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

**FOR
July 2025**

Prepared by:

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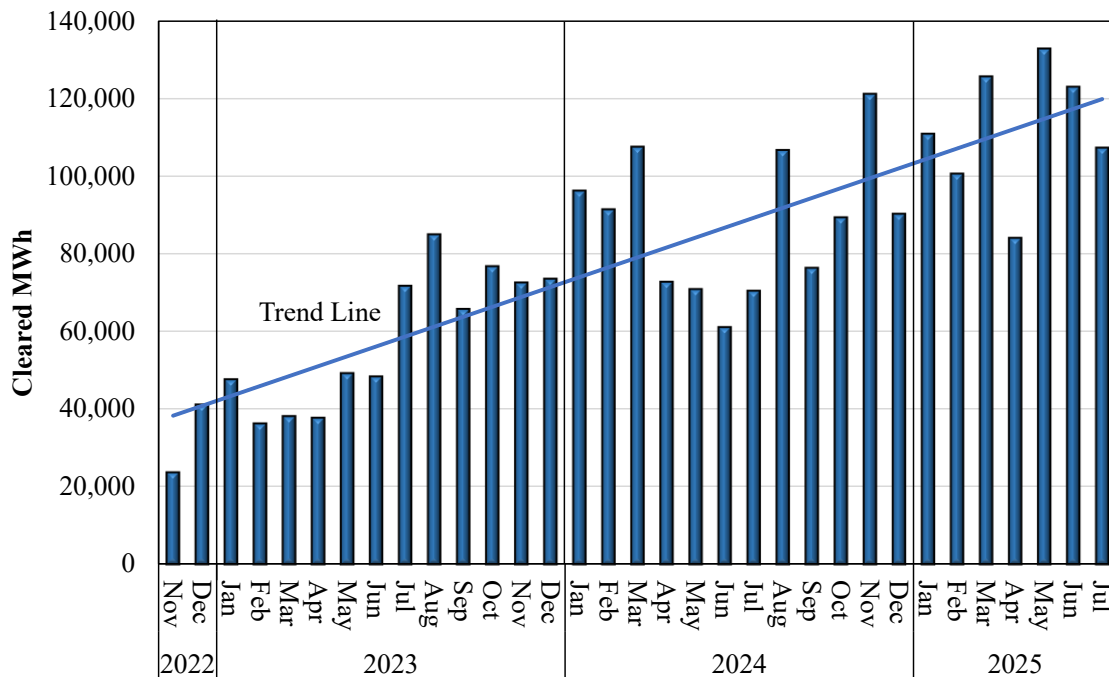
August 31, 2025

I. OVERVIEW

This is the July 2025 Auditor report on the Southeast Energy Exchange Market (SEEM). SEEM is an energy market that uses a centralized intra-hour energy exchange to create bilateral trades among its trading participants. 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 been operating since November 2022 and now has 24 members.

As discussed herein, trading volume in July was 106,000 MWh, below the volume in June of 122,000 MWh. The 12-month trailing average in July stands at 100,000 MWh, a rolling average that has been in a sustained upward trend. Figure 1 shows the cleared trades on a monthly historical basis. It shows a variable volume of cleared trades over time and with the estimated trend line indicating a strongly growing market.

Figure 1: Monthly Volume of Cleared Trades
November 2023 - July 2025



With an average bid-offer spread of \$10.80/MWh, the estimated production cost savings from SEEM transactions in July were \$1.1 million. Cumulative production cost savings since SEEM inception are approximately \$21 million. The growing trade volume is accompanied by relatively stable bid and offer volumes, indicating growing market efficiency.

Trading among SEEM members relies on individual transmission path segments connecting the members and trades July 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, six percent of the time availability was zero and 92 percent of the time a segment was available, and no cleared transaction utilized it. Overall, this indicates widely available transmission.

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 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 such inquiry in July.

In the remainder of the report (Section II), we provide the results of our analysis of the first main area of responsibility: to analyze 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 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 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 checked 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 July 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 so we 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. There were no changes in July 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 a relatively small number of changes to participant-specific constraints that closed and re-opened trade among a small number of counterparties in July. This level of change is not unusual.

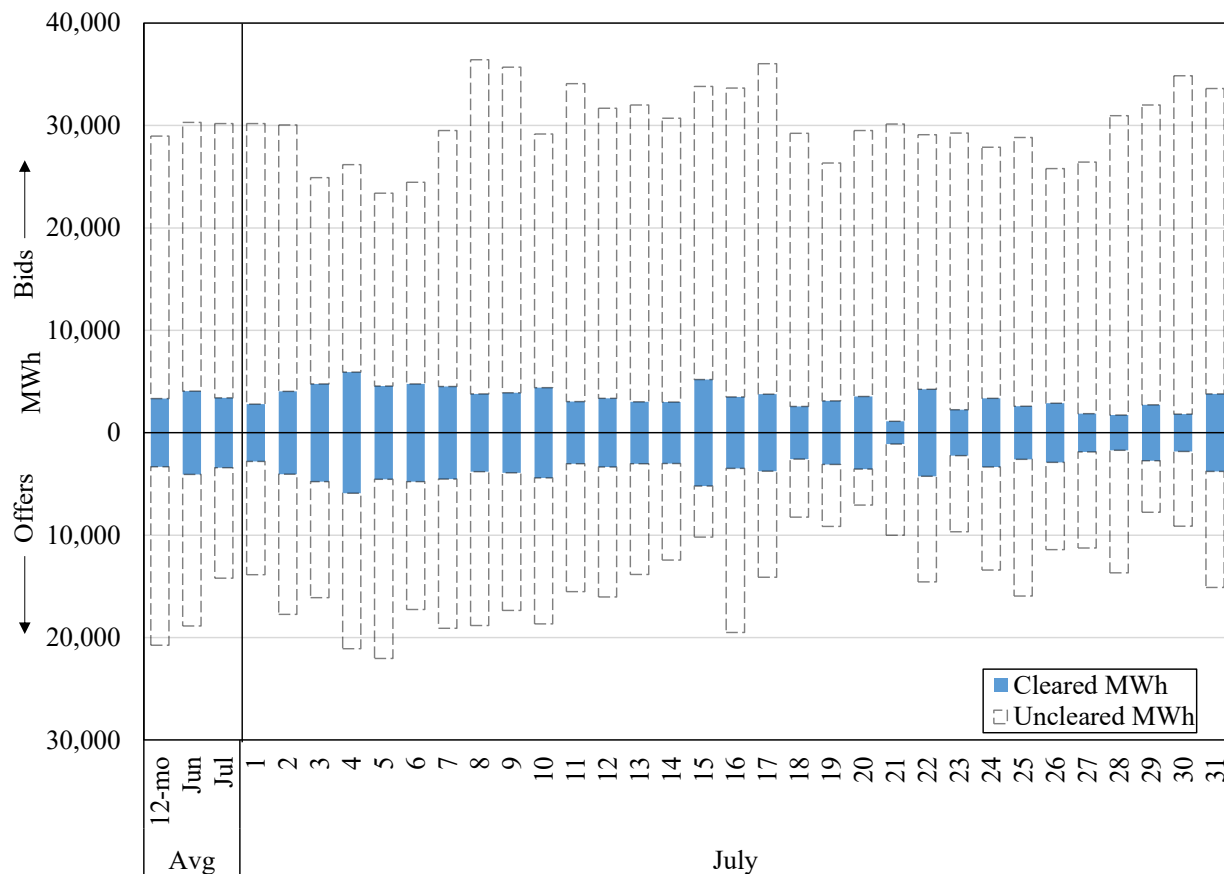
B. Market Activity

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 nearly 106,000 MWh of energy in July, which is above the trailing 12-month average of 100,000 MWh. The average clearing price in July was \$35/MWh. Figure 2 shows the daily SEEM bids and offers for July along with the daily average clearing price. 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 bars stacked above the bids and below the offers are the uncleared bids and offers.

Figure 2: Daily Bids and Offers and SEEM Clearing Price
July 2025



The left side columns show activity relative to the previous month and relative to the 12-month rolling average.

The individual days in Figure 2 show some variation in offers, bids, and cleared transactions across the month. In order to evaluate variations, we maintain an ongoing evaluation of key market drivers and outcomes that support our auditing. In particular, in addition to the bid, offer, and trading volumes, we evaluate clearing prices and regional demand proxy variables. By regional demand proxy, we mean temperature data that tends to strongly influence the overall demand for electricity. In particular, we use Degree Days (DD), which measures the need for heating and cooling, a major determinant of overall electricity demand.¹ This overall demand should be distinguished from SEEM demand. SEEM is a type of balancing market where participants have recourse to acquiring power to augment existing schedules or to sell excess. Demand in SEEM will depend on overall regional demand (DD), but also other operating horizon factors, particularly fixed forward schedules.

We make a statistical evaluation of these key parameters to infer market dynamics and outcomes. Table 1 shows statistical evaluation of these variables, with an explanation of these following the table.

¹ According to the US National Weather Service, “Degree days are the difference between the daily temperature mean, (high temperature plus low temperature divided by two) and 65°F. If the temperature mean is above 65°F, we subtract 65 from the mean and the result is *Cooling Degree Days*. If the temperature mean is below 65°F, we subtract the mean from 65 and the result is *Heating Degree Days*.” For the Figure, we use Degrees Days from

Table 1: Market Correlation Statistics
November 2023 - July 2025

		Correlation Coefficients	
		Degree Days	Price
1	Trade Volume	-0.016	0.008
	<i>p value</i>	0.693	0.834
2	Offer Volume	-0.391	-0.358
	<i>p value</i>	0.000	0.000
3	Bid Volume	0.262	0.224
	<i>p value</i>	0.000	0.000
4	Price	0.475	
	<i>p value</i>	0.000	

Note: Highlighted values are statistically significant at 95% confidence or higher.

The first entry in row 1 of the table shows the lack of statistical relationship between DD and Trade Volume over time. This is likely the result of a divergence of offer and bid response during extreme events, as we have noted in past reports when extreme weather had occurred. In particular, row 2 shows Offer Volume is negatively correlated with DD, while row 3 shows bid volume is responsive (positively correlated). In other words, suppliers pull back in periods of higher demand while buyers step up. These offsetting effects render the overall trade volume uncorrelated with DD.

The second entry in row 1 shows a statistically insignificant correlation between Trade Volume and (clearing) Price. To interpret these results, it is important to note that both Trade Volume and Price are equilibrium values, determined by intersection of supply (offers) and demand (bids). The absence of a statistical correlation indicates neither shifts in demand for SEEM energy nor shifts in supply to SEEM have primacy over the other.

The second entry in row 2 in the table shows a statistically significant *negative* correlation between supply offers and clearing price, something that is consistent with economic theory: an increase (decrease) in supply will lead to lower (higher) prices, thus a negative correlation. Similarly, in the second entry in Row 3 of the table, the statistically significant positive correlation between demand as measured by Bid Volume and price is expected from economic theory because higher (lower) demand would result in higher (lower) clearing prices.

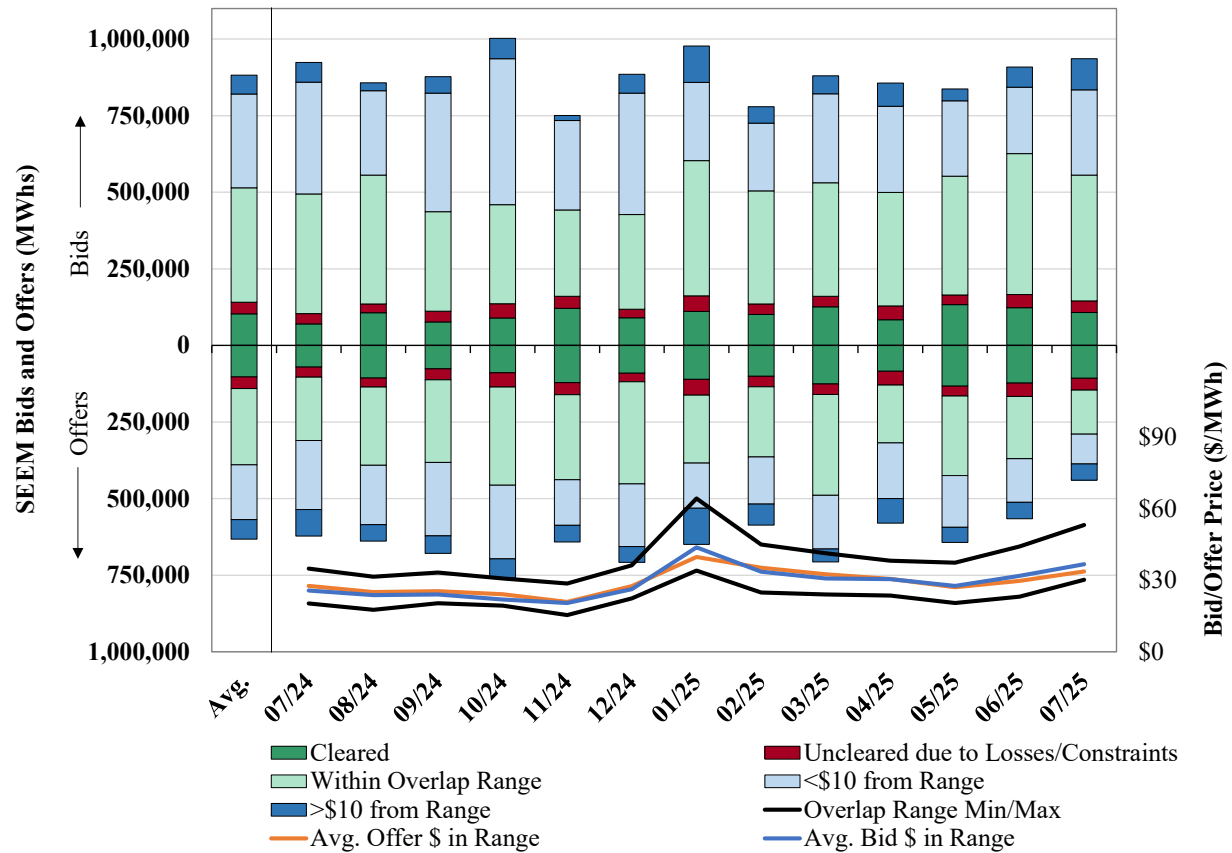
Finally, in Row 4 of the correlation matrix in the table shows a statistically significant positive correlation between price and DD, which would be expected from economics: high overall demand tends to result in higher prices.

Overall, the statistical relationships tend to support a well-functioning market, with most market variables behaving as expected in a competitive market.

Figure 3 shows our evaluation of market liquidity trends. 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 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.

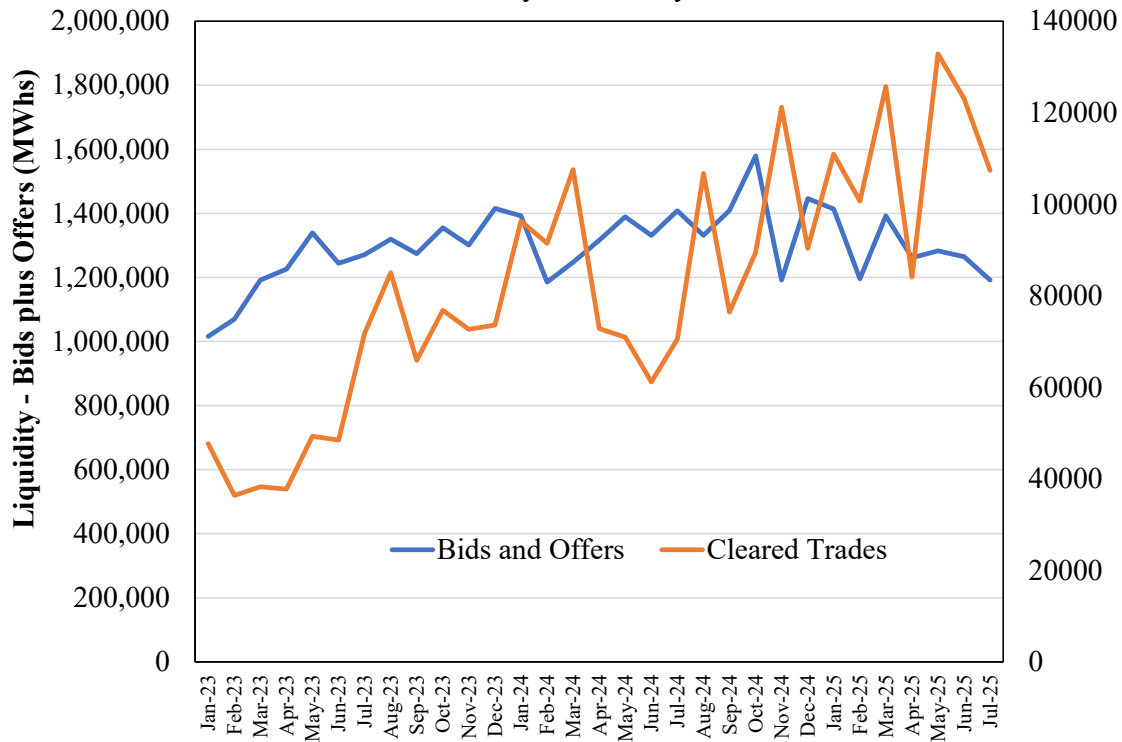
Figure 3: Bid and Offer Evaluation



In Figure 3, the total size of the stacked bars (both bids and offers) are an indication of market liquidity. In general, there tends to be more bids (varying just over 750,000 MWh) than offers (varying around 600,00 MWh).

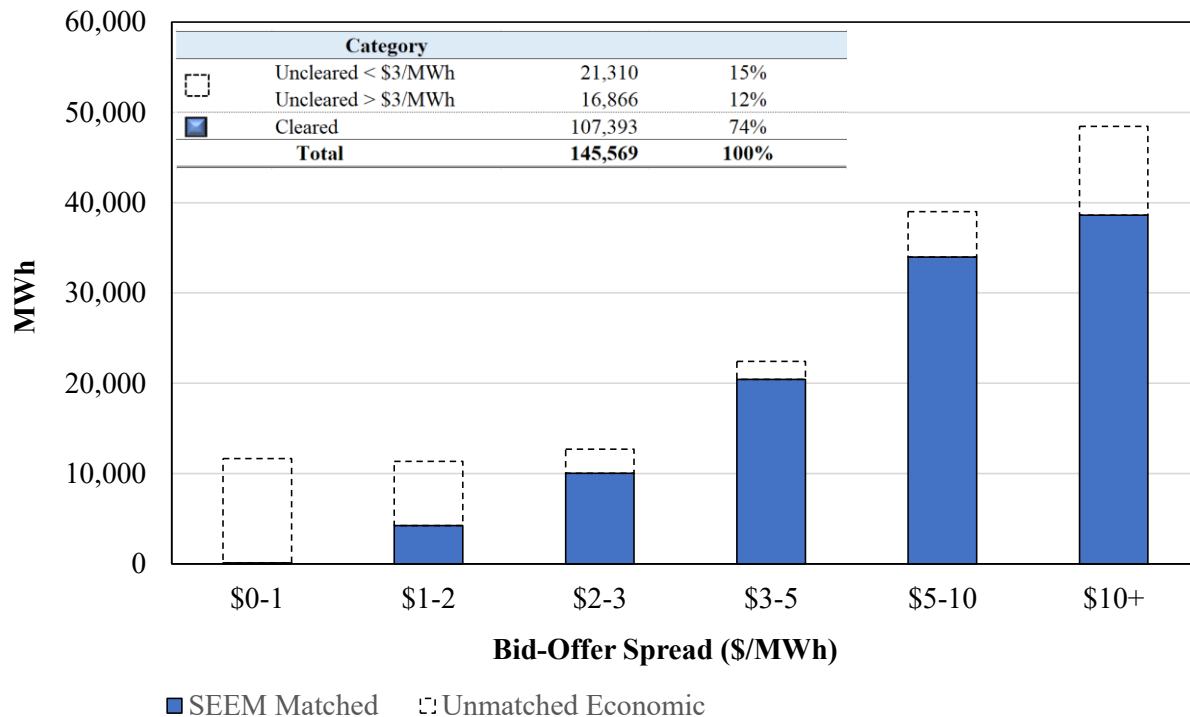
The bars in Figure 3 can be converted to total magnitude in order to create a rough measure of liquidity (bids plus offers). We then can compare this to cleared trades to assess market development. This is shown in Figure 4. The figure shows liquidity (bids and offers) is relatively steady, while cleared trades show a definite uptrend. This suggests intensified activity and is a positive indicator for market performance.

Figure 4: Liquidity v Cleared Trades
January 2023 - July 2025



Like in previous months, our evaluation of uncleared bids and offers 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 5 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 5: Cleared and Uncleared Economic Matches
July 2025



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 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. The inset table also shows that over the entire period 80 percent of the economic transactions cleared. The costs of transmission losses were likely the most significant factor that prevented transactions from clearing. This is because in each of the periods most of the uncleared economic transactions were those with spreads of less than \$3 per MWh.

Trades clearing in SEEM offer participants the ability to reduce output from higher-cost resources and replace it with lower-cost ones. In July, the bid-offer spread averaged \$10.80/MWh. With 106,000 MWh cleared, there is approximately \$1.1 million in production cost savings at least.² Figure 6 shows (the lower bound of) estimated production cost savings for each month since SEEM inception. The red line shows the cumulative savings, currently over \$21 million.

² There is likely more production cost saving than the data shown because the bids (offers) are likely to be slightly lower than the true cost of buyers (higher than the true cost to sellers) due to the split-the-savings nature of SEEM. In a split-the-savings auction like SEEM, participants will improve their payoff by slightly lowering bids and raising offers in an attempt to get a split closer to their counterparty's bid or offer.

Figure 6: Estimated Production Cost Savings

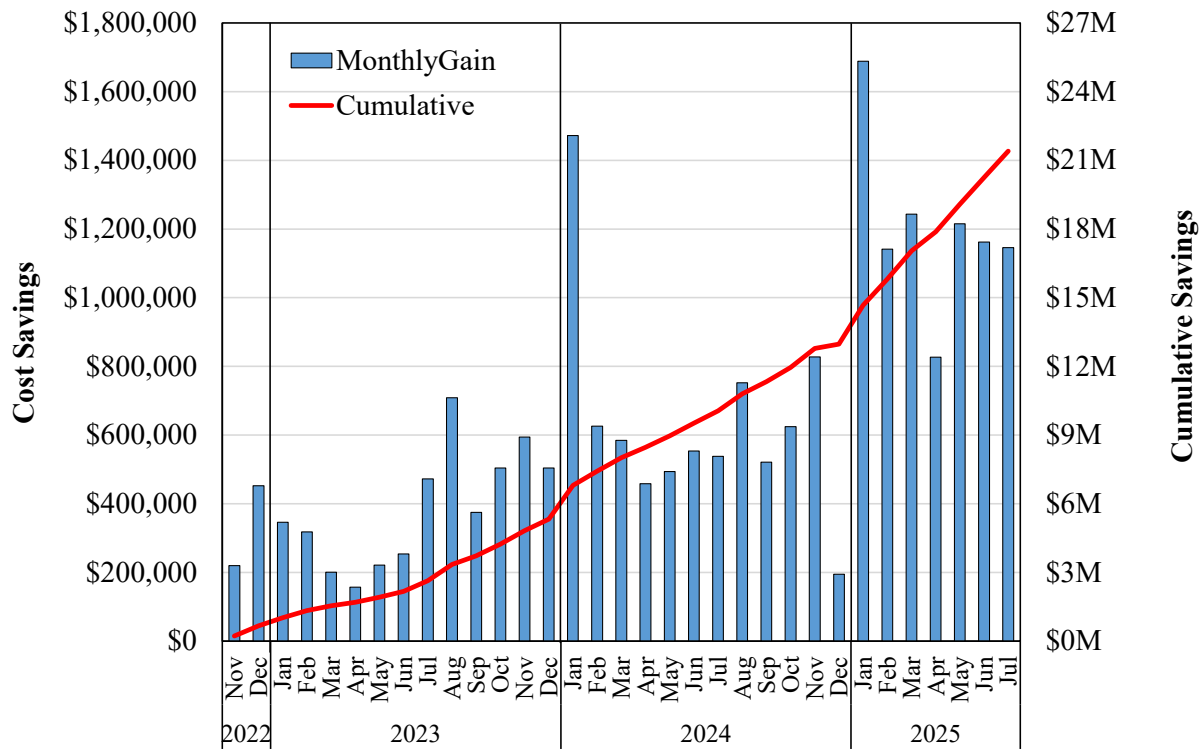
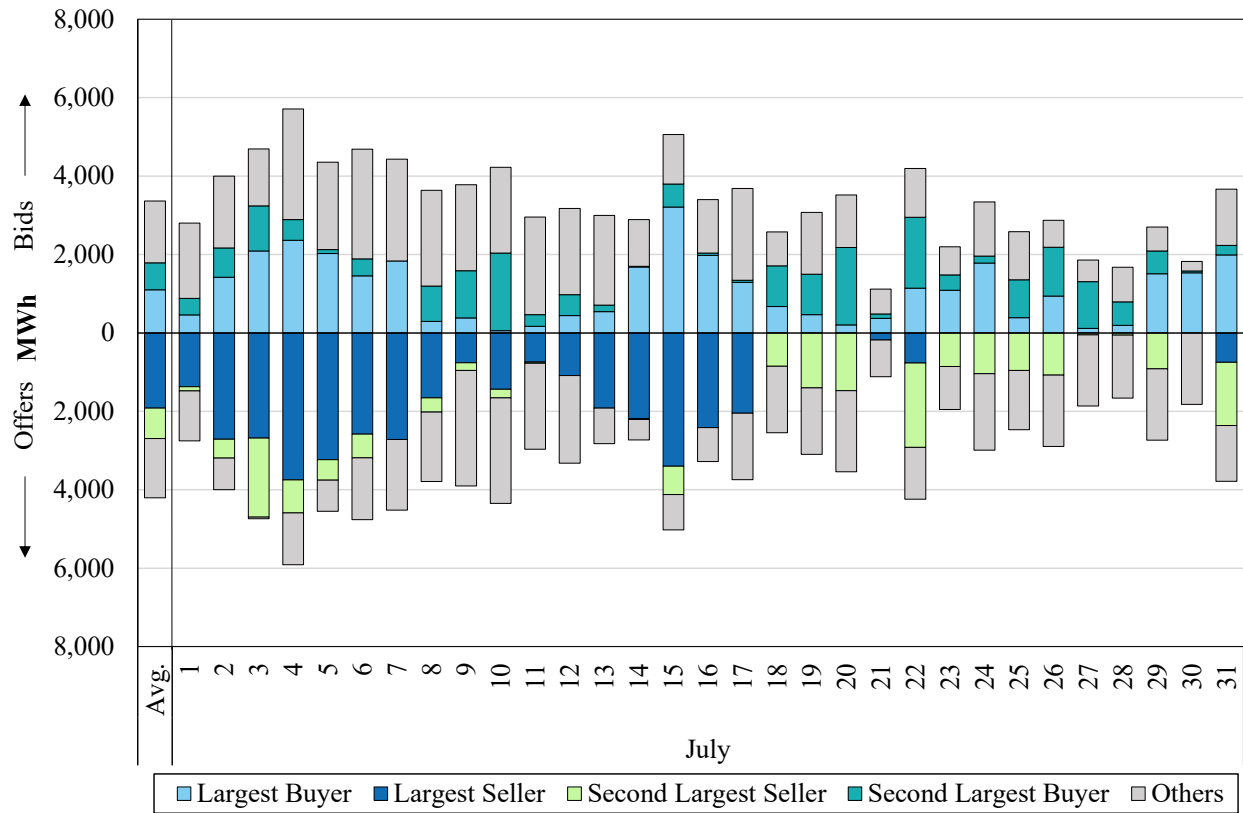


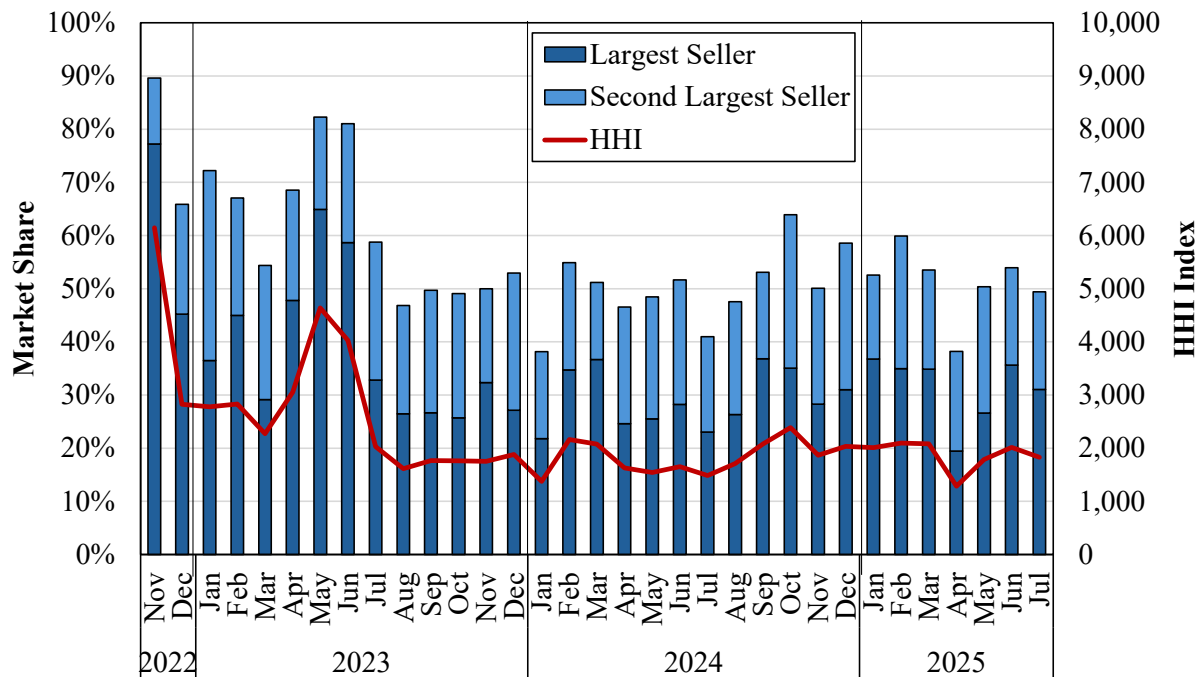
Figure 7 shows more detail on the matched bids and offers by showing the matches by the largest market participants. Like the prior figures, the bars above the x axis are cleared bids and the bars below are cleared offers. The bars in this figure are divided by the top two participants and then all the rest. The figure shows certain buyers and sellers comprise significant shares of the transaction activity. For the month, 38 percent of the sales were made by a single seller and 33 percent of the purchases were made by a single buyer.

Figure 7: Volumes of Matched Bids and Offers
July 2025



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 8 shows the monthly share of matched transactions 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 8: Seller Market Share and Concentration Statistics
November 2022 – July 2025

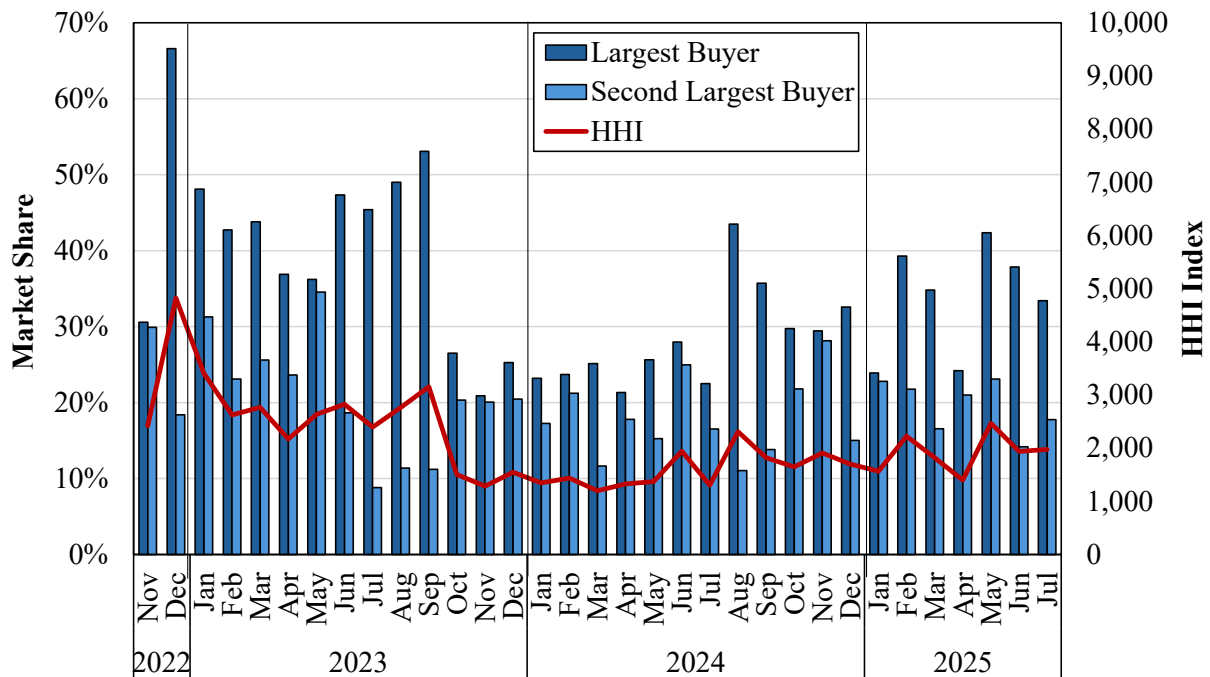


Not surprisingly, the share of the top seller, as well as the share of the top two, declined once the Florida participants fully joined in July 2023. The chart also shows that the HHI has declined. The HHI is a measure of market concentration and is used to determine market competitiveness, often on 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 $10,000 = 100 \times 100$. A perfectly competitive market where no firm has an appreciable market share, the HHI is close to zero. 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 been highly concentrated in most months. However, the HHI has come down over time and has remained close to 1800. Although this is close to the highly concentrated range, it has been falling. Figure 9 shows the buyer concentration.

Figure 9: Buyer Market Share and Concentration Statistics
November 2022 – July 2025

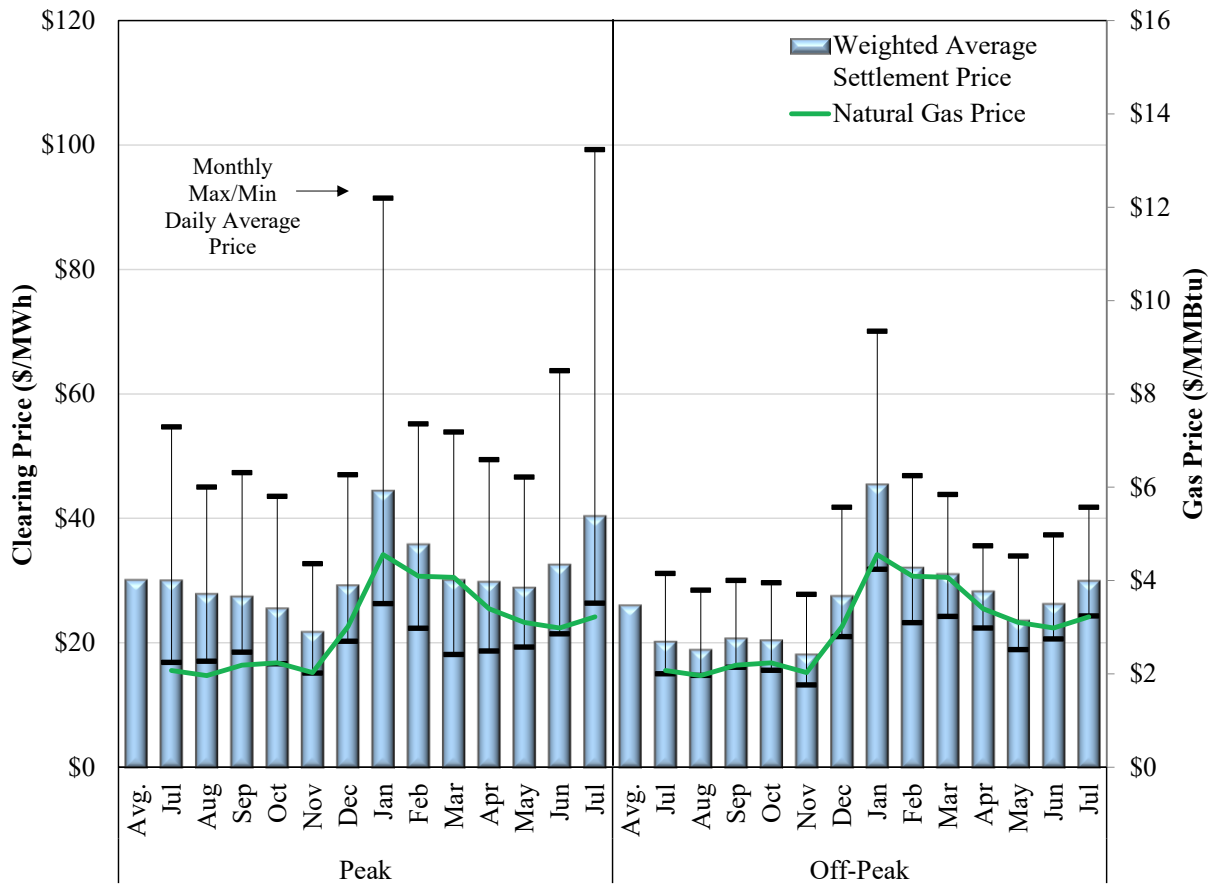


Buyer concentration has declined as membership has increased. These declines, together with the uptrend in matched trades, are indicative of a market evolving to greater liquidity and competitiveness.

2. Network Usage

In this subsection, we report on the usage of the SEEM network. Figure 10 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.

Figure 10: Monthly Clearing Prices and Natural Gas Costs



The figure shows that both peak and off-peak prices increased in July relative to June and were higher than the 12-month average, consistent with higher natural gas prices. The whisker bars for each month show 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. In July, there were 296 segments used -- 250 segments for which an ATC value was posted and 46 segments for which no ATC is posted (these are segments that were available on an unlimited basis.³) There were 63 segments in SEEM not used. We calculate total segment (MWh) usage for the 296 segments that were used during the month. For segments with ATC values, we

³ It is not unusual for transmission paths to have no ATC value posted, and not just for the SEEM transmission service (NFEETS), but also longer-term service.

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:

- (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;⁴
- (3) Unavailable, no ATC;⁵ 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 2 shows an excerpt of our statistics. The table displays the top 30 segments by volume for the month. The full data for all segments is provided in Appendix A. When ATC is listed as “None” this means there was no ATC posted.

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

⁵ ATC was less than 4 MW at the start of the interval.

Table 2: Statistics for Most Utilized SEEM Segments
July 2025

Segment	ATC			MWs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
F/FPC/FPC-SOCO//	0	323	422	33,336	15.22%	864	29%	113	4%	112	4%	1887	63%
SS/SOCO/FL-SOCO//	0	632	1,369	21,601	4.57%	882	30%	72	2%	42	1%	1980	67%
SS/SOCO/TVA-SOCO//	772	1,090	1,252	12,349	1.57%	463	16%	0	0%	0	0%	2513	84%
S/SC/SOCO-SC//	0	1,102	2,507	11,773	1.49%	642	22%	2	0%	185	6%	2147	72%
F/TEC/TEC-FPC//	0	2,228	3,884	11,528	0.76%	784	26%	0	0%	16	1%	2176	73%
S/DUK/TVA-DUK//	0	692	692	11,303	3.07%	327	11%	13	0%	631	21%	2005	67%
S/TVA/TVA-DUK//	0	357	357	9,831	4.04%	249	8%	11	0%	33	1%	2683	90%
F/FPC/TEC-SOCO//	0	323	422	9,768	4.35%	697	23%	0	0%	56	2%	2223	75%
SS/SOCO/SOCO-DUK//	-123	419	942	8,716	2.94%	292	10%	12	0%	56	2%	2616	88%
S/TVA/TVA-SOCO//	4,373	4,860	5,000	8,588	0.24%	246	8%	0	0%	0	0%	2730	92%
S/DUK/SOCO-DUK//	0	1,519	2,220	8,428	0.93%	391	13%	1	0%	656	22%	1928	65%
S/AECI/AECI-TVA//	0	126	544	7,942	7.36%	543	18%	17	1%	432	15%	1984	67%
SS/SOCO/SOCO-SOCO//	45,932	46,312	46,312	7,851	0.02%	416	14%	0	0%	0	0%	2560	86%
SS/GTC/FPC-GTC//	0	360	861	6,272	2.36%	351	12%	38	1%	20	1%	2567	86%
SS/GTC/SOCO-GTC//	12,163	13,397	14,341	6,193	0.06%	309	10%	0	0%	0	0%	2667	90%
SS/SOCO/FL-SC/MULTIPATHALIAS/	-172	88	366	6,037	7.52%	302	10%	110	4%	790	27%	1774	60%
S/SC/DUK-SC//	0	1,640	2,237	5,040	0.45%	374	13%	0	0%	38	1%	2564	86%
F/FPC/FPC-SEC/FPC-SSN/	0	1,457	1,922	4,716	0.49%	508	17%	11	0%	40	1%	2417	81%
S/TVA/AECI-SOCO//	0	51	396	4,037	9.50%	263	9%	118	4%	1,034	35%	1561	52%
F/SEC/FPC-JEA//	0	637	637	3,788	0.91%	365	12%	7	0%	100	3%	2504	84%
P/LGEE/LGEE-TVA//	0	1,623	1,623	3,640	0.37%	160	5%	0	0%	184	6%	2632	88%
S/DUK/SOCO-SC//	0	1,130	2,220	3,476	0.43%	248	8%	0	0%	81	3%	2647	89%
S/MEAG/FPC-SC//	None	None	None	3,128	0.00%	413	14%	0	0%	0	0%	2563	86%
SS/SOCO/FL-DUK/MULTIPATHALIAS/	-123	386	785	2,915	1.09%	378	13%	6	0%	98	3%	2494	84%
S/CPL/DUK-CPLE//	190	2,939	6,086	2,664	0.12%	349	12%	0	0%	0	0%	2627	88%
S/TVA/AECI-DUK//	0	51	357	2,618	6.38%	164	6%	79	3%	1,055	35%	1678	56%
S/TVA/LGEE-SOCO//	256	2,648	2,648	2,579	0.13%	135	5%	0	0%	0	0%	2841	95%
F/JEA/JEA-SOCO//	459	969	1,209	2,396	0.35%	513	17%	0	0%	0	0%	2463	83%
F/SEC/FPC-SEC/FPC-SSN/	0	1,457	1,872	2,237	0.24%	447	15%	7	0%	40	1%	2482	83%
F/JEA/SEC-JEA/SSN-JEA/	54	487	487	2,091	0.59%	293	10%	0	0%	0	0%	2683	90%

The “Uncleared” category indicates that among these most utilized segments, many of them have over 80 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).

Table 3 show the summary usage for all segments. During the month, total segment intervals are the product of all 359 segments and the number of intervals during the month. In July, there were 1,068,384 segment intervals.⁶ The two circumstances (Cases (2) and (3)) when a segment is constrained occurred in more than 71,000 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 91 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 (7 percent of the time). The third most common case was “Partially Used” (Case 1), where the segment was partially used (1.8 percent of the

⁶ The maximum number of segment intervals in a month is (359 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 July, SEEM operated in all intervals.

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 (1,013 intervals).

Table 3: Summary of All Segments
July 2025

Segment	Case 1 Partially Used		Case 2 Fully Used		Case 3 Unavailable		Case 4 Uncleared	
	Intervals	%	Intervals	%	Intervals	%	Intervals	%
All Segments	19,230	1.8%	872	0.1%	70,970	6.6%	977,312	91.5%

Measuring transmission capacity congestion by adding Case 2 and 3, the percentage of constrained segment intervals was 5 percent in July (versus 6 percent in June). 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 likely the main factor in preventing economic trades from being consummated than transmission constraints.

Further insight into constrained segments can be gained from Table 4. It shows the 20 segments least often available to SEEM. All segments shown reported ATC of 0 in one or more intervals during the month (ATC Min=0). In some intervals there were 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.

Table 4: Most Constrained SEEM Segments
July 2025

Segment	ATC			MWs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/DUK/CPLW-SCEG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/CPLW-SCEG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/DUK-SCEG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/SC-SCEG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/SOCO-SCEG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/TVA-SCEG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
SS/SOCO/FL-SCEG/MULTIPATHALIAS/	0	2	75	870	5.08%	71	2%	66	2%	1,564	53%	1275	43%
SS/SOCO/DUK-SCEG/MULTIPATHALIAS/	0	2	75	0	0.00%	0	0%	0	0%	1,549	52%	1427	48%
SS/SOCO/SC-SCEG/MULTIPATHALIAS/	0	2	75	0	0.00%	0	0%	0	0%	1,549	52%	1427	48%
SS/SOCO/SOCO-SCEG//	0	2	75	87	0.50%	3	0%	7	0%	1,549	52%	1417	48%
SS/SOCO/TVA-SCEG/MULTIPATHALIAS/	0	2	75	11	0.06%	1	0%	3	0%	1,549	52%	1423	48%
S/TVA/AECI-CPLW//	0	1	276	356	1.24%	48	2%	6	0%	1,508	51%	1414	48%
S/CPL/CPLW-TVA//	0	202	276	0	0.00%	0	0%	0	0%	1,259	42%	1717	58%
S/MEAG/MEAG-DUK//	0	18	126	96	0.34%	10	0%	3	0%	1,164	39%	1799	60%
S/TVA/AECI-LGEE//	0	51	396	0	0.00%	0	0%	0	0%	1,072	36%	1904	64%
S/TVA/AECI-DUK//	0	51	357	2,618	6.38%	164	6%	79	3%	1,055	35%	1678	56%
S/TVA/AECI-SOCO//	0	51	396	4,037	9.50%	263	9%	118	4%	1,034	35%	1561	52%
S/TVA/AECI-TVA//	0	51	396	931	2.19%	24	1%	7	0%	1,029	35%	1916	64%
S/TVA/CPLW-DUK//	0	276	276	0	0.00%	0	0%	0	0%	917	31%	2059	69%
S/TVA/DUK-CPLW//	0	264	276	0	0.00%	0	0%	0	0%	917	31%	2059	69%

III. EXPANSION OF SEEM

Our auditing of the SEEM operations and the economic benefits that SEEM has created over time, has led us to recommend potential expansion of the SEEM platform to other trading horizons, e.g., hourly, intra-day, and day-ahead. In this section, we provide some preliminary data to help assess this potential. We have undertaken this on our own initiative to provide only a very cursory consideration of this potential. Expanding SEEM beyond the current 15-minute horizon has not been formally considered or endorsed by stakeholders or the SEEM board.

Our analysis is straightforward: we compare the volume of trades in SEEM to the volume of trades in the hourly bilateral market. This comparison is conducted on a path basis, comparing the volume on a SEEM path to the corresponding volume of hourly bilateral trades. We have all trade volumes for SEEM. For bilateral hourly trade volumes, we use transmission reservation (TSR) data from the Open Access Sametime Information System (OASIS). We use hourly point-to-point transmission service requests data as a proxy for the bilateral trades. Point-to-point TSRs are defined only on paths between adjacent transmission systems. This means the TSR data for hourly bilateral trades is only available on paths with one segment. These are paths connecting adjacent systems and we use this as a proxy for bilateral trades between the two systems. It is possible for participants in the hourly bilateral market to string together multiple transmission reservations to create longer paths across multiple systems. However, given the transmission cost that exceeds \$10/MWh, we conclude this would be a rare use of the point-to-point reservations.

Accordingly, our comparison between SEEM volume and hourly bilateral volume is confined to one-segment paths. For July, approximately 56 percent of all transaction volume in SEEM was on one-segment paths, and most of this volume (97 percent) was on the top 20 one-segment paths. In Table 5, we show the top 20 one-segment paths in SEEM for July. The table shows the SEEM volume compared to the hourly approved (point-to-point) transmission reservations on the same path for OASIS. As the table shows, July SEEM volume on these paths was over 54,000 MWh. The hourly OASIS volume was about 16,000 MWh.

**Table 5: SEEM and OASIS Volume on Highest Volume One-Segment Paths
July 2025**

Path	SEEM Volume	OASIS Hourly Reservations
1	12,190	1,440
2	9,547	
3	8,365	210
4	6,547	8,876
5	5,762	
6	5,706	
7	1,665	
8	1,286	4,859
9	994	901
10	950	
11	915	
12	906	
13	701	
14	561	
15	486	
16	449	
17	442	
18	369	
19	319	
20	263	
Total	58,423	16,286

The data shows a higher volume in SEEM than in the hourly bilateral market, indicating most economy energy in July was traded in SEEM (on the top SEEM paths). July was different than the previous three months, when OASIS volume was substantially higher. For April through June, OASIS reservation volume on the top 20 SEEM paths averaged 100,000 MWh, compared to 16,000 MWh in July.

Table 6 below shows a volume comparison for April - July. The table shows a higher total and average OASIS volume on these paths for the four months compared to the SEEM volume. July SEEM volume was above average, but the July OASIS volume was substantially lower than the other months. This was the result of large OASIS volumes on individual paths in the previous months.

Table 6: Path Volume Monthly Comparison

Top 20 SEEM Paths (MWh)		
Month	SEEM Volume	OASIS Hourly Reservations
April	33,329	109,217
May	68,120	125,779
June	59,215	64,920
July	58,423	16,286
Total	219,086	316,202
Average	54,772	79,051

The data suggests that, at least for the one-segment paths that facilitate trade between adjacent systems, SEEM is being used by traders for economy energy to a substantial degree, and that an expanded SEEM that allows low-cost transmission paths on an hourly basis is likely to increase regional trading volume and provide increased production cost benefits for hourly activity.

However, comparing only one-segment paths leaves a gap in the analysis. SEEM has a unique advantage over the hourly market in that multiple charges for a SEEM transaction are confined to transmission losses across the systems (averaging about \$2/MWh per system). In July, about 45 percent of the cleared SEEM trades were between non-adjacent participants (multiple segments). For the hourly bilateral market, in contrast, participants face accumulating transmission charges that are much higher (over \$10/MWh per system).

The data above provides some insight into the potential for SEEM to expand. However, Using OASIS hourly TSR data will not be sufficient to evaluate the question. Accordingly, we will need further analysis and will continue to evaluate available data and other information to develop a more complete assessment of SEEM expansion.

IV. CONCLUSION

We reviewed the operation of SEEM for July 2025. 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 -- July 2025

Segment	ATC			MWs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
Segment	Min	Median	Max	MWWhs	Loading Factor	Partially Used	Fully Used	Unavailable	Uncleared				
F/FPC/FPC-SOCO//	0	323	422	33,336	15.22%	864	29%	113	4%	112	4%	1887	63%
SS/SOCO/FL-SOCO//	0	632	1,369	21,601	4.57%	882	30%	72	2%	42	1%	1980	67%
SS/SOCO/TVA-SOCO//	772	1,090	1,252	12,349	1.57%	463	16%	0	0%	0	0%	2513	84%
S/SC/SOCO-SC//	0	1,102	2,507	11,773	1.49%	642	22%	2	0%	185	6%	2147	72%
F/TEC/TEC-FPC//	0	2,228	3,884	11,528	0.76%	784	26%	0	0%	16	1%	2176	73%
S/DUK/TVA-DUK//	0	692	692	11,303	3.07%	327	11%	13	0%	631	21%	2005	67%
S/TVA/TVA-DUK//	0	357	357	9,831	4.04%	249	8%	11	0%	33	1%	2683	90%
F/FPC/TEC-SOCO//	0	323	422	9,768	4.35%	697	23%	0	0%	56	2%	2223	75%
SS/SOCO/SOCO-DUK//	-123	419	942	8,716	2.94%	292	10%	12	0%	56	2%	2616	88%
S/TVA/TVA-SOCO//	4,373	4,860	5,000	8,588	0.24%	246	8%	0	0%	0	0%	2730	92%
S/DUK/SOCO-DUK//	0	1,519	2,220	8,428	0.93%	391	13%	1	0%	656	22%	1928	65%
S/AECI/AECI-TVA//	0	126	544	7,942	7.36%	543	18%	17	1%	432	15%	1984	67%
SS/SOCO/SOCO-SOCO//	45,932	46,312	46,312	7,851	0.02%	416	14%	0	0%	0	0%	2560	86%
SS/GTC/FPC-GTC//	0	360	861	6,272	2.36%	351	12%	38	1%	20	1%	2567	86%
SS/GTC/SOCO-GTC//	12,163	13,397	14,341	6,193	0.06%	309	10%	0	0%	0	0%	2667	90%
SS/SOCO/FL-SC/MULTIPATHALIAS/	-172	88	366	6,037	7.52%	302	10%	110	4%	790	27%	1774	60%
S/SC/DUK-SC//	0	1,640	2,237	5,040	0.45%	374	13%	0	0%	38	1%	2564	86%
F/FPC/FPC-SEC/FPC-SSN/	0	1,457	1,922	4,716	0.49%	508	17%	11	0%	40	1%	2417	81%
S/TVA/AECI-SOCO//	0	51	396	4,037	9.50%	263	9%	118	4%	1,034	35%	1561	52%
F/SEC/FPC-JEA//	0	637	637	3,788	0.91%	365	12%	7	0%	100	3%	2504	84%
P/LGEE/LGEE-TVA//	0	1,623	1,623	3,640	0.37%	160	5%	0	0%	184	6%	2632	88%
S/DUK/SOCO-SC//	0	1,130	2,220	3,476	0.43%	248	8%	0	0%	81	3%	2647	89%
S/MEAG/FPC-SC//	None	None	None	3,128	0.00%	413	14%	0	0%	0	0%	2563	86%
SS/SOCO/FL-DUK/MULTIPATHALIAS/	-123	386	785	2,915	1.09%	378	13%	6	0%	98	3%	2494	84%
S/CPL/DUK-CPLE//	190	2,939	6,086	2,664	0.12%	349	12%	0	0%	0	0%	2627	88%
S/TVA/AECI-DUK//	0	51	357	2,618	6.38%	164	6%	79	3%	1,055	35%	1678	56%
S/TVA/LGEE-SOCO//	256	2,648	2,648	2,579	0.13%	135	5%	0	0%	0	0%	2841	95%
F/JEA/JEA-SOCO//	459	969	1,209	2,396	0.35%	513	17%	0	0%	0	0%	2463	83%
F/SEC/FPC-SEC/FPC-SSN/	0	1,457	1,872	2,237	0.24%	447	15%	7	0%	40	1%	2482	83%
F/JEA/SEC-JEA/SSN-JEA/	54	487	487	2,091	0.59%	293	10%	0	0%	0	0%	2683	90%
S/SCSG/SOCO-SCSG//	0	786	2,315	1,937	0.33%	251	8%	1	0%	261	9%	2463	83%
S/DUK/SOCO-CPLE//	0	1,497	2,220	1,932	0.21%	289	10%	0	0%	662	22%	2025	68%
F/JEA/SEC-SOCO/SSN-SOCO/	385	637	637	1,863	0.41%	119	4%	0	0%	0	0%	2857	96%
F/SEC/SEC-FPC/SSN-FPC/	0	662	1,360	1,723	0.32%	336	11%	0	0%	4	0%	2636	89%
SS/SOCO/SOCO-SC//	-172	89	366	1,525	1.88%	76	3%	49	2%	757	25%	2094	70%
F/FPC/SEC-SOCO/SSN-SOCO/	89	325	422	1,479	0.64%	285	10%	0	0%	0	0%	2691	90%
SS/GTC/TVA-GTC//	0	206	249	1,465	1.06%	123	4%	1	0%	28	1%	2824	95%
S/DUK/TVA-SC//	0	692	692	1,445	0.34%	130	4%	2	0%	126	4%	2718	91%
S/TVA/SOCO-TVA//	0	3,374	4,899	1,277	0.05%	77	3%	0	0%	4	0%	2895	97%
S/MEAG/FPC-DUK//	None	None	None	1,230	0.00%	177	6%	0	0%	0	0%	2799	94%
F/TEC/FPC-TEC//	0	829	2,907	1,050	0.16%	91	3%	3	0%	396	13%	2486	84%
S/MEAG/SOCO-MEAG//	2,617	3,095	3,170	999	0.04%	90	3%	0	0%	0	0%	2886	97%
F/FPC/TEC-FPC//	0	2,270	3,929	994	0.06%	176	6%	0	0%	12	0%	2788	94%
SS/GTC/FPC-SCSG//	None	None	None	937	0.00%	155	5%	0	0%	0	0%	2821	95%
SS/SOCO/SOCO-FL//	-51	423	1,093	937	0.30%	124	4%	7	0%	42	1%	2803	94%
SS/GTC/JEA-GTC//	0	360	861	935	0.35%	192	6%	1	0%	20	1%	2763	93%
S/TVA/AECI-TVA//	0	51	396	931	2.19%	24	1%	7	0%	1,029	35%	1916	64%
F/FPC/FPC-TEC//	0	1,179	3,116	927	0.10%	82	3%	0	0%	156	5%	2738	92%
F/JEA/SOCO-JEA//	0	685	1,111	883	0.17%	124	4%	0	0%	20	1%	2832	95%
SS/SOCO/FL-SCSG/MULTIPATHALIAS/	-16	2	75	870	5.08%	71	2%	66	2%	1,564	53%	1275	43%
SS/GTC/DUK-GTC//	0	340	546	868	0.35%	65	2%	0	0%	4	0%	2907	98%
S/CPL/CPL-DUK//	0	3,408	7,038	857	0.03%	30	1%	0	0%	13	0%	2933	99%
S/DUK/CPL-SOCO//	0	2,161	2,335	855	0.06%	30	1%	0	0%	12	0%	2934	99%
S/CPL/TVA-DUK//	0	264	276	841	0.60%	80	3%	0	0%	892	30%	2004	67%
SS/SOCO/FL-TVA/MULTIPATHALIAS/	-3	545	1,369	808	0.20%	45	2%	7	0%	63	2%	2861	96%
F/FPC/TEC-SEC/TEC-SSN/	0	1,359	1,922	766	0.08%	110	4%	0	0%	60	2%	2806	94%
SS/GTC/FPC-SOCO//	None	None	None	742	0.00%	69	2%	0	0%	0	0%	2907	98%
SS/GTC/FPC-SC//	None	None	None	729	0.00%	114	4%	0	0%	0	0%	2862	96%
SS/SOCO/SOCO-TVA//	-3	1,419	3,065	717	0.07%	23	1%	0	0%	28	1%	2925	98%
S/DUK/DUK-SOCO//	0	1,438	2,335	694	0.07%	114	4%	0	0%	152	5%	2710	91%

Appendix A (continued)

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/MEAG/SOCO-SC//	None	None	None	652	0.00%	111	4%	0	0%	0	0%	2865	96%
S/DUK/TVA-CPLE//	0	692	692	632	0.17%	92	3%	1	0%	640	22%	2243	75%
S/CPL/SC-CPLE//	0	2,038	3,255	620	0.04%	112	4%	0	0%	81	3%	2783	94%
S/DUK/CPLW-CPLE//	0	291	959	615	0.28%	66	2%	4	0%	708	24%	2198	74%
S/MEAG/FPC-MEAG//	0	38	189	615	1.65%	50	2%	48	2%	452	15%	2426	82%
S/TVA/SOCO-DUK//	0	357	357	570	0.23%	13	0%	0	0%	29	1%	2934	99%
S/TVA/LGEE-TVA//	206	2,648	2,648	561	0.03%	17	1%	0	0%	0	0%	2959	99%
S/SCSG/CPL-SCSG//	0	717	1,929	554	0.10%	79	3%	0	0%	189	6%	2708	91%
S/CPL/DUK-SCSG//	137	365	365	550	0.20%	78	3%	0	0%	0	0%	2898	97%
SS/SOCO/DUK-SOCO//	27	550	868	549	0.14%	55	2%	0	0%	0	0%	2921	98%
SS/GTC/FPC-DUK//	None	None	None	538	0.00%	82	3%	0	0%	0	0%	2894	97%
S/SCSG/SOCO-CPLE//	0	2,784	8,999	537	0.02%	125	4%	0	0%	89	3%	2762	93%
S/CPL/SCSG-CPLE//	0	623	623	536	0.12%	124	4%	0	0%	81	3%	2771	93%
F/FPC/SEC-FPC/SSN-FPC/	0	502	1,187	533	0.13%	120	4%	3	0%	48	2%	2805	94%
S/SC/SOCO-CPLE//	0	2,173	2,663	484	0.03%	90	3%	0	0%	13	0%	2873	97%
F/SEC/TEC-FPC//	0	533	729	478	0.12%	77	3%	0	0%	12	0%	2887	97%
F/TEC/TEC-SEC/TEC-SSO/	0	416	729	478	0.15%	77	3%	0	0%	48	2%	2851	96%
S/MEAG/MEAG-SOCO//	2,526	2,601	2,901	467	0.02%	13	0%	0	0%	0	0%	2963	100%
S/SCSG/SC-SCSG//	74	3,223	3,994	447	0.02%	69	2%	0	0%	0	0%	2907	98%
F/FPC/SEC-SEC/SSO-SSN/	164	657	1,042	437	0.09%	77	3%	0	0%	0	0%	2899	97%
F/FPC/SOCO-FPC//	0	336	611	410	0.18%	68	2%	5	0%	476	16%	2427	82%
S/DUK/DUK-SC//	0	784	2,234	369	0.06%	89	3%	0	0%	113	4%	2774	93%
S/TVA/LGEE-DUK//	0	357	357	361	0.15%	44	1%	0	0%	29	1%	2903	98%
S/TVA/AECI-CPLW//	0	1	276	356	1.24%	48	2%	6	0%	1,508	51%	1414	48%
S/SC/SOCO-SCSG//	0	1,213	2,531	314	0.04%	61	2%	1	0%	81	3%	2833	95%
S/MEAG/FPC-SCSG//	None	None	None	312	0.00%	179	6%	0	0%	0	0%	2797	94%
S/TVA/TVA-CPLW//	0	276	276	312	0.22%	13	0%	0	0%	892	30%	2071	70%
F/SEC/JEA-FPC//	313	637	637	309	0.07%	76	3%	0	0%	0	0%	2900	97%
SS/SOCO/TVA-FL/MULTIPATHALIAS/	-51	423	1,093	277	0.09%	37	1%	2	0%	42	1%	2895	97%
S/MEAG/FPC-SOCO//	None	None	None	272	0.00%	64	2%	0	0%	0	0%	2912	98%
S/MEAG/FPC-TVA//	None	None	None	235	0.00%	22	1%	0	0%	0	0%	2954	99%
SS/GTC/MEAG-GTC//	8,699	8,921	9,343	232	0.00%	31	1%	0	0%	0	0%	2945	99%
S/MEAG/TVA-SC//	None	None	None	231	0.00%	59	2%	0	0%	0	0%	2917	98%
SS/GTC/TVA-SCSG//	None	None	None	211	0.00%	49	2%	0	0%	0	0%	2927	98%
S/MEAG/TVA-FPC//	None	None	None	207	0.00%	32	1%	0	0%	0	0%	2944	99%
S/DUK/CPLW-DUK//	0	278	927	203	0.10%	12	0%	0	0%	810	27%	2154	72%
F/JEA/JEA-SEC/JEA-SSN/	410	518	518	189	0.05%	50	2%	0	0%	0	0%	2926	98%
F/SEC/SEC-JEA-SSN-JEA/	420	637	637	166	0.04%	37	1%	0	0%	0	0%	2939	99%
S/MEAG/MEAG-GTC//	2,521	2,816	3,102	157	0.01%	12	0%	0	0%	0	0%	2964	100%
F/JEA/SOCO-SEC/SOCO-SSN/	256	502	502	156	0.04%	38	1%	0	0%	0	0%	2938	99%
S/SC/DUK-CPLE//	3,016	3,616	4,316	140	0.01%	31	1%	0	0%	0	0%	2945	99%
S/TVA/LGEE-CPLW//	0	276	276	139	0.10%	14	0%	0	0%	888	30%	2074	70%
S/SC/DUK-SCSG//	1,987	3,314	4,039	133	0.01%	14	0%	0	0%	0	0%	2962	100%
F/FPC/SEC-SOCO/SSO-SOCO/	89	300	422	131	0.06%	19	1%	0	0%	0	0%	2957	99%
SS/GTC/FPC-MEAG//	None	None	None	112	0.00%	20	1%	0	0%	0	0%	2956	99%
SS/GTC/TVA-DUK//	None	None	None	107	0.00%	7	0%	0	0%	0	0%	2969	100%
F/FPC/SOCO-SEC/SOCO-SSN/	0	336	611	106	0.05%	17	1%	1	0%	476	16%	2482	83%
F/SEC/SEC-FPC/SSO-FPC/	299	453	1,020	105	0.03%	19	1%	0	0%	0	0%	2957	99%
S/SC/CPL-SC//	0	986	1,961	104	0.01%	6	0%	0	0%	85	3%	2885	97%
F/FPC/SOCO-TEC//	0	322	611	103	0.05%	6	0%	5	0%	480	16%	2485	84%
S/CPL/CPL-SC//	0	1,582	4,032	103	0.01%	5	0%	0	0%	13	0%	2958	99%
S/MEAG/JEA-MEAG//	0	38	189	103	0.28%	16	1%	6	0%	452	15%	2502	84%
S/MEAG/MEAG-DUK//	0	18	126	96	0.34%	10	0%	3	0%	1,164	39%	1799	60%
S/MEAG/JEA-SC//	None	None	None	93	0.00%	23	1%	0	0%	0	0%	2953	99%
S/DUK/SC-DUK//	0	1,538	2,899	92	0.01%	5	0%	0	0%	590	20%	2381	80%
S/SC/SCSG-SC//	1,326	1,653	2,422	92	0.01%	16	1%	0	0%	0	0%	2960	99%
S/SC/SOCO-DUK//	0	2,273	2,786	92	0.01%	5	0%	0	0%	18	1%	2953	99%
S/SCSG/SOCO-SC//	0	1,510	4,472	92	0.01%	16	1%	0	0%	92	3%	2868	96%
SS/SOCO/SOCO-SCSG//	-16	2	75	87	0.50%	3	0%	7	0%	1,549	52%	1417	48%
SS/GTC/FPC-TVA//	None	None	None	85	0.00%	10	0%	0	0%	0	0%	2966	100%

Appendix A (continued)

Segment	ATC			MWs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
SS/GTC/JEA-SC//	None	None	None	84	0.00%	13	0%	0	0%	0	0%	2963	100%
S/MEAG/FPC-GTC//	None	None	None	81	0.00%	24	1%	0	0%	0	0%	2952	99%
S/MEAG/TVA-JEA//	None	None	None	79	0.00%	19	1%	0	0%	0	0%	2957	99%
S/MEAG/MEAG-SC//	0	42	60	74	0.28%	4	0%	8	0%	180	6%	2784	94%
S/MEAG/GTC-MEAG//	1,005	1,812	2,150	73	0.01%	8	0%	0	0%	0	0%	2968	100%
S/MEAG/TVA-DUK//	None	None	None	73	0.00%	9	0%	0	0%	0	0%	2967	100%
SS/SOCO/TVA-DUK/MULTIPATHALIAS/	-123	419	942	63	0.02%	5	0%	0	0%	56	2%	2915	98%
S/MEAG/DUK-MEAG//	0	139	208	61	0.07%	6	0%	0	0%	88	3%	2882	97%
S/MEAG/DUK-FPC//	None	None	None	57	0.00%	20	1%	0	0%	0	0%	2956	99%
SS/GTC/JEA-DUK//	None	None	None	57	0.00%	11	0%	0	0%	0	0%	2965	100%
S/CPL/CPL-SC-CEG//	0	365	365	55	0.02%	8	0%	0	0%	13	0%	2955	99%
S/SC-CEG/CPL-SC-CEG//	0	2,789	13,047	51	0.00%	7	0%	0	0%	13	0%	2956	99%
SS/GTC/SC-CEG-GTC//	38	60	88	48	0.11%	5	0%	1	0%	0	0%	2970	100%
SS/GTC/TVA-FPC//	None	None	None	47	0.00%	11	0%	0	0%	0	0%	2965	100%
S/MEAG/GTC-SC//	None	None	None	45	0.00%	12	0%	0	0%	0	0%	2964	100%
S/MEAG/JEA-DUK//	None	None	None	44	0.00%	12	0%	0	0%	0	0%	2964	100%
SS/SOCO/TVA-SC/MULTIPATHALIAS/	-172	89	366	43	0.05%	5	0%	2	0%	757	25%	2212	74%
S/MEAG/TVA-SC-CEG//	None	None	None	42	0.00%	40	1%	0	0%	0	0%	2936	99%
SS/GTC/JEA-SC-CEG//	None	None	None	38	0.00%	17	1%	0	0%	0	0%	2959	99%
F/SEC/JEA-SEC/JEA-SSN/	470	637	637	36	0.01%	8	0%	0	0%	0	0%	2968	100%
S/DUK/DUK-CPL-CEG//	0	2,401	4,878	36	0.00%	13	0%	0	0%	81	3%	2882	97%
S/MEAG/JEA-SC-CEG//	None	None	None	36	0.00%	28	1%	0	0%	0	0%	2948	99%
SS/GTC/JEA-SOCO//	None	None	None	36	0.00%	4	0%	0	0%	0	0%	2972	100%
S/TVA/SOCO-CPLW//	0	276	276	34	0.02%	4	0%	0	0%	892	30%	2080	70%
S/DUK/CPLW-SC//	0	281	969	23	0.01%	1	0%	0	0%	726	24%	2249	76%
S/DUK/DUK-TVA//	0	692	692	21	0.00%	3	0%	0	0%	190	6%	2783	94%
S/TVA/DUK-SOCO//	0	343	343	21	0.01%	3	0%	0	0%	29	1%	2944	99%
F/FPC/SEC-TEC/SSN-TEC/	331	755	1,218	20	0.00%	4	0%	0	0%	0	0%	2972	100%
S/MEAG/SOCO-SC-CEG//	None	None	None	19	0.00%	13	0%	0	0%	0	0%	2963	100%
S/MEAG/JEA-TVA//	None	None	None	18	0.00%	3	0%	0	0%	0	0%	2973	100%
SS/GTC/SOCO-SC//	None	None	None	16	0.00%	2	0%	0	0%	0	0%	2974	100%
F/FPC/SEC-FPC/SSO-FPC/	199	452	920	15	0.00%	5	0%	0	0%	0	0%	2971	100%
S/MEAG/MEAG-JEA//	0	109	237	15	0.02%	2	0%	0	0%	260	9%	2714	91%
SS/GTC/SOCO-TVA//	None	None	None	13	0.00%	2	0%	0	0%	0	0%	2974	100%
SS/GTC/SOCO-JEA//	None	None	None	12	0.00%	5	0%	0	0%	0	0%	2971	100%
SS/SOCO/TVA-SC-CEG/MULTIPATHALIAS/	-16	2	75	11	0.06%	1	0%	3	0%	1,549	52%	1423	48%
SS/GTC/DUK-FPC//	None	None	None	9	0.00%	1	0%	0	0%	0	0%	2975	100%
S/DUK/SC-CEG-DUK//	0	509	510	8	0.00%	4	0%	0	0%	632	21%	2340	79%
S/MEAG/MEAG-SC-CEG//	3	5	13	8	0.15%	0	0%	5	0%	576	19%	2395	80%
S/SC-CEG/SOCO-DUK//	7,622	99,958	99,999	8	0.00%	4	0%	0	0%	0	0%	2972	100%
S/MEAG/TVA-MEAG//	34	87	185	7	0.01%	1	0%	0	0%	0	0%	2975	100%
SS/GTC/TVA-JEA//	None	None	None	7	0.00%	2	0%	0	0%	0	0%	2974	100%
S/MEAG/MEAG-FPC//	0	109	237	6	0.01%	1	0%	0	0%	260	9%	2715	91%
SS/GTC/JEA-MEAG//	None	None	None	6	0.00%	2	0%	0	0%	0	0%	2974	100%
SS/GTC/TVA-SC//	None	None	None	6	0.00%	2	0%	0	0%	0	0%	2974	100%
S/DUK/CPL-CEG-DUK//	0	2,629	5,850	5	0.00%	1	0%	0	0%	522	18%	2453	82%
S/DUK/SOCO-TVA//	0	692	692	5	0.00%	1	0%	0	0%	76	3%	2899	97%
S/MEAG/DUK-JEA//	None	None	None	5	0.00%	3	0%	0	0%	0	0%	2973	100%
S/TVA/DUK-TVA//	0	343	343	5	0.00%	1	0%	0	0%	29	1%	2946	99%
SS/GTC/MEAG-TVA//	None	None	None	5	0.00%	5	0%	0	0%	0	0%	2971	100%
S/CPL/SC-DUK//	0	2,814	4,527	4	0.00%	1	0%	0	0%	13	0%	2962	100%
S/AECI/TVA-AECI//	452	844	1,130	3	0.00%	2	0%	0	0%	0	0%	2974	100%
SS/GTC/SOCO-SC-CEG//	None	None	None	3	0.00%	1	0%	0	0%	0	0%	2975	100%
SS/SOCO/SC-CEG-SOCO//	72	114	169	3	0.00%	1	0%	0	0%	0	0%	2975	100%
S/DUK/CPL-CEG-TVA//	0	692	692	2	0.00%	1	0%	0	0%	132	4%	2843	96%
S/MEAG/JEA-SOCO//	None	None	None	2	0.00%	2	0%	0	0%	0	0%	2974	100%
S/TVA/DUK-AECI//	0	343	343	2	0.00%	1	0%	0	0%	39	1%	2936	99%
SS/GTC/MEAG-DUK//	None	None	None	2	0.00%	1	0%	0	0%	0	0%	2975	100%
S/CPL/DUK-SC//	45	1,255	2,970	1	0.00%	1	0%	0	0%	0	0%	2975	100%
S/CPL/SC-CEG-DUK//	0	623	623	1	0.00%	1	0%	0	0%	13	0%	2962	100%

Appendix A (continued)

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/MEAG/JEA-GTC//	None	None	None	1	0.00%	1	0%	0	0%	0	0%	2975	100%
S/TVA/SOCO-AEC//	0	600	661	1	0.00%	1	0%	0	0%	6	0%	2969	100%
SS/GTC/JEA-TVA//	None	None	None	1	0.00%	1	0%	0	0%	0	0%	2975	100%
F/FPC/FPC-FPC/FPC-FPCS/	803	2,551	3,435	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/FPC-GVL//	0	238	391	0	0.00%	0	0%	0	0%	32	1%	2944	99%
F/FPC/GVL-FPC//	42	389	520	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/GVL-FPC/GVL-FPCS/	42	389	520	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/GVL-SEC/GVL-SSN/	193	395	520	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/GVL-SOCO//	89	305	407	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/GVL-TEC//	193	395	519	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/SEC-FPC/SSN-FPCS/	0	502	1,187	0	0.00%	0	0%	0	0%	48	2%	2928	98%
F/FPC/SEC-FPC/SSO-FPCS/	199	452	920	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/SEC-GVL/SSN-GVL/	0	242	395	0	0.00%	0	0%	0	0%	4	0%	2972	100%
F/FPC/SEC-GVL/SSO-GVL/	0	224	368	0	0.00%	0	0%	0	0%	4	0%	2972	100%
F/FPC/SEC-TEC/SSO-TEC/	164	656	1,042	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/FPC/SOCO-FPC/SOCO-FPCS/	0	336	611	0	0.00%	0	0%	0	0%	484	16%	2492	84%
F/FPC/SOCO-GVL//	0	189	359	0	0.00%	0	0%	0	0%	504	17%	2472	83%
F/FPC/TEC-FPC/TEC-FPCS/	0	2,199	3,147	0	0.00%	0	0%	0	0%	12	0%	2964	100%
F/FPC/TEC-GVL//	0	241	395	0	0.00%	0	0%	0	0%	40	1%	2936	99%
F/SEC/SEC-TEC/SSO-TEC/	164	656	729	0	0.00%	0	0%	0	0%	0	0%	2976	100%
F/SEC/TEC-SEC/TEC-SSO/	0	416	729	0	0.00%	0	0%	0	0%	48	2%	2928	98%
F/TEC/SEC-FPC/SSO-FPC/	0	656	729	0	0.00%	0	0%	0	0%	16	1%	2960	99%
F/TEC/SEC-TEC/SSO-TEC/	164	656	729	0	0.00%	0	0%	0	0%	0	0%	2976	100%
P/LGEE/TVA-LGEE//	0	870	1,424	0	0.00%	0	0%	0	0%	403	14%	2573	86%
S/CPL/CPLW-DUK//	0	456	1,245	0	0.00%	0	0%	0	0%	22	1%	2954	99%
S/CPL/CPLW-TVA//	0	202	276	0	0.00%	0	0%	0	0%	1,259	42%	1717	58%
S/CPL/DUK-CPLW//	22	469	469	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/CPL/DUK-TVA//	0	276	276	0	0.00%	0	0%	0	0%	881	30%	2095	70%
S/CPL/SC-SCG//	539	623	623	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/CPL/SC-SCG//	137	365	365	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/CPL/TVA-CPLW//	0	264	276	0	0.00%	0	0%	0	0%	897	30%	2079	70%
S/DUK/CPLW-CPLW//	0	454	454	0	0.00%	0	0%	0	0%	26	1%	2950	99%
S/DUK/CPLW-SC//	0	1,008	2,591	0	0.00%	0	0%	0	0%	72	2%	2904	98%
S/DUK/CPLW-SCG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/CPLW-SCG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/CPLW-SOCO//	0	312	1,037	0	0.00%	0	0%	0	0%	701	24%	2275	76%
S/DUK/CPLW-TVA//	0	320	692	0	0.00%	0	0%	0	0%	732	25%	2244	75%
S/DUK/DUK-CPLW//	0	432	454	0	0.00%	0	0%	0	0%	72	2%	2904	98%
S/DUK/DUK-SCG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/SC-CPLW//	0	2,519	2,899	0	0.00%	0	0%	0	0%	81	3%	2895	97%
S/DUK/SC-CPLW//	0	448	454	0	0.00%	0	0%	0	0%	242	8%	2734	92%
S/DUK/SCG-CPLW//	0	509	510	0	0.00%	0	0%	0	0%	114	4%	2862	96%
S/DUK/SCG-CPLW//	0	449	454	0	0.00%	0	0%	0	0%	242	8%	2734	92%
S/DUK/SCG-SC//	443	510	510	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/DUK/SCG-SOCO//	443	510	510	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/DUK/SCG-TVA//	0	509	510	0	0.00%	0	0%	0	0%	140	5%	2836	95%
S/DUK/SC-SCG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/SC-SOCO//	506	2,207	2,335	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/DUK/SC-TVA//	0	692	692	0	0.00%	0	0%	0	0%	144	5%	2832	95%
S/DUK/SOCO-CPLW//	0	454	454	0	0.00%	0	0%	0	0%	242	8%	2734	92%
S/DUK/SOCO-SCG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/TVA-CPLW//	0	454	454	0	0.00%	0	0%	0	0%	271	9%	2705	91%
S/DUK/TVA-SCG//	0	0	0	0	0.00%	0	0%	0	0%	2,976	100%	0	0%
S/DUK/TVA-SOCO//	4	692	692	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/MEAG/MEAG-TVA//	0	67	140	0	0.00%	0	0%	0	0%	448	15%	2528	85%
S/MEAG/SCG-MEAG//	8	13	19	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/MEAG/SC-MEAG//	4	23	49	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SC/CPLW-DUK//	3,054	3,754	4,354	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SC/CPLW-SCG//	0	870	2,576	0	0.00%	0	0%	0	0%	81	3%	2895	97%
S/SC/CPLW-SOCO//	0	3,205	3,867	0	0.00%	0	0%	0	0%	14	0%	2962	100%

Appendix A (continued)

Segment	ATC			MWs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/SC/DUK-SOCO//	1,935	3,448	3,937	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SC/SC-CPLE//	0	2,675	4,713	0	0.00%	0	0%	0	0%	11	0%	2965	100%
S/SC/SC-DUK//	0	2,512	3,764	0	0.00%	0	0%	0	0%	18	1%	2958	99%
S/SC/SCEG-CPLE//	0	1,303	3,286	0	0.00%	0	0%	0	0%	97	3%	2879	97%
S/SC/SCEG-DUK//	0	3,227	3,402	0	0.00%	0	0%	0	0%	18	1%	2958	99%
S/SC/SCEG-SOCO//	2,326	3,207	3,367	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SC/SC-SCEG//	1,039	2,446	9,296	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SC/SC-SOCO//	0	2,630	3,699	0	0.00%	0	0%	0	0%	18	1%	2958	99%
S/SCEG/CPLE-DUK//	3,885	5,981	10,524	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/CPLE-SC//	0	1,255	3,371	0	0.00%	0	0%	0	0%	78	3%	2898	97%
S/SCEG/DUK-CPLE//	0	4,884	12,038	0	0.00%	0	0%	0	0%	86	3%	2890	97%
S/SCEG/DUK-SC//	0	2,075	6,189	0	0.00%	0	0%	0	0%	18	1%	2958	99%
S/SCEG/DUK-SCEG//	0	1,069	3,026	0	0.00%	0	0%	0	0%	195	7%	2781	93%
S/SCEG/DUK-SOCO//	99,677	99,891	99,931	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/SC-CPLE//	1,820	3,317	4,761	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/SC-DUK//	3,118	4,116	6,469	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/SCEG-CPLE//	104	2,292	3,381	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/SCEG-DUK//	143	2,599	4,313	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/SCEG-SC//	835	1,614	2,463	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/SCEG-SOCO//	156	2,706	4,421	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/SCEG/SC-SOCO//	2,774	3,897	4,973	0	0.00%	0	0%	0	0%	0	0%	2976	100%
S/TVA/AECI-LGEE//	0	51	396	0	0.00%	0	0%	0	0%	1,072	36%	1904	64%
S/TVA/CPLW-AECI//	0	276	276	0	0.00%	0	0%	0	0%	898	30%	2078	70%
S/TVA/CPLW-DUK//	0	276	276	0	0.00%	0	0%	0	0%	917	31%	2059	69%
S/TVA/CPLW-LGEE//	0	276	276	0	0.00%	0	0%	0	0%	900	30%	2076	70%
S/TVA/CPLW-SOCO//	0	276	276	0	0.00%	0	0%	0	0%	888	30%	2088	70%
S/TVA/CPLW-TVA//	0	276	276	0	0.00%	0	0%	0	0%	888	30%	2088	70%
S/TVA/DUK-CPLW//	0	264	276	0	0.00%	0	0%	0	0%	917	31%	2059	69%
S/TVA/DUK-LGEE//	0	343	343	0	0.00%	0	0%	0	0%	49	2%	2927	98%
S/TVA/LGEE-AECI//	0	600	661	0	0.00%	0	0%	0	0%	10	0%	2966	100%
S/TVA/SOCO-LGEE//	0	2,491	2,648	0	0.00%	0	0%	0	0%	20	1%	2956	99%
S/TVA/TVA-AECI//	0	600	661	0	0.00%	0	0%	0	0%	10	0%	2966	100%
S/TVA/TVA-LGEE//	0	2,178	2,648	0	0.00%	0	0%	0	0%	20	1%	2956	99%
SS/GTC/GTC-DUK//	0	347	592	0	0.00%	0	0%	0	0%	156	5%	2820	95%
SS/GTC/GTC-FPC//	0	331	705	0	0.00%	0	0%	0	0%	80	3%	2896	97%
SS/GTC/GTC-GTC//	25,128	25,529	25,735	0	0.00%	0	0%	0	0%	0	0%	2976	100%
SS/GTC/GTC-JEA//	0	331	705	0	0.00%	0	0%	0	0%	80	3%	2896	97%
SS/GTC/GTC-MEAG//	9,355	9,777	9,999	0	0.00%	0	0%	0	0%	0	0%	2976	100%
SS/GTC/GTC-SC//	0	31	283	0	0.00%	0	0%	0	0%	856	29%	2120	71%
SS/GTC/GTC-SCEG//	0	25	60	0	0.00%	0	0%	0	0%	288	10%	2688	90%
SS/GTC/GTC-SOCO//	20,000	20,000	20,000	0	0.00%	0	0%	0	0%	0	0%	2976	100%
SS/GTC/GTC-TVA//	0	431	660	0	0.00%	0	0%	0	0%	28	1%	2948	99%
SS/GTC/SC-GTC//	0	86	185	0	0.00%	0	0%	0	0%	4	0%	2972	100%
SS/SOCO/DUK-FL/MULTIPATHALIAS/	-51	373	806	0	0.00%	0	0%	0	0%	42	1%	2934	99%
SS/SOCO/DUK-SC/MULTIPATHALIAS/	-172	88	366	0	0.00%	0	0%	0	0%	757	25%	2219	75%
SS/SOCO/DUK-SCEG/MULTIPATHALIAS/	-16	2	75	0	0.00%	0	0%	0	0%	1,549	52%	1427	48%
SS/SOCO/DUK-TVA/MULTIPATHALIAS/	-3	509	868	0	0.00%	0	0%	0	0%	28	1%	2948	99%
SS/SOCO/SC-DUK/MULTIPATHALIAS/	-123	178	500	0	0.00%	0	0%	0	0%	56	2%	2920	98%
SS/SOCO/SCEG-DUK/MULTIPATHALIAS/	-123	108	169	0	0.00%	0	0%	0	0%	56	2%	2920	98%
SS/SOCO/SCEG-FL/MULTIPATHALIAS/	-51	114	169	0	0.00%	0	0%	0	0%	42	1%	2934	99%
SS/SOCO/SCEG-SC/MULTIPATHALIAS/	-172	84	169	0	0.00%	0	0%	0	0%	757	25%	2219	75%
SS/SOCO/SCEG-TVA/MULTIPATHALIAS/	-3	114	169	0	0.00%	0	0%	0	0%	28	1%	2948	99%
SS/SOCO/SC-FL/MULTIPATHALIAS/	-51	216	500	0	0.00%	0	0%	0	0%	42	1%	2934	99%
SS/SOCO/SC-SCEG/MULTIPATHALIAS/	-16	2	75	0	0.00%	0	0%	0	0%	1,549	52%	1427	48%
SS/SOCO/SC-SOCO//	51	233	500	0	0.00%	0	0%	0	0%	0	0%	2976	100%
SS/SOCO/SC-TVA/MULTIPATHALIAS/	-3	233	500	0	0.00%	0	0%	0	0%	28	1%	2948	99%