MONTHLY AUDIT REPORT ON THE SOUTHEAST ENERGY EXCHANGE MARKET

FOR

March 2025

Prepared by:

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April 30, 2025

I. OVERVIEW

This is the March 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 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 been operating since November 2022 and now has 24 members.[1]

As discussed herein, trading volumes in March were 125,000, up from 99,000 MWh in February and above the 12-month trailing monthly average of 90,000 MWh. The March volume also represents an all-time high since market inception. With an average bid-offer spread of over $10/MWh, the estimated production cost savings from SEEM transactions in March were $1.2 million. Trading among SEEM members relies on individual transmission path 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, five percent of the time availability was zero and 93 percent of the time a segment was available while no cleared transaction utilized it. Overall, this indicates widely available transmission. Due to transmission loss costs, transmission constraints, and participant-specific constraints, about 26,000 MWh of potential economic exchanges were left uncleared in March, which is higher than the level in February. As explained more below, 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.

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[1] 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 members joining in June 2023 are: Seminole Electric Cooperative; Tampa Electric Company; Duke Energy Florida; Florida Power Corporation; TEA Gainesville System Utilities; and TEA JEA.

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 March.

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 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 March 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 March 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 series of changes to participant-specific constraints that closed and re-opened trade among a small number of counterparties in March. These changes were numerous and involved a single common participant. While this activity is squarely within the SEEM rules,

we contacted the participant to inquire. The participant explained various changes to the participant-specific constraints were to accommodate entry of new counterparties.

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 125,000 MWh of energy in March, higher than any previous month. The trailing 12-month average of 90,000 MWh. The average clearing price was $10/kWh. Figure 1 shows the daily SEEM bids and offers for March 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.
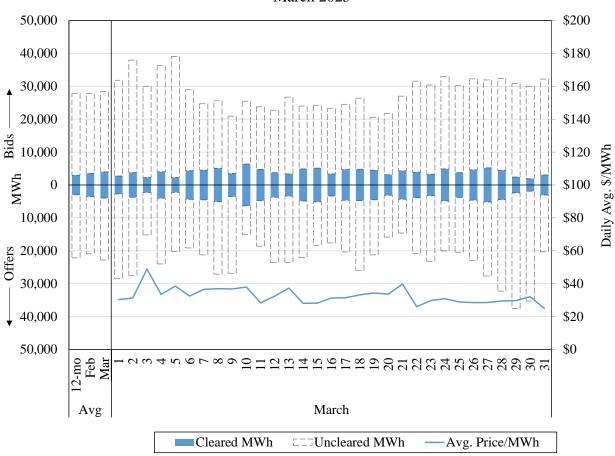
Figure 1: Daily Bids and Offers
March 2025

The left side columns show activity relative to the previous month and relative to the 12-month rolling average. As the left-side monthly and the 12-month average bars show, total liquidity (cleared and uncleared bids and offers) was slightly lower than both the 12-month average and lower than February's level.

The individual days in Figure 1 show some variation in offers, bids, and cleared transactions across the month. Prices were relatively stable.

Figure 2 shows the daily cleared transactions alone, to better observe the daily variation. We also include a proxy for regional demand, Degree Days (DDs). DDs are common measures of daily temperature levels that measure the demand for cooling and heating.[2]

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[2] 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 Atlanta, GA.
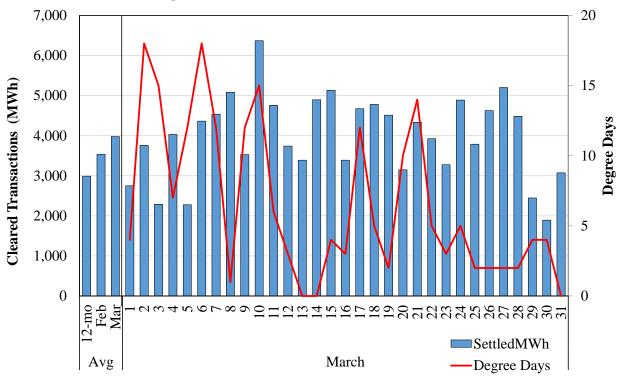
Figure 2: Cleared Transactions and Demand

The chart shows some periods of time when the trading volumes and DD move in opposite direction. However, we found no statistical relationship as measured by the correlation coefficient[3] between Degree Days and trading volumes. In other months when there were extreme weather events, we observed a decline in offer volume and trades when these events occurred. An extended evaluation in time indicates that generally the relationship does not hold. Table 1 shows an extended statistical evaluation of DD and cleared trades, as well as evaluation of other market variables.

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[3] The correlation coefficient is a statistic that measures the relationship between two variables (in our case the cleared volumes and Degree Days). A positive correlation coefficient indicates the variables tend to move in the same direction while a negative correlation coefficient indicates the variables tend to move in opposite directions. A correlation coefficient at or close to zero means there is no linear relationship.

Table 1: Market Correlation Statistics
November 2023 - March 2025

		Correlation Coefficients	
		Degree Days	Price
1	Trade Volume	0.023	0.108
	p value	0.656	0.035
2	Offer Volume	-0.392	-0.160
	p value	0.000	0.002
3	Bid Volume	0.265	0.074
	p value	0.000	0.150
4	Price	0.262	
	p value	0.000	

Note: Highlighted values are statistically significant.

The first entry in row 1 of the table shows the lack of statistical relationship between DD and cleared trades over time. The other entries show the correlation statistics between market activity (Trades, Offers, and Bids) and DD and Price. The second entry in Row 1 is the correlation between clearing prices and DD, which is significant only at the 96 percent level (p value = 0.035). In prior reports, this statistical relationship was stronger and so is worth noting. Both Trade Volume and Clearing Price are cleared equilibrium values, determined by intersection of supply (offers) and demand (bids). When the clearing price and clearing quantity are positively correlated, this indicates a market where demand is fluctuating more than supply. In other words, changes in demand dominates changes in supply.

Row 2 in the table shows a statistically significant *negative* correlation between supply offers and DD, but not between supply offers and clearing price. We would not expect a negative correlation between supply offers and DD based on market fundamentals alone -- with higher regional demand, we would expect more supply to respond. However, resource management also requires recourse to reliability considerations. High DD days can create tight operating conditions and a withdrawal of supply to meet reliability objectives, thus reducing capacity available for economy trades in SEEM. Our discussion with participants supported this logic. Row 2 also shows an absence of correlation between supply offers and price. We would expect a stronger relationship given supply an increase in supply will tend to decrease price. However, if the supply increase is predominately high-priced offers, the price could be unaffected.

In Row 3 of the table, the statistically significant positive correlation between Bid Volume and DD price is expected from economic theory because higher regional demand (DD) will result in

more participants seeking power supplies in SEEM. There is no statistical correlation between Bid Volume and clearing price. In theory, the correlation could be in either direction – a positive correlation if the clearing price influenced by higher demand; a negative correlation if the clearing price is dominated by more expensive supply.

Finally, in Row 4 of the correlation matrix in the table reports a positive correlation between price and DD, something that is also expected from economics: high overall demand tends to result in higher prices.

Overall, the absence of a statistical relationship between cleared trades and DD is likely the result of Offer Volume not responding to higher system demand, likely due to reliability constraints, which is not sufficiently offset by higher participant demand. Otherwise, the statistics suggest the market mainly is behaving as expected according to economics.

Figure 3 shows the cleared trades on an historical monthly basis. It shows a variable volume of cleared trades with a notable increase in July 2023 with the addition of Florida participants. The highest volume is in the most recent month, March 2025. The figure also shows the trend line. The R-squared indicates 71 percent of the variation in monthly cleared volumes is the result of a time trend. Part of that is the result of new participants, of course, but the trend continues past the major change in membership in July of 2023. The slope of the trend line is 2,681, meaning each month the cleared volume increases by an average of 2,681 MWh. Both estimated coefficients (the coefficient of t and the estimated intercept (34,309) are statistically significant.
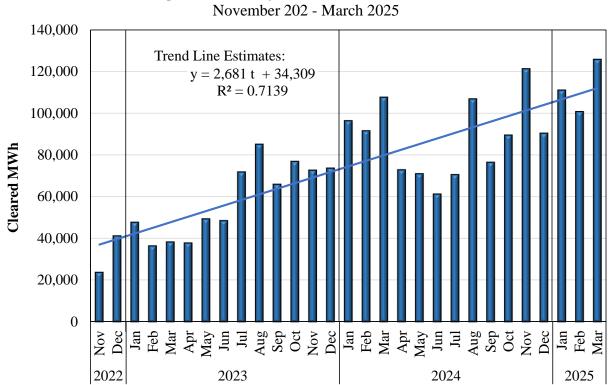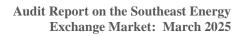
Figure 3: Monthly Volume of Cleared Trades
November 202 - March 2025

Trend Line Estimates:
$$y = 2,681 \ t \ + 34,309$$
$$R^2 = 0.7139$$

Figure 4 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.
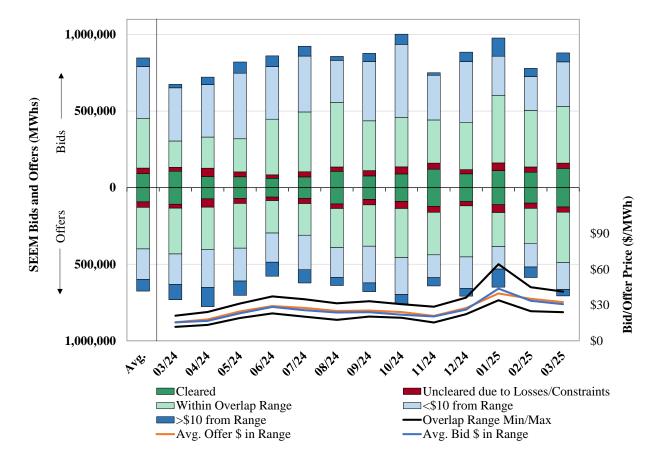
Figure 4: Bid and Offer Evaluation

In Figure 4, 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 around 750,000 MWh) than offers (varying around 600,00 MWh).

The bars in Figure 4 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 **Error! Reference source not found.**. 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 5: Liquidity v Cleared Trades
January 2023 - March 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 6 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.
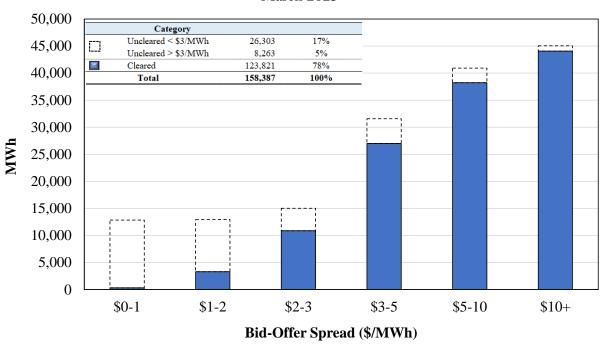
Figure 6: Cleared and Uncleared Economic Matches
March 2025

Category			
□	Uncleared < $3/MWh	26,303	17%
	Uncleared > $3/MWh	8,263	5%
■	Cleared	123,821	78%
	Total	**158,387**	**100%**

■ SEEM Matched   □ Unmatched Economic

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, 78 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 March, the bid-offer spread averaged $10/MWh. With 99,000 MWh cleared, there is approximately $1.2 million in production cost savings at least.[4] This is the highest monthly production cost savings since the market opened. Figure 7 shows (the

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[4] There is likely more production cost saving than the data shown because the bids (offers) are likely to by 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.

lower bound of) estimated production cost savings for each month since SEEM inception. The red line shows the cumulative savings. Cumulative savings are almost $16 million.
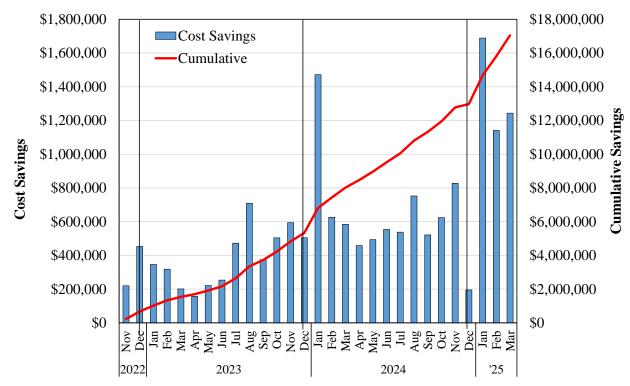
Figure 7: Estimated Production Cost Savings

Figure 8 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.
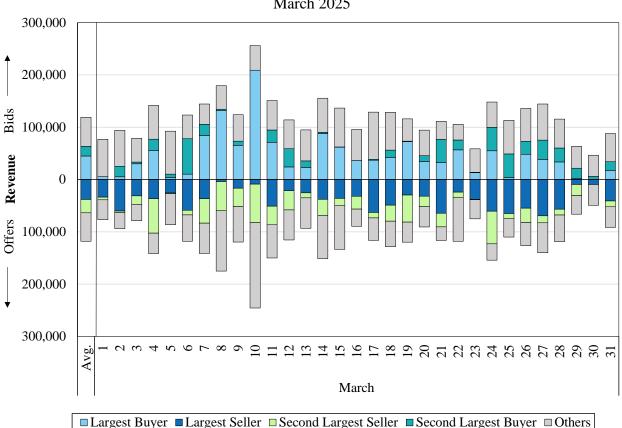
Figure 8: Volumes of Matched Bids and Offers
March 2025

The figure shows certain buyers and sellers comprise significant shares of the transaction activity. For the month, 37 percent of the sales were made by a single seller and 36 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 9 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.
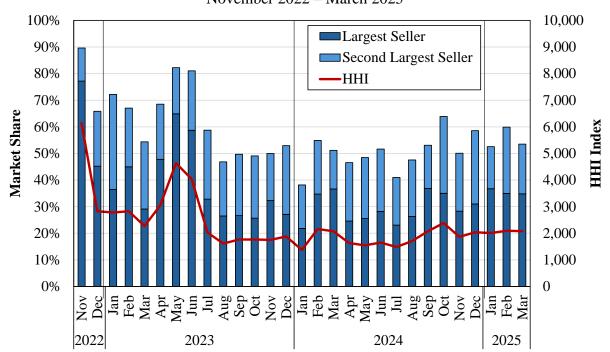
Figure 9: Seller Market Share and Concentration Statistics
November 2022 – March 2025

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 x 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 10 shows the buyer concentration.
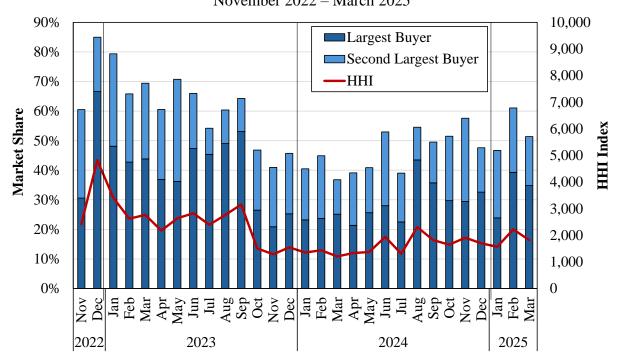
Figure 10: Buyer Market Share and Concentration Statistics
November 2022 – March 2025

The entry of Florida participants coincided with a decline in buyer concentration. 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 11 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.
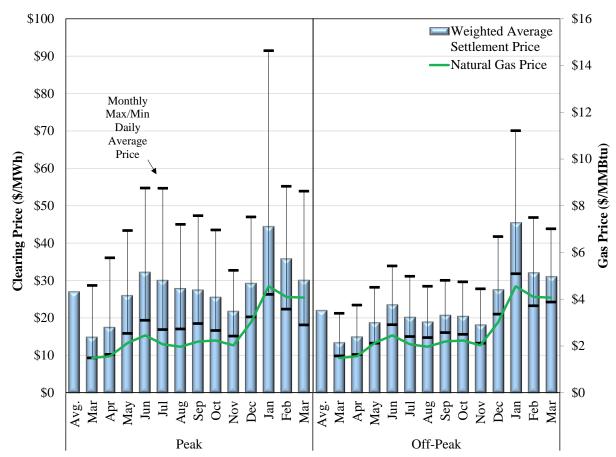
Figure 11: Monthly Clearing Prices and Natural Gas Costs

The figure shows that both peak and off-peak prices increased in March relative to February 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 March, there were 305 segments used -- 250 segments for which an ATC value was posted and 55 segments for which no ATC is posted (these are segments that were available on an unlimited basis.[5]) There were 54 segments in SEEM not used. We calculate total segment (MWh) usage for the 305 segments that were used during the month. For segments with ATC values, we

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[5]   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;[6]

(3) Unavailable, no ATC;[7] 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.

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

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

Table 2: Statistics for Most Utilized SEEM Segments
March 2025

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
F/FPC/FPC-SOCO//	0	170	301	27,549	23.93%	922	31%	270	9%	384	13%	1396	47%
F/TEC/TEC-FPC//	1,234	2,599	3,267	20,893	1.11%	1,082	36%	0	0%	0	0%	1890	64%
S/DUK/TVA-DUK//	0	692	692	17,525	4.84%	440	15%	24	1%	701	24%	1807	61%
F/SEC/FPC-JEA//	0	637	637	16,271	3.97%	1,070	36%	0	0%	184	6%	1718	58%
SS/SOCO/FL-SOCO//	75	737	1,524	16,008	2.66%	581	20%	2	0%	0	0%	2389	80%
S/TVA/TVA-DUK//	80	380	440	15,375	5.60%	393	13%	35	1%	0	0%	2544	86%
S/DUK/SOCO-DUK//	0	1,548	2,220	14,077	1.63%	569	19%	6	0%	771	26%	1626	55%
F/FPC/TEC-SOCO//	0	170	301	13,684	11.89%	809	27%	61	2%	384	13%	1718	58%
F/FPC/FPC-SEC/FPC-SSN/	330	898	1,423	13,634	1.90%	1,061	36%	0	0%	0	0%	1911	64%
S/SC/SOCO-SC//	0	1,014	2,211	13,461	1.85%	801	27%	7	0%	152	5%	2012	68%
F/JEA/SEC-SOCO/SSN-SOCO/	0	615	838	10,106	2.57%	467	16%	0	0%	184	6%	2321	78%
SS/SOCO/FL-SC/MULTIPATHALIAS/	0	290	634	9,311	4.32%	684	23%	15	1%	19	1%	2254	76%
P/LGEE/LGEE-TVA//	0	1,623	1,623	8,342	0.73%	394	13%	0	0%	9	0%	2569	86%
S/TVA/SOCO-TVA//	0	4,011	4,940	8,030	0.26%	277	9%	0	0%	8	0%	2687	90%
F/JEA/SEC-JEA/SSN-JEA/	0	487	487	7,714	2.42%	1,069	36%	0	0%	292	10%	1611	54%
S/TVA/TVA-SOCO//	4,475	4,910	5,000	6,118	0.17%	170	6%	0	0%	0	0%	2802	94%
SS/SOCO/SOCO-DUK//	-26	388	816	5,951	2.04%	151	5%	48	2%	49	2%	2724	92%
SS/SOCO/FL-DUK/MULTIPATHALIAS/	-26	315	793	4,612	1.82%	287	10%	42	1%	49	2%	2594	87%
S/MEAG/FPC-SC//	None	None	None	4,544	0.00%	593	20%	0	0%	0	0%	2379	80%
S/DUK/SC-DUK//	0	1,290	2,899	4,450	0.42%	179	6%	0	0%	112	4%	2681	90%
SS/SOCO/TVA-SOCO//	566	1,227	1,621	4,347	0.50%	116	4%	0	0%	0	0%	2856	96%
SS/SOCO/FL-TVA/MULTIPATHALIAS/	75	712	1,524	4,277	0.77%	196	7%	0	0%	0	0%	2776	93%
S/TVA/LGEE-DUK//	80	380	440	4,169	1.52%	190	6%	9	0%	0	0%	2773	93%
S/CPL/DUK-CPLE//	239	2,454	6,847	4,093	0.21%	227	8%	0	0%	0	0%	2745	92%
F/FPC/TEC-FPC//	1,279	2,650	3,312	3,684	0.19%	500	17%	0	0%	0	0%	2472	83%
S/CPL/SC-CPLE//	0	1,817	4,527	3,556	0.26%	405	14%	1	0%	53	2%	2513	85%
F/FPC/TEC-SEC/TEC-SSN/	305	897	1,423	3,525	0.49%	331	11%	0	0%	0	0%	2641	89%
S/SC/SOCO-DUK//	0	2,531	2,922	3,431	0.19%	121	4%	0	0%	10	0%	2841	96%
F/JEA/SOCO-JEA//	0	259	411	3,344	1.85%	411	14%	2	0%	340	11%	2219	75%
S/SCEG/SOCO-SCEG//	0	487	3,172	3,344	0.69%	404	14%	6	0%	875	29%	1687	57%

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).

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 March, there were 906,460 segment intervals.[8] The two circumstances (Cases (2) and (3)) when a segment is constrained occurred in more than 50,000 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 93 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 (5 percent of the time). The third most common

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[8] 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 March, SEEM operated in all intervals.

case was "Partially Used" (Case 1), where the segment was partially used (2.4 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 (860 intervals).

Table 3: Summary of All Segments
March 2025

Segment	Case 1 Partially Used		Case 2 Fully Used		Case 3 Unavailable		Case 4 Uncleared	
	Intervals	%	Intervals	%	Intervals	%	Intervals	%
All Segments	25,420	2.4%	860	0.1%	50,106	4.8%	966,970	92.7%

Measuring transmission capacity congestion by adding Case 2 and 3, the percentage of constrained segment intervals was 5.0 percent in March (versus 2.0 percent in February). 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 unconstrainted for SEEM activity.

Table 4: Most Constrained SEEM Segments
March 2025

Segment	ATC				Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max	MWhs	Factor	Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/AECI/AECI-TVA//	0	0	598	218	0.42%	19	1%	0	0%	1,991	67%	962	32%
S/TVA/AECI-TVA//	0	1	380	0	0.00%	0	0%	0	0%	1,820	61%	1152	39%
S/TVA/AECI-CPLW//	0	1	276	46	0.09%	8	0%	0	0%	1,811	61%	1153	39%
S/TVA/AECI-SOCO//	0	1	419	100	0.17%	10	0%	0	0%	1,728	58%	1234	42%
S/TVA/AECI-DUK//	0	1	380	72	0.12%	9	0%	0	0%	1,711	58%	1252	42%
S/TVA/AECI-LGEE//	0	1	419	0	0.00%	0	0%	0	0%	1,689	57%	1283	43%
S/TVA/CPLW-AECI//	0	276	308	0	0.00%	0	0%	0	0%	1,017	34%	1955	66%
S/AECI/TVA-AECI//	0	483	997	59	0.02%	6	0%	0	0%	986	33%	1980	67%
S/SCEG/SOCO-SCEG//	0	487	3,172	3,344	0.69%	404	14%	6	0%	875	29%	1687	57%
S/TVA/DUK-AECI//	0	366	426	0	0.00%	0	0%	0	0%	842	28%	2130	72%
S/TVA/SOCO-AECI//	0	632	725	59	0.02%	6	0%	0	0%	838	28%	2128	72%
S/DUK/SOCO-SCEG//	0	130	164	448	0.64%	67	2%	0	0%	831	28%	2074	70%
S/TVA/LGEE-AECI//	0	632	725	0	0.00%	0	0%	0	0%	830	28%	2142	72%
S/DUK/TVA-SCEG//	0	129	164	131	0.19%	20	1%	0	0%	830	28%	2122	71%
S/DUK/CPLE-SCEG//	0	129	164	0	0.00%	0	0%	0	0%	825	28%	2147	72%
S/TVA/TVA-AECI//	0	632	725	0	0.00%	0	0%	0	0%	818	28%	2154	72%
S/DUK/CPLW-SCEG//	0	129	164	0	0.00%	0	0%	0	0%	814	27%	2158	73%
S/CPL/CPLE-SCEG//	0	365	567	0	0.00%	0	0%	0	0%	803	27%	2169	73%
S/SCEG/CPLE-SCEG//	0	883	5,707	8	0.00%	1	0%	0	0%	798	27%	2173	73%
S/DUK/DUK-SCEG//	0	129	164	308	0.44%	70	2%	1	0%	793	27%	2108	71%

III. CONCLUSION

We reviewed the operation of SEEM for March 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 -- March 2025

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
F/FPC/FPC-SOCO//	0	170	301	27,549	23.93%	922	31%	270	9%	384	13%	1396	47%
F/TEC/TEC-FPC//	1,234	2,599	3,267	20,893	1.11%	1,082	36%	0	0%	0	0%	1890	64%
S/DUK/TVA-DUK//	0	692	692	17,525	4.84%	440	15%	24	1%	701	24%	1807	61%
F/SEC/FPC-JEA//	0	637	637	16,271	3.97%	1,070	36%	0	0%	184	6%	1718	58%
SS/SOCO/FL-SOCO//	75	737	1,524	16,008	2.66%	581	20%	2	0%	0	0%	2389	80%
S/TVA/TVA-DUK//	80	380	440	15,375	5.60%	393	13%	35	1%	0	0%	2544	86%
S/DUK/SOCO-DUK//	0	1,548	2,220	14,077	1.63%	569	19%	6	0%	771	26%	1626	55%
F/FPC/TEC-SOCO//	0	170	301	13,684	11.89%	809	27%	61	2%	384	13%	1718	58%
F/FPC/FPC-SEC/FPC-SSN/	330	898	1,423	13,634	1.90%	1,061	36%	0	0%	0	0%	1911	64%
S/SC/SOCO-SC//	0	1,014	2,211	13,461	1.85%	801	27%	7	0%	152	5%	2012	68%
F/JEA/SEC-SOCO/SSN-SOCO/	0	615	838	10,106	2.57%	467	16%	0	0%	184	6%	2321	78%
SS/SOCO/FL-SC/MULTIPATHALIAS/	0	290	634	9,311	4.32%	684	23%	15	1%	19	1%	2254	76%
P/LGEE/LGEE-TVA//	0	1,623	1,623	8,342	0.73%	394	13%	0	0%	9	0%	2569	86%
S/TVA/SOCO-TVA//	0	4,011	4,940	8,030	0.26%	277	9%	0	0%	8	0%	2687	90%
F/JEA/SEC-JEA/SSN-JEA/	0	487	487	7,714	2.42%	1,069	36%	0	0%	292	10%	1611	54%
S/TVA/TVA-SOCO//	4,475	4,910	5,000	6,118	0.17%	170	6%	0	0%	0	0%	2802	94%
SS/SOCO/SOCO-DUK//	-26	388	816	5,951	2.04%	151	5%	48	2%	49	2%	2724	92%
SS/SOCO/FL-DUK/MULTIPATHALIAS/	-26	315	793	4,612	1.82%	287	10%	42	1%	49	2%	2594	87%
S/MEAG/FPC-SC//	None	None	None	4,544	0.00%	593	20%	0	0%	0	0%	2379	80%
S/DUK/SC-DUK//	0	1,290	2,899	4,450	0.42%	179	6%	0	0%	112	4%	2681	90%
SS/SOCO/TVA-SOCO//	566	1,227	1,621	4,347	0.50%	116	4%	0	0%	0	0%	2856	96%
SS/SOCO/FL-TVA/MULTIPATHALIAS/	75	712	1,524	4,277	0.77%	196	7%	0	0%	0	0%	2776	93%
S/TVA/LGEE-DUK//	80	380	440	4,169	1.52%	190	6%	9	0%	0	0%	2773	93%
S/CPL/DUK-CPLE//	239	2,454	6,847	4,093	0.21%	227	8%	0	0%	0	0%	2745	92%
F/FPC/TEC-FPC//	1,279	2,650	3,312	3,684	0.19%	500	17%	0	0%	0	0%	2472	83%
S/CPL/SC-CPLE//	0	1,817	4,527	3,556	0.26%	405	14%	1	0%	53	2%	2513	85%
F/FPC/TEC-SEC/TEC-SSN/	305	897	1,423	3,525	0.49%	331	11%	0	0%	0	0%	2641	89%
S/SC/SOCO-DUK//	0	2,531	2,922	3,431	0.19%	121	4%	0	0%	10	0%	2841	96%
F/JEA/SOCO-JEA//	0	259	411	3,344	1.85%	411	14%	2	0%	340	11%	2219	75%
S/SCEG/SOCO-SCEG//	0	487	3,172	3,344	0.69%	404	14%	6	0%	875	29%	1687	57%
F/SEC/FPC-SEC/FPC-SSN/	330	898	1,423	3,235	0.45%	456	15%	0	0%	0	0%	2516	85%
SS/SOCO/SOCO-SC//	0	315	634	3,114	1.35%	235	8%	22	1%	19	1%	2696	91%
S/TVA/LGEE-SOCO//	0	2,828	3,000	3,060	0.15%	263	9%	0	0%	60	2%	2649	89%
S/CPL/TVA-DUK//	0	276	308	2,875	1.89%	125	4%	10	0%	730	25%	2107	71%
SS/SOCO/SOCO-FL//	93	821	1,548	2,809	0.46%	272	9%	0	0%	0	0%	2700	91%
SS/SOCO/SOCO-SOCO//	43,135	46,312	46,312	2,640	0.01%	161	5%	0	0%	0	0%	2811	95%
S/MEAG/FPC-DUK//	None	None	None	2,509	0.00%	388	13%	0	0%	0	0%	2584	87%
F/FPC/SOCO-FPC//	0	171	358	2,503	2.07%	234	8%	105	4%	276	9%	2357	79%
S/DUK/TVA-CPLE//	0	692	692	2,342	0.63%	81	3%	1	0%	732	25%	2158	73%
S/SC/SOCO-CPLE//	0	2,498	2,862	2,321	0.14%	297	10%	0	0%	43	1%	2632	89%
S/SCEG/SC-SCEG//	0	3,144	99,995	2,266	0.08%	237	8%	1	0%	5	0%	2729	92%
F/TEC/FPC-TEC//	0	1,598	2,928	2,265	0.19%	193	6%	0	0%	180	6%	2599	87%
F/FPC/FPC-TEC//	0	1,735	2,972	2,255	0.18%	192	6%	0	0%	180	6%	2600	87%
F/FPC/SEC-SEC/SSO-SSN/	0	552	1,042	2,179	0.53%	279	9%	0	0%	24	1%	2669	90%
F/SEC/TEC-FPC//	415	729	729	1,874	0.37%	222	7%	0	0%	0	0%	2750	93%
F/TEC/TEC-SEC/TEC-SSO/	0	366	630	1,874	0.75%	222	7%	0	0%	24	1%	2726	92%
S/TVA/TVA-CPLW//	0	276	308	1,827	0.97%	97	3%	0	0%	223	8%	2652	89%
SS/SOCO/FL-SCEG/MULTIPATHALIAS/	0	47	131	1,817	3.69%	168	6%	104	3%	292	10%	2408	81%
S/MEAG/FPC-TVA//	None	None	None	1,810	0.00%	127	4%	0	0%	0	0%	2845	96%
S/SC/SOCO-SCEG//	0	1,026	2,359	1,809	0.25%	180	6%	1	0%	149	5%	2642	89%
S/DUK/CPLW-DUK//	0	742	1,243	1,726	0.32%	79	3%	0	0%	75	3%	2818	95%
S/SC/SC-SOCO//	0	3,154	3,880	1,711	0.08%	124	4%	0	0%	16	1%	2832	95%
SS/SOCO/TVA-FL/MULTIPATHALIAS/	93	763	1,438	1,704	0.30%	165	6%	0	0%	0	0%	2807	94%
F/SEC/SEC-JEA/SSN-JEA/	0	637	637	1,549	0.38%	342	12%	0	0%	184	6%	2446	82%
SS/SOCO/TVA-SC/MULTIPATHALIAS/	0	315	634	1,373	0.60%	46	2%	1	0%	19	1%	2906	98%
S/SC/SC-CPLE//	0	2,486	4,256	1,356	0.08%	131	4%	0	0%	82	3%	2759	93%
F/FPC/SEC-FPC/SSN-FPC/	0	256	1,111	1,281	0.48%	168	6%	0	0%	265	9%	2539	85%
S/DUK/CPLW-CPLE//	0	750	1,243	1,149	0.24%	63	2%	0	0%	674	23%	2235	75%
S/SC/DUK-SC//	0	1,428	2,945	1,067	0.10%	146	5%	0	0%	2	0%	2824	95%
S/TVA/LGEE-CPLW//	0	276	308	1,002	0.54%	56	2%	2	0%	239	8%	2675	90%

Appendix A (continued)

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/MEAG/SOCO-MEAG//	2,498	3,055	3,195	957	0.04%	75	3%	0	0%	0	0%	2897	97%
S/SC/SC-DUK//	2	2,902	3,839	941	0.04%	61	2%	0	0%	2	0%	2909	98%
F/SEC/JEA-FPC//	0	637	637	928	0.22%	89	3%	0	0%	240	8%	2643	89%
SS/GTC/FPC-SCEG//	None	None	None	926	0.00%	171	6%	0	0%	0	0%	2801	94%
S/SCEG/DUK-SCEG//	0	1,159	5,125	887	0.10%	146	5%	0	0%	748	25%	2078	70%
F/SEC/SEC-FPC/SSO-FPC/	0	474	975	851	0.23%	180	6%	0	0%	4	0%	2788	94%
F/SEC/SEC-FPC/SSN-FPC/	0	256	1,111	839	0.32%	207	7%	0	0%	256	9%	2509	84%
SS/GTC/FPC-DUK//	None	None	None	816	0.00%	66	2%	0	0%	0	0%	2906	98%
F/JEA/SOCO-SEC/SOCO-SSN/	0	253	411	768	0.43%	53	2%	3	0%	316	11%	2600	87%
S/DUK/DUK-SC//	0	1,109	2,574	738	0.09%	137	5%	0	0%	120	4%	2715	91%
SS/GTC/SOCO-GTC//	13,010	13,793	14,963	721	0.01%	40	1%	0	0%	0	0%	2932	99%
SS/GTC/FPC-SC//	None	None	None	708	0.00%	78	3%	0	0%	0	0%	2894	97%
S/MEAG/JEA-DUK//	None	None	None	659	0.00%	129	4%	0	0%	0	0%	2843	96%
SS/GTC/FPC-GTC//	0	409	958	657	0.20%	42	1%	0	0%	4	0%	2926	98%
F/JEA/JEA-SOCO//	0	713	1,049	639	0.13%	140	5%	0	0%	4	0%	2828	95%
S/DUK/SOCO-SC//	0	1,280	2,220	630	0.07%	42	1%	1	0%	129	4%	2800	94%
SS/GTC/FPC-TVA//	None	None	None	622	0.00%	31	1%	0	0%	0	0%	2941	99%
S/MEAG/FPC-MEAG//	0	69	204	618	0.94%	70	2%	10	0%	136	5%	2756	93%
S/CPL/SCEG-CPLE//	0	623	817	594	0.13%	115	4%	0	0%	18	1%	2839	96%
S/DUK/SOCO-CPLE//	0	1,764	2,220	565	0.06%	103	3%	0	0%	755	25%	2114	71%
S/SCEG/SCEG-SOCO//	0	2,219	5,511	557	0.03%	59	2%	0	0%	4	0%	2909	98%
S/MEAG/JEA-SC//	None	None	None	494	0.00%	116	4%	0	0%	0	0%	2856	96%
S/MEAG/FPC-SCEG//	None	None	None	491	0.00%	304	10%	0	0%	0	0%	2668	90%
F/FPC/SEC-SOCO/SSN-SOCO/	0	170	301	486	0.43%	118	4%	0	0%	452	15%	2402	81%
SS/SOCO/SC-TVA/MULTIPATHALIAS/	75	340	537	485	0.19%	28	1%	0	0%	0	0%	2944	99%
S/DUK/DUK-SOCO//	0	1,883	2,335	480	0.04%	118	4%	0	0%	127	4%	2727	92%
S/SCEG/SOCO-SC//	0	2,531	8,335	470	0.02%	43	1%	0	0%	13	0%	2916	98%
S/DUK/SOCO-SCEG//	0	130	164	448	0.64%	67	2%	0	0%	831	28%	2074	70%
SS/SOCO/SC-FL/MULTIPATHALIAS/	75	340	537	438	0.17%	46	2%	0	0%	0	0%	2926	98%
F/FPC/SEC-SOCO/SSO-SOCO/	0	146	297	433	0.41%	91	3%	0	0%	408	14%	2473	83%
S/SC/SCEG-SC//	355	1,418	3,070	413	0.04%	39	1%	0	0%	0	0%	2933	99%
S/MEAG/JEA-TVA//	None	None	None	410	0.00%	38	1%	0	0%	0	0%	2934	99%
SS/SOCO/SOCO-TVA//	210	1,357	2,360	405	0.04%	18	1%	0	0%	0	0%	2954	99%
SS/GTC/TVA-SC//	None	None	None	398	0.00%	17	1%	0	0%	0	0%	2955	99%
S/SC/SC-SCEG//	0	2,863	5,878	389	0.02%	48	2%	0	0%	20	1%	2904	98%
S/TVA/SOCO-DUK//	80	380	440	382	0.14%	16	1%	0	0%	0	0%	2956	99%
SS/GTC/SOCO-SC//	None	None	None	346	0.00%	14	0%	0	0%	0	0%	2958	100%
S/MEAG/SOCO-DUK//	None	None	None	332	0.00%	46	2%	0	0%	0	0%	2926	98%
S/MEAG/TVA-JEA//	None	None	None	320	0.00%	40	1%	0	0%	0	0%	2932	99%
S/DUK/DUK-SCEG//	0	129	164	308	0.44%	70	2%	1	0%	793	27%	2108	71%
SS/GTC/SC-GTC//	27	127	204	295	0.31%	16	1%	3	0%	0	0%	2953	99%
SS/SOCO/SOCO-SCEG//	0	47	131	287	0.58%	27	1%	17	1%	292	10%	2636	89%
SS/GTC/JEA-TVA//	None	None	None	283	0.00%	27	1%	0	0%	0	0%	2945	99%
SS/GTC/GTC-SOCO//	20,000	20,000	20,000	276	0.00%	8	0%	0	0%	0	0%	2964	100%
S/SC/DUK-SCEG//	0	3,409	3,841	267	0.01%	36	1%	0	0%	2	0%	2934	99%
SS/GTC/JEA-SC//	None	None	None	258	0.00%	40	1%	0	0%	0	0%	2932	99%
SS/GTC/JEA-DUK//	None	None	None	257	0.00%	37	1%	0	0%	0	0%	2935	99%
S/MEAG/JEA-MEAG//	0	69	204	241	0.37%	34	1%	4	0%	136	5%	2798	94%
S/MEAG/SOCO-JEA//	None	None	None	231	0.00%	39	1%	0	0%	0	0%	2933	99%
SS/SOCO/SCEG-FL/MULTIPATHALIAS/	3	149	197	229	0.22%	31	1%	0	0%	3	0%	2938	99%
S/MEAG/TVA-DUK//	None	None	None	228	0.00%	23	1%	0	0%	0	0%	2949	99%
S/MEAG/TVA-SC//	None	None	None	222	0.00%	26	1%	0	0%	0	0%	2946	99%
S/SCEG/SCEG-CPLE//	0	2,432	3,992	221	0.01%	52	2%	0	0%	4	0%	2916	98%
S/AECI/AECI-TVA//	0	0	598	218	0.42%	19	1%	0	0%	1,991	67%	962	32%
S/DUK/SCEG-DUK//	0	650	651	201	0.05%	27	1%	0	0%	113	4%	2832	95%
S/SCEG/SC-CPLE//	0	3,895	99,994	199	0.01%	15	1%	0	0%	4	0%	2953	99%
SS/GTC/JEA-GTC//	0	409	958	198	0.06%	22	1%	0	0%	4	0%	2946	99%
F/JEA/JEA-SEC/JEA-SSN/	0	518	518	196	0.05%	46	2%	0	0%	80	3%	2846	96%
S/SCEG/SCEG-DUK//	515	2,020	5,121	184	0.01%	22	1%	0	0%	0	0%	2950	99%
SS/SOCO/SC-SOCO//	75	340	537	183	0.07%	23	1%	0	0%	0	0%	2949	99%

Appendix A (continued)

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/SCEG/SOCO-CPLE//	0	2,573	12,113	174	0.01%	48	2%	0	0%	720	24%	2204	74%
F/FPC/SOCO-SEC/SOCO-SSN/	0	139	358	168	0.15%	23	1%	4	0%	364	12%	2581	87%
SS/SOCO/TVA-SCEG/MULTIPATHALIAS/	0	47	131	159	0.32%	6	0%	16	1%	292	10%	2658	89%
S/CPL/SC-DUK//	1,013	3,285	4,527	155	0.01%	4	0%	0	0%	0	0%	2968	100%
S/DUK/CPLE-DUK//	0	2,279	6,550	155	0.01%	4	0%	0	0%	69	2%	2899	98%
S/MEAG/TVA-FPC//	None	None	None	143	0.00%	33	1%	0	0%	0	0%	2939	99%
S/MEAG/MEAG-JEA//	65	151	267	136	0.12%	15	1%	0	0%	0	0%	2957	99%
S/MEAG/DUK-MEAG//	0	110	205	135	0.17%	29	1%	0	0%	128	4%	2815	95%
SS/SOCO/TVA-DUK/MULTIPATHALIAS/	-26	388	816	132	0.05%	8	0%	0	0%	49	2%	2915	98%
S/DUK/TVA-SCEG//	0	129	164	131	0.19%	20	1%	0	0%	830	28%	2122	71%
S/MEAG/MEAG-SOCO//	2,501	2,641	2,994	125	0.01%	8	0%	0	0%	0	0%	2964	100%
SS/GTC/SC-TVA//	None	None	None	115	0.00%	8	0%	0	0%	0	0%	2964	100%
SS/GTC/SCEG-GTC//	23	81	107	114	0.20%	9	0%	3	0%	0	0%	2960	100%
F/FPC/SEC-FPC/SSO-FPC/	0	474	975	113	0.03%	39	1%	0	0%	4	0%	2929	99%
S/MEAG/MEAG-FPC//	65	151	267	113	0.10%	12	0%	0	0%	0	0%	2960	100%
S/TVA/LGEE-TVA//	0	2,828	3,000	111	0.01%	6	0%	0	0%	76	3%	2890	97%
SS/GTC/TVA-SCEG//	None	None	None	110	0.00%	27	1%	0	0%	0	0%	2945	99%
SS/GTC/GTC-SC//	3	183	297	105	0.07%	8	0%	0	0%	24	1%	2940	99%
SS/SOCO/DUK-SOCO//	36	658	1,018	101	0.02%	15	1%	0	0%	0	0%	2957	99%
S/TVA/AECI-SOCO//	0	1	419	100	0.17%	10	0%	0	0%	1,728	58%	1234	42%
SS/GTC/TVA-FPC//	None	None	None	99	0.00%	7	0%	0	0%	0	0%	2965	100%
SS/GTC/GTC-DUK//	0	237	512	94	0.05%	4	0%	0	0%	127	4%	2841	96%
S/SC/SCEG-DUK//	888	3,058	3,254	92	0.00%	8	0%	0	0%	0	0%	2964	100%
S/MEAG/DUK-JEA//	None	None	None	89	0.00%	28	1%	0	0%	0	0%	2944	99%
S/MEAG/SOCO-SC//	None	None	None	88	0.00%	11	0%	0	0%	0	0%	2961	100%
P/LGEE/TVA-LGEE//	0	1,420	1,424	79	0.01%	6	0%	0	0%	4	0%	2962	100%
S/TVA/SOCO-LGEE//	853	2,824	2,997	79	0.00%	6	0%	0	0%	0	0%	2966	100%
SS/GTC/SOCO-DUK//	None	None	None	79	0.00%	10	0%	0	0%	0	0%	2962	100%
S/TVA/DUK-TVA//	0	366	426	78	0.03%	18	1%	0	0%	72	2%	2882	97%
SS/SOCO/DUK-FL/MULTIPATHALIAS/	36	615	1,018	78	0.02%	21	1%	0	0%	0	0%	2951	99%
SS/GTC/JEA-SCEG//	None	None	None	77	0.00%	25	1%	0	0%	0	0%	2947	99%
S/DUK/DUK-TVA//	0	692	692	75	0.02%	19	1%	0	0%	71	2%	2882	97%
S/MEAG/JEA-SCEG//	None	None	None	75	0.00%	41	1%	0	0%	0	0%	2931	99%
S/CPL/CPLE-SC//	0	1,913	4,330	73	0.00%	5	0%	0	0%	30	1%	2937	99%
S/MEAG/FPC-SOCO//	None	None	None	72	0.00%	15	1%	0	0%	0	0%	2957	99%
S/TVA/AECI-DUK//	0	1	380	72	0.12%	9	0%	0	0%	1,711	58%	1252	42%
SS/SOCO/SCEG-TVA/MULTIPATHALIAS/	3	149	197	71	0.07%	4	0%	5	0%	3	0%	2960	100%
S/MEAG/DUK-FPC//	None	None	None	65	0.00%	23	1%	0	0%	0	0%	2949	99%
S/MEAG/SC-JEA//	None	None	None	64	0.00%	17	1%	0	0%	0	0%	2955	99%
S/SC/CPLE-SC//	0	1,157	2,162	64	0.01%	5	0%	0	0%	160	5%	2807	94%
S/MEAG/MEAG-SC//	0	39	63	61	0.19%	4	0%	4	0%	8	0%	2956	99%
S/AECI/TVA-AECI//	0	483	997	59	0.02%	6	0%	0	0%	986	33%	1980	67%
S/DUK/DUK-CPLE//	0	2,458	7,226	59	0.00%	11	0%	0	0%	97	3%	2864	96%
S/MEAG/SC-MEAG//	10	27	44	59	0.29%	4	0%	7	0%	0	0%	2961	100%
S/TVA/SOCO-AECI//	0	632	725	59	0.02%	6	0%	0	0%	838	28%	2128	72%
SS/GTC/GTC-JEA//	1	629	1,017	57	0.01%	8	0%	0	0%	4	0%	2960	100%
SS/GTC/DUK-GTC//	0	449	639	52	0.02%	11	0%	0	0%	16	1%	2945	99%
S/MEAG/SCEG-FPC//	None	None	None	49	0.00%	14	0%	0	0%	0	0%	2958	100%
S/TVA/AECI-CPLW//	0	1	276	46	0.09%	8	0%	0	0%	1,811	61%	1153	39%
SS/GTC/JEA-SOCO//	None	None	None	45	0.00%	3	0%	0	0%	0	0%	2969	100%
S/CPL/CPLE-DUK//	1,281	5,620	8,309	40	0.00%	7	0%	0	0%	0	0%	2965	100%
S/DUK/CPLE-SOCO//	0	2,064	2,335	40	0.00%	7	0%	0	0%	76	3%	2889	97%
F/SEC/JEA-SEC/JEA-SSN/	0	637	637	36	0.01%	9	0%	0	0%	80	3%	2883	97%
SS/GTC/JEA-MEAG//	None	None	None	36	0.00%	4	0%	0	0%	0	0%	2968	100%
S/SC/DUK-CPLE//	3,343	3,531	4,123	34	0.00%	1	0%	0	0%	0	0%	2971	100%
S/MEAG/SOCO-FPC//	None	None	None	33	0.00%	9	0%	0	0%	0	0%	2963	100%
S/MEAG/JEA-SOCO//	None	None	None	32	0.00%	6	0%	0	0%	0	0%	2966	100%
SS/SOCO/SCEG-SOCO//	3	149	197	32	0.03%	3	0%	1	0%	3	0%	2965	100%
S/MEAG/SC-FPC//	None	None	None	31	0.00%	7	0%	0	0%	0	0%	2965	100%
S/MEAG/TVA-SCEG//	None	None	None	31	0.00%	29	1%	0	0%	0	0%	2943	99%

Appendix A (continued)

Segment	ATC Min	ATC Median	ATC Max	MWhs	Loading Factor	Partially Used Intervals	%	Fully Used Intervals	%	Unavailable Intervals	%	Uncleared Intervals	%
SS/GTC/SCEG-TVA//	None	None	None	30	0.00%	6	0%	0	0%	0	0%	2966	100%
S/CPL/DUK-SCEG//	0	365	567	26	0.01%	2	0%	0	0%	782	26%	2188	74%
S/MEAG/GTC-MEAG//	1,020	1,816	2,196	26	0.00%	4	0%	0	0%	0	0%	2968	100%
S/MEAG/SCEG-JEA//	None	None	None	26	0.00%	6	0%	0	0%	0	0%	2966	100%
S/MEAG/SC-TVA//	None	None	None	25	0.00%	8	0%	0	0%	0	0%	2964	100%
S/SCEG/SOCO-DUK//	0	4,701	99,999	24	0.00%	6	0%	0	0%	709	24%	2257	76%
F/SEC/SEC-TEC/SSO-TEC/	0	552	729	22	0.01%	5	0%	0	0%	28	1%	2939	99%
F/TEC/SEC-TEC/SSO-TEC/	0	510	729	22	0.01%	5	0%	0	0%	28	1%	2939	99%
SS/GTC/SC-FPC//	None	None	None	21	0.00%	3	0%	0	0%	0	0%	2969	100%
S/SC/CPLE-SOCO//	0	3,205	3,997	19	0.00%	2	0%	0	0%	67	2%	2903	98%
S/SCEG/CPLE-SC//	0	3,677	99,999	18	0.00%	1	0%	0	0%	104	3%	2867	96%
S/MEAG/MEAG-DUK//	0	53	139	17	0.04%	5	0%	1	0%	72	2%	2894	97%
S/MEAG/SOCO-SCEG//	None	None	None	17	0.00%	9	0%	0	0%	0	0%	2963	100%
S/SCEG/SCEG-SC//	0	2,190	4,770	17	0.00%	4	0%	0	0%	4	0%	2964	100%
SS/GTC/GTC-FPC//	1	629	1,017	15	0.00%	3	0%	0	0%	4	0%	2965	100%
SS/GTC/TVA-JEA//	None	None	None	15	0.00%	5	0%	0	0%	0	0%	2967	100%
S/DUK/SC-CPLE//	0	1,853	2,899	14	0.00%	3	0%	0	0%	82	3%	2887	97%
SS/GTC/SC-JEA//	None	None	None	14	0.00%	3	0%	0	0%	0	0%	2969	100%
SS/GTC/GTC-TVA//	0	448	619	13	0.00%	1	0%	0	0%	4	0%	2967	100%
SS/GTC/SOCO-JEA//	None	None	None	12	0.00%	2	0%	0	0%	0	0%	2970	100%
S/MEAG/MEAG-SCEG//	0	6	15	11	0.17%	0	0%	5	0%	96	3%	2871	97%
F/FPC/SOCO-TEC//	0	127	358	10	0.01%	3	0%	0	0%	516	17%	2453	83%
S/CPL/DUK-SC//	332	2,643	4,267	10	0.00%	2	0%	0	0%	0	0%	2970	100%
S/MEAG/GTC-DUK//	None	None	None	10	0.00%	2	0%	0	0%	0	0%	2970	100%
SS/GTC/SOCO-SCEG//	None	None	None	10	0.00%	5	0%	0	0%	0	0%	2967	100%
SS/GTC/FPC-SOCO//	None	None	None	9	0.00%	2	0%	0	0%	0	0%	2970	100%
S/SCEG/CPLE-SCEG//	0	883	5,707	8	0.00%	1	0%	0	0%	798	27%	2173	73%
S/DUK/SCEG-TVA//	0	651	651	7	0.00%	1	0%	0	0%	20	1%	2951	99%
S/MEAG/SCEG-TVA//	None	None	None	4	0.00%	4	0%	0	0%	0	0%	2968	100%
S/MEAG/TVA-MEAG//	0	61	82	4	0.01%	2	0%	0	0%	76	3%	2894	97%
S/TVA/DUK-SOCO//	116	366	426	4	0.00%	2	0%	0	0%	0	0%	2970	100%
S/CPL/DUK-TVA//	0	262	308	3	0.00%	3	0%	0	0%	223	8%	2746	92%
S/DUK/DUK-CPLW//	0	476	484	3	0.00%	3	0%	0	0%	2	0%	2967	100%
S/TVA/CPLW-SOCO//	0	276	308	3	0.00%	3	0%	0	0%	223	8%	2746	92%
SS/GTC/SCEG-JEA//	None	None	None	2	0.00%	1	0%	0	0%	0	0%	2971	100%
S/MEAG/GTC-SCEG//	None	None	None	1	0.00%	1	0%	0	0%	0	0%	2971	100%
SS/GTC/FPC-MEAG//	None	None	None	1	0.00%	1	0%	0	0%	0	0%	2971	100%
F/FPC/FPC-FPC/FPC-FPCS/	2,416	3,594	4,176	0	0.00%	0	0%	0	0%	0	0%	2972	100%
F/FPC/FPC-GVL//	112	185	341	0	0.00%	0	0%	0	0%	0	0%	2972	100%
F/FPC/GVL-FPC//	0	404	497	0	0.00%	0	0%	0	0%	240	8%	2732	92%
F/FPC/GVL-FPC/GVL-FPCS/	0	404	497	0	0.00%	0	0%	0	0%	240	8%	2732	92%
F/FPC/GVL-SEC/GVL-SSN/	0	401	495	0	0.00%	0	0%	0	0%	164	6%	2808	94%
F/FPC/GVL-SOCO//	0	170	301	0	0.00%	0	0%	0	0%	384	13%	2588	87%
F/FPC/GVL-TEC//	0	399	495	0	0.00%	0	0%	0	0%	240	8%	2732	92%
F/FPC/SEC-FPC/SSN-FPCS/	0	256	1,111	0	0.00%	0	0%	0	0%	265	9%	2707	91%
F/FPC/SEC-FPC/SSO-FPCS/	0	474	975	0	0.00%	0	0%	0	0%	4	0%	2968	100%
F/FPC/SEC-GVL/SSN-GVL/	0	175	342	0	0.00%	0	0%	0	0%	208	7%	2764	93%
F/FPC/SEC-GVL/SSO-GVL/	0	179	342	0	0.00%	0	0%	0	0%	24	1%	2948	99%
F/FPC/SEC-TEC/SSN-TEC/	0	737	1,158	0	0.00%	0	0%	0	0%	420	14%	2552	86%
F/FPC/SEC-TEC/SSO-TEC/	0	552	1,042	0	0.00%	0	0%	0	0%	28	1%	2944	99%
F/FPC/SOCO-FPC/SOCO-FPCS/	0	126	358	0	0.00%	0	0%	0	0%	531	18%	2441	82%
F/FPC/SOCO-GVL//	0	121	297	0	0.00%	0	0%	0	0%	516	17%	2456	83%
F/FPC/TEC-FPC/TEC-FPCS/	1,279	2,650	3,312	0	0.00%	0	0%	0	0%	0	0%	2972	100%
F/FPC/TEC-GVL//	113	184	342	0	0.00%	0	0%	0	0%	0	0%	2972	100%
F/SEC/TEC-SEC/TEC-SSO/	0	366	630	0	0.00%	0	0%	0	0%	24	1%	2948	99%
F/TEC/SEC-FPC/SSO-FPC/	0	510	729	0	0.00%	0	0%	0	0%	28	1%	2944	99%
S/CPL/CPLE-SCEG//	0	365	567	0	0.00%	0	0%	0	0%	803	27%	2169	73%
S/CPL/CPLW-DUK//	97	575	1,257	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/CPL/CPLW-TVA//	0	276	308	0	0.00%	0	0%	0	0%	249	8%	2723	92%
S/CPL/DUK-CPLW//	77	262	519	0	0.00%	0	0%	0	0%	0	0%	2972	100%

Appendix A (continued)

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
S/CPL/SC-SCEG//	315	365	567	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/CPL/SCEG-DUK//	207	623	817	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/CPL/SCEG-SC//	0	623	817	0	0.00%	0	0%	0	0%	3	0%	2969	100%
S/CPL/TVA-CPLW//	0	276	308	0	0.00%	0	0%	0	0%	257	9%	2715	91%
S/DUK/CPLE-CPLW//	0	476	484	0	0.00%	0	0%	0	0%	29	1%	2943	99%
S/DUK/CPLE-SC//	0	1,398	2,656	0	0.00%	0	0%	0	0%	141	5%	2831	95%
S/DUK/CPLE-SCEG//	0	129	164	0	0.00%	0	0%	0	0%	825	28%	2147	72%
S/DUK/CPLE-TVA//	0	692	692	0	0.00%	0	0%	0	0%	20	1%	2952	99%
S/DUK/CPLW-SC//	0	768	1,243	0	0.00%	0	0%	0	0%	141	5%	2831	95%
S/DUK/CPLW-SCEG//	0	129	164	0	0.00%	0	0%	0	0%	814	27%	2158	73%
S/DUK/CPLW-SOCO//	0	850	1,243	0	0.00%	0	0%	0	0%	94	3%	2878	97%
S/DUK/CPLW-TVA//	0	692	692	0	0.00%	0	0%	0	0%	33	1%	2939	99%
S/DUK/SC-CPLW//	0	476	484	0	0.00%	0	0%	0	0%	61	2%	2911	98%
S/DUK/SC-SCEG//	0	137	164	0	0.00%	0	0%	0	0%	140	5%	2832	95%
S/DUK/SC-SOCO//	0	1,850	2,335	0	0.00%	0	0%	0	0%	61	2%	2911	98%
S/DUK/SC-TVA//	0	692	692	0	0.00%	0	0%	0	0%	74	2%	2898	98%
S/DUK/SCEG-CPLE//	0	651	651	0	0.00%	0	0%	0	0%	60	2%	2912	98%
S/DUK/SCEG-CPLW//	0	476	484	0	0.00%	0	0%	0	0%	61	2%	2911	98%
S/DUK/SCEG-SC//	296	651	651	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/DUK/SCEG-SOCO//	0	651	651	0	0.00%	0	0%	0	0%	11	0%	2961	100%
S/DUK/SOCO-CPLW//	0	476	484	0	0.00%	0	0%	0	0%	738	25%	2234	75%
S/DUK/SOCO-TVA//	0	692	692	0	0.00%	0	0%	0	0%	549	18%	2423	82%
S/DUK/TVA-CPLW//	0	476	484	0	0.00%	0	0%	0	0%	89	3%	2883	97%
S/DUK/TVA-SC//	0	692	692	0	0.00%	0	0%	0	0%	136	5%	2836	95%
S/DUK/TVA-SOCO//	0	692	692	0	0.00%	0	0%	0	0%	16	1%	2956	99%
S/MEAG/MEAG-GTC//	2,475	2,849	3,072	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/MEAG/MEAG-TVA//	45	109	132	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/MEAG/SCEG-MEAG//	5	17	23	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/SC/CPLE-DUK//	3,247	3,839	4,027	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/SC/CPLE-SCEG//	0	1,064	3,597	0	0.00%	0	0%	0	0%	158	5%	2814	95%
S/SC/DUK-SOCO//	2,255	3,205	3,997	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/SC/SCEG-CPLE//	0	2,353	3,189	0	0.00%	0	0%	0	0%	35	1%	2937	99%
S/SC/SCEG-SOCO//	0	2,953	3,255	0	0.00%	0	0%	0	0%	14	0%	2958	100%
S/SCEG/CPLE-DUK//	1,442	99,993	99,999	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/SCEG/CPLE-SOCO//	0	5,356	99,999	0	0.00%	0	0%	0	0%	55	2%	2917	98%
S/SCEG/DUK-CPLE//	0	99,908	99,999	0	0.00%	0	0%	0	0%	709	24%	2263	76%
S/SCEG/DUK-SC//	1,960	5,611	99,940	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/SCEG/DUK-SOCO//	99,798	99,923	99,999	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/SCEG/SC-DUK//	2,252	99,928	99,996	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/SCEG/SC-SOCO//	0	5,076	99,995	0	0.00%	0	0%	0	0%	4	0%	2968	100%
S/TVA/AECI-LGEE//	0	1	419	0	0.00%	0	0%	0	0%	1,689	57%	1283	43%
S/TVA/AECI-TVA//	0	1	380	0	0.00%	0	0%	0	0%	1,820	61%	1152	39%
S/TVA/CPLW-AECI//	0	276	308	0	0.00%	0	0%	0	0%	1,017	34%	1955	66%
S/TVA/CPLW-DUK//	0	276	308	0	0.00%	0	0%	0	0%	223	8%	2749	92%
S/TVA/CPLW-LGEE//	0	276	308	0	0.00%	0	0%	0	0%	223	8%	2749	92%
S/TVA/CPLW-TVA//	0	276	308	0	0.00%	0	0%	0	0%	223	8%	2749	92%
S/TVA/DUK-AECI//	0	366	426	0	0.00%	0	0%	0	0%	842	28%	2130	72%
S/TVA/DUK-CPLW//	0	276	308	0	0.00%	0	0%	0	0%	223	8%	2749	92%
S/TVA/DUK-LGEE//	116	366	426	0	0.00%	0	0%	0	0%	0	0%	2972	100%
S/TVA/LGEE-AECI//	0	632	725	0	0.00%	0	0%	0	0%	830	28%	2142	72%
S/TVA/SOCO-CPLW//	0	276	308	0	0.00%	0	0%	0	0%	223	8%	2749	92%
S/TVA/TVA-AECI//	0	632	725	0	0.00%	0	0%	0	0%	818	28%	2154	72%
S/TVA/TVA-LGEE//	527	2,824	2,997	0	0.00%	0	0%	0	0%	0	0%	2972	100%
SS/GTC/GTC-GTC//	25,504	25,735	25,735	0	0.00%	0	0%	0	0%	0	0%	2972	100%
SS/GTC/GTC-MEAG//	9,334	9,754	9,999	0	0.00%	0	0%	0	0%	0	0%	2972	100%
SS/GTC/GTC-SCEG//	0	26	72	0	0.00%	0	0%	0	0%	252	8%	2720	92%
SS/GTC/MEAG-GTC//	8,701	8,944	9,364	0	0.00%	0	0%	0	0%	0	0%	2972	100%
SS/GTC/TVA-GTC//	0	291	384	0	0.00%	0	0%	0	0%	4	0%	2968	100%
SS/SOCO/DUK-SC/MULTIPATHALIAS/	0	314	634	0	0.00%	0	0%	0	0%	19	1%	2953	99%
SS/SOCO/DUK-SCEG/MULTIPATHALIAS/	0	47	131	0	0.00%	0	0%	0	0%	292	10%	2680	90%

Appendix A (continued)

Segment	ATC			MWhs	Loading Factor	Partially Used		Fully Used		Unavailable		Uncleared	
	Min	Median	Max			Intervals	%	Intervals	%	Intervals	%	Intervals	%
SS/SOCO/DUK-TVA/MULTIPATHALIAS/	36	658	1,018	0	0.00%	0	0%	0	0%	0	0%	2972	100%
SS/SOCO/SC-DUK/MULTIPATHALIAS/	-26	286	528	0	0.00%	0	0%	0	0%	49	2%	2923	98%
SS/SOCO/SC-SCEG/MULTIPATHALIAS/	0	47	131	0	0.00%	0	0%	0	0%	292	10%	2680	90%
SS/SOCO/SCEG-DUK/MULTIPATHALIAS/	-26	141	197	0	0.00%	0	0%	0	0%	52	2%	2920	98%
SS/SOCO/SCEG-SC/MULTIPATHALIAS/	0	149	197	0	0.00%	0	0%	0	0%	22	1%	2950	99%