0%	8	0%	2024	68%
S/TVA/SOCO-TVA//	0	2,356	2,932	12,117	0.006955	445	15%	0	0%	8	0%	2519	85%
F/FPC/TEC-SOCO//	0	285	370	10,207	0.051102	688	23%	53	2%	28	1%	2203	74%
SS/SOCO/FL-SOCO//	393	976	1,284	9,604	0.013432	880	30%	0	0%	0	0%	2092	70%
S/TVA/TVA-LGEE//	0	613	2,765	8,148	0.016814	286	10%	20	1%	728	25%	1938	65%
S/CPL/CPLD-DUK//	1,165	5,928	8,005	8,001	0.001929	323	11%	0	0%	0	0%	2649	89%
F/JEA/JEA-SOCO//	179	553	822	6,779	0.016866	1,076	36%	0	0%	0	0%	1896	64%
S/CPL/DUK-CPLE//	337	3,178	6,819	6,460	0.002738	603	20%	0	0%	0	0%	2369	80%
S/DUK/SOCO-CPLE//	0	1,787	2,220	4,902	0.003917	587	20%	0	0%	22	1%	2363	80%
S/MEAG/FPC-MEAG//	0	108	224	4,043	0.054753	294	10%	80	3%	189	6%	2409	81%
F/FPC/SOCO-FPC//	0	363	527	3,962	0.016037	496	17%	39	1%	76	3%	2361	79%
S/DUK/CPLD-TVA//	96	692	692	3,831	0.007603	138	5%	2	0%	0	0%	2832	95%
SS/SOCO/SOCO-TVA//	794	1,817	2,687	3,799	0.002909	119	4%	0	0%	0	0%	2853	96%
SS/SOCO/FL-DUK/MULTIPATHALIAS/	0	366	866	3,658	0.012821	404	14%	24	1%	50	2%	2494	84%
SS/SOCO/SOCO-DUK//	0	366	866	3,599	0.012613	391	13%	32	1%	50	2%	2499	84%
SS/SOCO/TVA-SOCO//	879	1,516	1,571	3,570	0.003323	122	4%	0	0%	0	0%	2850	96%
F/FPC/TEC-FPC//	0	1,804	2,751	3,550	0.002739	491	17%	0	0%	8	0%	2473	83%
S/SC/SOCO-SC//	0	628	1,720	3,531	0.00709	368	12%	7	0%	668	22%	1929	65%
SS/SOCO/SOCO-FL//	591	1,200	1,622	3,504	0.000998	436	15%	0	0%	0	0%	2536	85%
S/TVA/TVA-SOCO//	0	2,920	2,935	3,501	0.001636	118	4%	0	0%	16	1%	2838	95%
S/TVA/TVA-DUK//	0	355	430	3,275	0.012506	85	3%	1	0%	16	1%	2870	97%
S/TVA/DUK-LGEE//	0	355	355	3,258	0.017844	131	4%	9	0%	720	24%	2112	71%
SS/SOCO/SOCO-SOCO//	40,439	44,230	44,230	3,209	0.000998	203	7%	0	0%	0	0%	2769	93%
S/SC/DUK-SC//	0	1,396	2,694	2,376	0.002398	254	9%	4	0%	160	5%	2554	86%
S/AECI/TVA-AECI//	0	237	913	2,331	0.008826	77	3%	42	1%	1,133	38%	1720	58%
S/DUK/DUK-SOCO//	0	1,966	2,335	2,224	0.002197	196	7%	0	0%	476	16%	2300	77%
S/DUK/CPLD-SOCO//	0	2,035	2,335	2,187	0.001943	209	7%	1	0%	462	16%	2300	77%
S/MEAG/SOCO-MEAG//	2,575	3,025	3,225	2,172	0.000976	195	7%	0	0%	0	0%	2777	93%
S/DUK/TVA-DUK//	0	692	692	1,991	0.003962	48	2%	1	0%	18	1%	2905	98%
S/CPL/DUK-TVA//	0	276	308	1,978	0.009812	72	2%	8	0%	10	0%	2882	97%
S/DUK/CPLD-CPLW//	0	361	554	1,956	0.0079	76	3%	1	0%	350	12%	2545	86%
S/TVA/SOCO-AECI//	0	622	686	1,942	0.004588	107	4%	0	0%	12	0%	2853	96%
S/DUK/SOCO-SC//	0	917	2,220	1,911	0.002647	207	7%	5	0%	449	15%	2311	78%
S/SCEG/DUK-SCEG//	0	186	319	1,795	0.013524	213	7%	12	0%	104	4%	2643	89%
S/DUK/SOCO-SCEG//	0	187	213	1,660	0.015142	203	7%	0	0%	512	17%	2257	76%
SS/SOCO/FL-SC/MULTIPATHALIAS/	-200	50	331	1,650	0.023312	129	4%	115	4%	519	17%	2209	74%
S/TVA/CPLW-LGEE//	0	276	276	1,605	0.010975	64	2%	1	0%	720	24%	2187	74%
SS/SOCO/DUK-FL/MULTIPATHALIAS/	172	910	1,052	1,566	0.002374	257	9%	0	0%	0	0%	2715	91%
S/SCEG/SOCO-SCEG//	0	428	2,182	1,533	0.003177	200	7%	7	0%	752	25%	2013	68%
S/DUK/TVA-CPLE//	0	692	692	1,503	0.002971	56	2%	0	0%	6	0%	2910	98%
SS/SOCO/FL-SCEG/MULTIPATHALIAS/	0	21	125	1,380	0.055633	117	4%	84	3%	1,191	40%	1580	53%
S/TVA/DUK-TVA//	40	355	430	1,340	0.005138	59	2%	3	0%	0	0%	2910	98%
F/JEA/JEA-SOCO//	275	825	1,058	1,267	0.002079	297	10%	0	0%	0	0%	2675	90%
S/DUK/DUK-TVA//	0	692	692	1,263	0.00322	52	2%	0	0%	457	15%	2463	83%
SS/GTC/GTC-SOCO//	20,000	20,000	20,000	1,199	0.000081	64	2%	0	0%	0	0%	2908	98%
F/TEC/FPC-TEC//	33	1,871	2,797	1,185	0.000861	110	4%	0	0%	0	0%	2862	96%
SS/GTC/GTC-TVA//	0	474	710	1,176	0.003588	56	2%	0	0%	4	0%	2912	98%
SS/GTC/GTC-FPC//	195	804	1,019	1,053	0.001804	91	3%	0	0%	0	0%	2881	97%
F/FPC/FPC-TEC//	73	1,912	2,837	1,037	0.000737	92	3%	0	0%	0	0%	2880	97%
S/MEAG/DUK-MEAG//	0	136	170	977	0.010543	78	3%	4	0%	7	0%	2883	97%
S/DUK/SOCO-DUK//	0	1,858	2,220	975	0.000765	95	3%	0	0%	34	1%	2843	96%
S/SC/CPLD-SC//	0	732	2,091	950	0.001642	96	3%	6	0%	640	22%	2230	75%
S/CPL/SCEG-CPLE//	248	637	637	924	0.002061	110	4%	0	0%	0	0%	2862	96%
S/SCEG/SCEG-CPLE//	278	671	905	924	0.001856	110	4%	0	0%	0	0%	2862	96%
SS/SOCO/DUK-SOCO//	172	939	1,052	909	0.001363	41	1%	0	0%	0	0%	2931	99%
S/CPL/CPLD-SCEG//	0	404	404	899	0.003323	92	3%	0	0%	41	1%	2839	96%

Appendix A (continued)

Segment	ATC			Loading MWhs Factor	Partially Used		Fully Used		Unavailable		Uncleared		
	Min	Median	Max		Intervals	%	Intervals	%	Intervals	%	Intervals	%	
SS/GTC/FPC-GTC//	0	606	808	897	0.002182	41	1%	4	0%	4	0%	2923	98%
SS/GTC/SOCO-GTC//	12,990	13,876	14,619	746	0.000072	42	1%	0	0%	0	0%	2930	99%
S/CPL/CPLE-SC//	0	2,145	4,420	717	0.000406	78	3%	0	0%	44	1%	2850	96%
SS/GTC/GTC-DUK//	0	289	604	610	0.003018	32	1%	25	1%	95	3%	2820	95%
SS/GTC/GTC-MEAG//	9,445	9,849	9,999	606	0.000083	51	2%	0	0%	0	0%	2921	98%
S/SC/SCEG-SC//	792	1,113	2,176	590	0.000678	74	2%	0	0%	0	0%	2898	98%
SS/GTC/GTC-JEA//	195	804	1,019	556	0.000952	90	3%	0	0%	0	0%	2882	97%
S/SCEG/CPL-SC//	0	418	582	549	0.00261	70	2%	0	0%	572	19%	2330	78%
S/CPL/SC-CPL//	604	1,582	3,303	533	0.000425	47	2%	0	0%	0	0%	2925	98%
S/CPL/TVA-DUK//	0	276	308	517	0.002556	31	1%	1	0%	3	0%	2937	99%
S/DUK/CPLW-CPL//	0	674	1,243	503	0.001009	29	1%	1	0%	374	13%	2568	86%
S/TVA/TVA-CPLW//	0	276	308	489	0.002426	25	1%	0	0%	24	1%	2923	98%
S/SCEG/SCEG-SOCO//	416	2,795	6,041	480	0.000224	68	2%	0	0%	0	0%	2904	98%
S/SC/SOCO-CPL//	0	2,247	2,825	479	0.00035	34	1%	0	0%	166	6%	2772	93%
S/MEAG/GTC-MEAG//	1,479	1,920	2,155	453	0.000323	40	1%	0	0%	0	0%	2932	99%
SS/SOCO/SOCO-SC//	-200	50	331	391	0.005524	31	1%	12	0%	519	17%	2410	81%
SS/GTC/GTC-SC//	0	183	293	343	0.002892	29	1%	2	0%	396	13%	2545	86%
S/CPL/DUK-SC//	0	1,762	4,311	342	0.000259	34	1%	0	0%	3	0%	2935	99%
SS/GTC/DUK-GTC//	71	561	662	334	0.000812	22	1%	0	0%	0	0%	2950	99%
S/DUK/DUK-SC//	0	839	2,724	319	0.000446	47	2%	0	0%	467	16%	2458	83%
S/SCEG/CPL-SCOCO//	0	418	611	301	0.000981	20	1%	7	0%	19	1%	2926	98%
SS/SOCO/SCEG-SOCO//	43	223	264	299	0.001776	34	1%	1	0%	0	0%	2937	99%
S/TVA/DUK-SOCO//	40	355	430	299	0.001146	10	0%	0	0%	0	0%	2962	100%
S/TVA/DUK-AECI//	0	355	430	296	0.001168	16	1%	0	0%	12	0%	2944	99%
S/TVA/SOCO-DUK//	155	355	430	287	0.001109	21	1%	0	0%	0	0%	2951	99%
S/TVA/CPLW-TVA//	128	276	308	255	0.001246	14	0%	0	0%	0	0%	2958	100%
S/SCEG/SC-SCEG//	0	2,685	4,728	252	0.000142	30	1%	3	0%	90	3%	2849	96%
S/DUK/DUK-SCEG//	0	186	213	236	0.002186	37	1%	0	0%	471	16%	2464	83%
S/SCEG/SOCO-SC//	0	1,525	4,969	225	0.000203	37	1%	2	0%	218	7%	2715	91%
S/AECI/AECI-TVA//	0	253	682	217	0.00097	29	1%	2	0%	93	3%	2848	96%
S/SCEG/SCEG-SC//	0	2,955	6,123	213	0.000089	27	1%	0	0%	5	0%	2940	99%
SS/SOCO/DUK-TVA/MULTIPATHALIAS/	172	939	1,052	208	0.000312	9	0%	0	0%	0	0%	2963	100%
SS/GTC/SCEG-GTC//	45	122	145	204	0.002204	20	1%	0	0%	0	0%	2952	99%
S/MEAG/MEAG-TVA//	0	104	153	192	0.002569	9	0%	4	0%	192	6%	2767	93%
SS/GTC/TVA-GTC//	79	354	371	183	0.000734	8	0%	0	0%	0	0%	2964	100%
P/LGEE/LGEE-TVA//	188	1,354	1,623	182	0.000186	13	0%	0	0%	0	0%	2959	100%
S/TVA/LGEE-SOCO//	0	2,828	2,925	182	0.000087	13	0%	0	0%	8	0%	2951	99%
S/MEAG/MEAG-DUK//	0	68	128	178	0.003262	23	1%	3	0%	4	0%	2942	99%
S/SC/SOCO-SCEG//	0	1,443	2,352	172	0.000206	29	1%	0	0%	498	17%	2445	82%
SS/SOCO/TVA-FL/MULTIPATHALIAS/	591	1,175	1,564	156	0.00018	26	1%	0	0%	0	0%	2946	99%
SS/SOCO/SCEG-FL/MULTIPATHALIAS/	43	223	264	152	0.000903	31	1%	0	0%	0	0%	2941	99%
F/FPC/SOCO-TEC//	0	363	527	148	0.0006	13	0%	5	0%	80	3%	2874	97%
SS/GTC/JEA-GTC//	0	606	808	145	0.000353	37	1%	0	0%	4	0%	2931	99%
SS/SOCO/SOCO-SCEG//	0	21	125	135	0.005442	21	1%	5	0%	1,191	40%	1755	59%
S/SC/SC-SOCO//	845	3,204	3,661	130	0.000055	16	1%	0	0%	0	0%	2956	99%
S/MEAG/MEAG-FPC//	14	188	277	121	0.000912	10	0%	1	0%	0	0%	2961	100%
S/DUK/SCEG-SC//	425	669	669	121	0.000247	11	0%	0	0%	0	0%	2961	100%
S/SCEG/CPL-SC//	35	418	611	121	0.00039	11	0%	0	0%	0	0%	2961	100%
S/TVA/AECI-DUK//	0	145	409	120	0.000994	18	1%	0	0%	490	16%	2464	83%
S/DUK/SCEG-DUK//	0	669	669	119	0.000244	11	0%	0	0%	9	0%	2952	99%
S/CPL/DUK-SCEG//	15	404	404	118	0.000429	19	1%	0	0%	0	0%	2953	99%
S/MEAG/TVA-MEAG//	37	77	206	107	0.001659	5	0%	3	0%	0	0%	2964	100%
S/SCEG/DUK-SC//	0	187	417	101	0.000722	9	0%	0	0%	4	0%	2959	100%
S/SC/CPL-SCOCO//	0	3,167	3,891	97	0.000057	5	0%	0	0%	400	13%	2567	86%
S/MEAG/MEAG-JEA//	14	188	277	94	0.000709	16	1%	0	0%	0	0%	2956	99%
S/TVA/CPLW-AECI//	0	276	308	93	0.000464	7	0%	0	0%	12	0%	2953	99%
S/TVA/AECI-LGEE//	0	123	409	87	0.001049	6	0%	4	0%	1,102	37%	1860	63%
S/MEAG/MEAG-SC//	0	39	63	84	0.003206	3	0%	6	0%	580	20%	2383	80%
S/SCEG/SCEG-DUK//	297	757	935	80	0.000143	10	0%	0	0%	0	0%	2962	100%
S/SC/DUK-SCEG//	874	3,231	3,777	80	0.000034	11	0%	0	0%	0	0%	2961	100%

Appendix A (continued)

Segment	ATC			MWs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/DUK/TVA-SC//	0	692	692	78	0.000215	8	0%	4	0%	496	17%	2464	83%
S/MEAG/SCEG-MEAG//	0	26	31	77	0.00395	10	0%	6	0%	20	1%	2936	99%
S/SC/SC-DUK//	357	2,523	3,304	76	0.000042	9	0%	0	0%	0	0%	2963	100%
S/DUK/SC-TVA//	0	692	692	76	0.000151	9	0%	0	0%	3	0%	2960	100%
SS/SOCO/SC-SOCO//	351	591	768	73	0.000179	1	0%	0	0%	0	0%	2971	100%
SS/GTC/GTC-SCEG//	0	18	68	71	0.004825	3	0%	7	0%	1,154	39%	1808	61%
S/SC/SC-CPLE//	470	3,169	4,506	59	0.000025	13	0%	0	0%	0	0%	2959	100%
S/MEAG/MEAG-SOCO//	2,511	2,711	3,159	56	0.000028	5	0%	0	0%	0	0%	2967	100%
S/SCEG/CPLE-SC//	0	418	582	51	0.000021	4	0%	2	0%	465	16%	2501	84%
S/SCEG/SOCO-DUK//	0	757	935	49	0.000087	2	0%	0	0%	2	0%	2968	100%
S/MEAG/JEA-MEAG//	0	108	244	48	0.000065	12	0%	5	0%	189	6%	2766	93%
S/MEAG/SC-MEAG//	0	48	62	47	0.001435	4	0%	2	0%	6	0%	2960	100%
SS/SOCO/TVA-SC/MULTIPATHALIAS/	-200	50	331	46	0.000065	3	0%	1	0%	519	17%	2449	82%
SS/SOCO/TVA-SCEG/MULTIPATHALIAS/	0	21	125	42	0.001693	2	0%	0	0%	1,191	40%	1779	60%
S/DUK/SC-DUK//	0	1,788	2,916	36	0.000027	2	0%	0	0%	9	0%	2961	100%
S/SC/SOCO-DUK//	0	2,331	2,877	36	0.000025	2	0%	0	0%	160	5%	2810	95%
S/TVA/SOCO-CPLW//	76	276	308	28	0.000138	7	0%	0	0%	0	0%	2965	100%
S/DUK/CPLW-SC//	0	1,140	2,773	27	0.000028	2	0%	4	0%	495	17%	2471	83%
S/TVA/CPLW-SOCO//	128	276	308	25	0.000122	2	0%	0	0%	0	0%	2970	100%
S/DUK/DUK-CPLW//	0	361	554	22	0.00009	3	0%	0	0%	372	13%	2597	87%
S/DUK/CPLW-DUK//	0	802	1,243	14	0.000021	2	0%	0	0%	9	0%	2961	100%
S/DUK/SOCO-TVA//	0	692	692	13	0.000026	5	0%	0	0%	16	1%	2951	99%
S/DUK/DUK-CPLE//	0	2,748	7,055	12	0.000006	2	0%	0	0%	451	15%	2519	85%
SS/GTC/SC-GTC//	139	224	291	12	0.000077	3	0%	0	0%	0	0%	2969	100%
SS/SOCO/SCEG-TVA/MULTIPATHALIAS/	43	223	264	12	0.000071	1	0%	0	0%	0	0%	2971	100%
S/DUK/SC-SOCO//	0	2,110	2,335	12	0.000009	3	0%	0	0%	19	1%	2950	99%
S/SC/CPLW-DUK//	3,515	3,785	3,970	12	0.000004	3	0%	0	0%	0	0%	2969	100%
S/DUK/SCEG-TVA//	96	668	669	10	0.000021	1	0%	0	0%	0	0%	2971	100%
S/TVA/AECI-DUK//	0	145	355	10	0.000084	2	0%	1	0%	490	16%	2479	83%
SS/SOCO/SC-FL/MULTIPATHALIAS/	351	591	768	9	0.000022	3	0%	0	0%	0	0%	2969	100%
S/CPL/SC-SCEG//	15	404	404	5	0.000018	1	0%	0	0%	0	0%	2971	100%
S/MEAG/MEAG-SCEG//	0	4	15	3	0.000099	0	0%	2	0%	1,461	49%	1509	51%
S/SCEG/SOCO-CPLE//	0	671	1,054	0	0	0	0%	0	0%	100	3%	2872	97%
SS/SOCO/TVA-DUK/MULTIPATHALIAS/	0	366	866	0	0	0	0%	0	0%	50	2%	2922	98%
S/CPL/SCEG-SC//	248	637	637	0	0	0	0%	0	0%	0	0%	2972	100%
S/SCEG/DUK-CPLE//	0	187	417	0	0	0	0%	0	0%	2	0%	2970	100%
S/SC/DUK-CPLE//	3,400	3,585	3,824	0	0	0	0%	0	0%	0	0%	2972	100%
S/DUK/TVA-SCEG//	0	187	213	0	0	0	0%	0	0%	502	17%	2470	83%
S/DUK/CPLW-SCEG//	0	187	213	0	0	0	0%	0	0%	489	16%	2483	84%
S/MEAG/MEAG-GTC//	2,516	2,751	3,151	0	0	0	0%	0	0%	0	0%	2972	100%
SS/GTC/MEAG-GTC//	8,574	8,749	9,153	0	0	0	0%	0	0%	0	0%	2972	100%
SS/SOCO/SCEG-SC/MULTIPATHALIAS/	-200	50	264	0	0	0	0%	0	0%	519	17%	2453	83%
S/TVA/LGEE-DUK//	0	355	430	0	0	0	0%	0	0%	8	0%	2964	100%
S/TVA/LGEE-CPLW//	0	276	308	0	0	0	0%	0	0%	12	0%	2960	100%
S/DUK/CPLW-DUK//	0	6,139	7,712	0	0	0	0%	0	0%	15	1%	2957	100%
S/CPL/SCEG-DUK//	248	637	637	0	0	0	0%	0	0%	0	0%	2972	100%
S/DUK/SCEG-SOCO//	0	669	669	0	0	0	0%	0	0%	16	1%	2956	99%
S/SC/SC-SCEG//	0	3,768	5,184	0	0	0	0%	0	0%	188	6%	2784	94%
S/TVA/LGEE-TVA//	0	2,828	3,000	0	0	0	0%	0	0%	8	0%	2964	100%
S/DUK/TVA-SOCO//	0	692	692	0	0	0	0%	0	0%	16	1%	2956	99%
S/TVA/AECI-CPLW//	0	145	276	0	0	0	0%	0	0%	490	16%	2482	84%
S/DUK/CPLW-SOCO//	0	655	1,243	0	0	0	0%	0	0%	473	16%	2499	84%
SS/SOCO/SCEG-DUK/MULTIPATHALIAS/	0	208	264	0	0	0	0%	0	0%	50	2%	2922	98%
S/TVA/AECI-TVA//	0	145	409	0	0	0	0%	0	0%	440	15%	2532	85%
S/CPL/SC-DUK//	461	2,684	4,545	0	0	0	0%	0	0%	0	0%	2972	100%
S/DUK/SOCO-CPLW//	0	319	554	0	0	0	0%	0	0%	429	14%	2543	86%
S/SCEG/SC-SOCO//	2,535	5,085	6,092	0	0	0	0%	0	0%	0	0%	2972	100%
S/TVA/LGEE-AECI//	0	622	686	0	0	0	0%	0	0%	12	0%	2960	100%
S/DUK/SC-CPLE//	0	2,771	2,916	0	0	0	0%	0	0%	3	0%	2969	100%
SS/SOCO/SC-TVA/MULTIPATHALIAS/	351	591	768	0	0	0	0%	0	0%	0	0%	2972	100%

Appendix A (continued)

Segment	ATC			Loading		Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/DUK/SCEG-CPLE//	0	669	669	0	0	0	0%	0	0%	3	0%	2969	100%
S/DUK/SC-SCEG//	0	190	214	0	0	0	0%	0	0%	353	12%	2619	88%
S/DUK/CPLE-SCEG//	0	187	213	0	0	0	0%	0	0%	506	17%	2466	83%
S/SCEG/DUK-SOCO//	9	187	417	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/GVL-FPC//	136	241	307	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/FPC-GVL//	61	151	228	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/TEC-FPC/TEC-FPCS/	0	1,804	2,751	0	0	0	0%	0	0%	8	0%	2964	100%
F/TEC/SEC-FPC/SSO-FPC/	0	247	705	0	0	0	0%	0	0%	28	1%	2944	99%
F/FPC/SOCO-SEC/SOCO-SSN/	0	363	504	0	0	0	0%	0	0%	76	3%	2896	97%
F/FPC/GVL-FPC/GVL-FPCS/	136	241	307	0	0	0	0%	0	0%	0	0%	2972	100%
F/TEC/SEC-TEC/SSO-TEC/	0	247	705	0	0	0	0%	0	0%	20	1%	2952	99%
F/FPC/FPC-SEC/FPC-SSN/	385	501	1,279	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/SEC-FPC/SSO-FPCS/	0	493	765	0	0	0	0%	0	0%	28	1%	2944	99%
F/FPC/SOCO-FPC/SOCO-FPCS/	0	363	527	0	0	0	0%	0	0%	76	3%	2896	97%
F/JEA/SOCO-SEC/SOCO-SSN/	298	383	522	0	0	0	0%	0	0%	0	0%	2972	100%
S/SCEG/SC-CPLE//	478	671	1,054	0	0	0	0%	0	0%	0	0%	2972	100%
S/SC/DUK-SOCO//	2,859	3,404	3,765	0	0	0	0%	0	0%	0	0%	2972	100%
S/TVA/DUK-CPLW//	40	276	308	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/GVL-TEC//	137	241	307	0	0	0	0%	0	0%	0	0%	2972	100%
S/CPL/DUK-CPLW//	197	434	530	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/SEC-FPC/SSN-FPCS/	0	147	1,120	0	0	0	0%	0	0%	488	16%	2484	84%
S/DUK/CPLW-TVA//	0	692	692	0	0	0	0%	0	0%	29	1%	2943	99%
S/CPL/CPLW-TVA//	0	276	308	0	0	0	0%	0	0%	26	1%	2946	99%
F/FPC/SEC-SOCO/SSN-SOCO/	0	288	370	0	0	0	0%	0	0%	4	0%	2968	100%
S/DUK/CPLW-SC//	0	607	1,243	0	0	0	0%	0	0%	464	16%	2508	84%
F/FPC/SEC-GVL/SSN-GVL/	57	148	229	0	0	0	0%	0	0%	0	0%	2972	100%
F/TEC/TEC-SEC/TEC-SSO/	0	714	729	0	0	0	0%	0	0%	16	1%	2956	99%
F/JEA/SEC-SOCO/SSN-SOCO/	275	637	637	0	0	0	0%	0	0%	0	0%	2972	100%
S/CPL/TVA-CPLW//	0	276	308	0	0	0	0%	0	0%	31	1%	2941	99%
F/FPC/SEC-TEC/SSN-TEC/	0	1,078	1,436	0	0	0	0%	0	0%	4	0%	2968	100%
F/FPC/TEC-GVL//	0	147	224	0	0	0	0%	0	0%	20	1%	2952	99%
F/FPC/FPC-FPC/FPC-FPCS/	2,914	3,629	4,231	0	0	0	0%	0	0%	0	0%	2972	100%
S/SC/SCEG-CPLE//	1,459	2,254	3,270	0	0	0	0%	0	0%	0	0%	2972	100%
S/SC/SCEG-DUK//	1,599	2,558	3,276	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/TEC-SEC/TEC-SSN/	0	500	1,279	0	0	0	0%	0	0%	24	1%	2948	99%
S/SCEG/SC-DUK//	486	757	935	0	0	0	0%	0	0%	0	0%	2972	100%
S/SC/SCEG-SOCO//	2,002	3,056	3,276	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/SEC-FPC/SSO-FPC/	0	493	765	0	0	0	0%	0	0%	28	1%	2944	99%
F/FPC/SEC-SOCO/SSO-SOCO/	0	245	351	0	0	0	0%	0	0%	32	1%	2940	99%
F/FPC/SEC-FPC/SSN-FPC/	0	147	1,120	0	0	0	0%	0	0%	488	16%	2484	84%
F/FPC/GVL-SOCO//	0	237	303	0	0	0	0%	0	0%	4	0%	2968	100%
F/FPC/GVL-SEC/GVL-SSN/	140	242	307	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/SEC-GVL/SSO-GVL/	0	129	224	0	0	0	0%	0	0%	28	1%	2944	99%
F/JEA/JEA-SEC/JEA-SSN/	233	383	518	0	0	0	0%	0	0%	0	0%	2972	100%
F/FPC/SEC-TEC/SSO-TEC/	0	247	705	0	0	0	0%	0	0%	20	1%	2952	99%
F/JEA/SEC-JEA/SSN-JEA/	0	439	589	0	0	0	0%	0	0%	1,276	43%	1696	57%
F/FPC/SOCO-GVL//	0	134	220	0	0	0	0%	0	0%	76	3%	2896	97%
F/FPC/SEC-SEC/SSO-SSN/	0	247	705	0	0	0	0%	0	0%	28	1%	2944	99%
S/CPL/CPLW-DUK//	0	791	1,318	0	0	0	0%	0	0%	16	1%	2956	99%
S/DUK/SC-CPLW//	0	243	554	0	0	0	0%	0	0%	645	22%	2327	78%
S/DUK/SCEG-CPLW//	0	284	554	0	0	0	0%	0	0%	451	15%	2521	85%
S/DUK/TVA-CPLW//	0	374	554	0	0	0	0%	0	0%	355	12%	2617	88%
S/SC/CPLE-SCEG//	0	1,155	3,099	0	0	0	0%	0	0%	498	17%	2474	83%
S/TVA/CPLW-DUK//	128	276	308	0	0	0	0%	0	0%	0	0%	2972	100%
S/TVA/TVA-AECL//	0	622	686	0	0	0	0%	0	0%	20	1%	2952	99%
SS/GTC/GTC-GTC//	25,685	25,835	25,835	0	0	0	0%	0	0%	0	0%	2972	100%
SS/SOCO/DUK-SC/MULTIPATHALIAS/	-200	50	331	0	0	0	0%	0	0%	519	17%	2453	83%
SS/SOCO/DUK-SCEG/MULTIPATHALIAS/	0	21	125	0	0	0	0%	0	0%	1,191	40%	1781	60%
SS/SOCO/SC-DUK/MULTIPATHALIAS/	0	366	605	0	0	0	0%	0	0%	50	2%	2922	98%
SS/SOCO/SC-SCEG/MULTIPATHALIAS/	0	21	125	0	0	0	0%	0	0%	1,191	40%	1781	60%