



June 30, 2023

Via Electronic Filing

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

RE: *Fourteenth Annual Informational Report of the Independent Auction Monitor
Docket Nos. ER09-88, ER17-514*

Dear Ms. Bose:

The Brattle Group (“Brattle”), as the Independent Auction Monitor (“IAM”) for the Southern Companies’ Day-Ahead and Hour-Ahead Energy Auctions in the Southern Balancing Authority Area (“Auction”), hereby submits its fourteenth annual informational report (the “Annual Informational Report”).

Consistent with prior annual reports, the Annual Informational Report, attached as Exhibit A, addresses the following: (1) the clearing price for each Auction; (2) the amount of energy offered and sold by each seller (identified by name) in each Auction; (3) the amount of energy bid on and purchased by each buyer in each Auction; (4) any instances where the IAM was unable to verify Southern Companies’ available capacity calculations or inputs; and (5) any instances where issues arose involving availability of or the terms for transmission service needed to accommodate an Energy Auction purchase. It also reports on the Southern Companies’ compliance with applicable Energy Auction Tariff requirements. The Annual Informational Report is submitted with our best efforts, as economists, to serve the purpose of the IAM as articulated in the Federal Energy Regulatory Commission’s orders.¹

Brattle is submitting a non-public and a public version of the Annual Informational Report. Brattle requests confidential and privileged treatment for the non-public version of the Annual Informational Report in accordance with 18 C.F.R. §§ 388.107 and 388.112. Brattle is authorized to represent that Southern Companies join in this request for confidential and privileged treatment. A justification for the

¹ *Southern Company Services, Inc.*, 125 FERC ¶ 61,316 (2008); *Southern Company Services, Inc.*, 134 FERC ¶ 61,226 (2011); *Alabama Power Company*, 158 FERC ¶ 61,131 (2017).

PUBLIC VERSION—REDACTED

redactions in the public version of the Annual Informational Report has been developed by Southern Companies, and is attached as Exhibit B.

Pursuant to 18 C.F.R. § 388.112(d) and (e), the following individuals should be notified of any request or decision to release the non-public version of the Annual Informational Report or any part thereof and should be given opportunity to comment on any request for release:

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Thank you for your attention to this matter. Please direct any questions concerning this submission to the undersigned.

Respectfully submitted,

/s/Dean M. Murphy

Dean M. Murphy

Attachments

cc: All Parties (with public version of Exhibit A)

PUBLIC VERSION—REDACTED

Exhibit A

Independent Auction Monitor's Annual Informational Report

(Public Version—Redacted)

Informational Report for The Southern Companies' Energy Auction

April 24, 2022 to April 23, 2023

PREPARED FOR



THE FEDERAL ENERGY
REGULATORY COMMISSION

SUBMITTED BY

The Brattle Group
Independent Auction Monitor

JUNE 30, 2023



Informational Report
for
The Southern Companies' Energy Auction
April 24, 2022 to April 23, 2023

Docket Nos. ER09-88, ER17-514

June 30, 2023

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The views expressed in this report are those of the authors and do not necessarily reflect the views of The Brattle Group, Inc. or Van Ness Feldman, LLP.

Table of Contents

I.	Introduction and Overview	1
II.	Clearing Price for Each Energy Auction.....	3
III.	Energy Auction Offerors.....	5
IV.	Energy Auction Bidders.....	8
V.	Changes in Auction and Auction Verification Protocols.....	9
VI.	Results of Monitoring.....	11
VII.	Legal Advisor’s Report on Compliance with Data Restrictions.....	16
VIII.	Conclusion	21

Appendices

Appendix A: IAM Protocols

Appendix B: IAM Issue Tracking Forms

Appendix C: Load Forecasting Uncertainty Percentages

Appendix D: HAE Cleared Auctions

I. Introduction and Overview

This is the fourteenth annual report reviewing the Southern Companies¹ Day-Ahead Energy (“DAE”) and Hour-Ahead Energy (“HAE”) auctions (collectively the “Energy Auction” or “Auction”), as administered by their agent Southern Company Services Inc. (“SCS”). This report has been prepared by The Brattle Group (“Brattle”), which serves as the Independent Auction Monitor (“IAM”), and is being provided to the Federal Energy Regulatory Commission (“FERC” or “Commission”) in order to provide the Commission with information regarding our ongoing monitoring of the Energy Auction. This report includes:

- a. The clearing price for each Auction that cleared;
- b. The amount of energy offered and sold by each seller in each Auction;
- c. The amount of energy bid on and purchased by each buyer in each Auction;
- d. Instances where the IAM was unable to verify SCS’s Available Capacity calculations, or inputs used in those calculations;
- e. Instances where issues arose involving the availability or terms of transmission service needed to accommodate an Energy Auction purchase;
- f. Changes in the IAM’s protocols;
- g. Any instances in which the IAM has reported complaints regarding the Energy Auction or other serious matters to FERC;
- h. Any instances of suspected Energy Auction manipulation or other questionable behavior related to the Energy Auction by any Auction Participant;
- i. Confirmation as to whether SCS complied with the Energy Auction Tariff² regarding the handling of Auction Participant confidential information; and
- j. Confirmation as to whether, in the judgment of the IAM, the Energy Auction is being properly administered in accordance with the Energy Auction Tariff, with due regard for its nature and complexity.

¹ Alabama Power Company, Georgia Power Company, Gulf Power Company, Mississippi Power Company, and Southern Power Company are referred to collectively as “Southern Companies.” Southern Companies sold Gulf Power Company to NextEra Energy effective January 1, 2019, with Gulf Power continuing to operate as a member of the Southern Pool through a transition period that ended July 13, 2022, as discussed in Section V.A.

² Southern Companies’ market-based rate tariff includes several relevant segments: General Tariff Provisions; Rules of the Energy Auction (“Auction Rules”); Rules on Southern Companies’ Energy Auction Participation (“Participation Rules”); and Appendices DA-1, DA-2, HA-1, and HA-2 to the Participation Rules. Alabama Power Company Market Based Rate Tariff and Southern’s Tariff Volume No. 4 (effective February 8, 2017). We refer to these documents collectively as “the Tariff.”

The review period for this informational report is April 24, 2022 through April 23, 2023.³ The rest of the report is organized as follows. Section II summarizes the clearing price of each cleared Firm-LD and Recallable DAE auction, and each cleared HAE auction. Sections III and IV provide information about the participation of Energy Auction offerors and bidders, respectively. Section V summarizes changes in the Auction and in our monitoring and verification protocols during the current review period. Section VI summarizes the results of our monitoring, including those instances in which SCS did not fully comply with the Tariff. Section VII contains the summary report of the IAM’s legal advisor, Van Ness Feldman, LLP (“Van Ness Feldman”), which assisted in monitoring compliance with the data restrictions contained in the Tariff. Lastly, Section VIII provides our conclusions and a summary of our observations.

SUMMARY OF CONCLUSIONS

To the best of our ability to ascertain, and with the specific exceptions identified in this report, we have found that SCS has complied with the requirements of the Tariff throughout the review period. We found no evidence of attempts to manipulate the Auction or other questionable behavior by any Auction Participant, nor did we receive any complaints regarding the availability or the terms of transmission service needed to accommodate an Energy Auction purchase. Van Ness Feldman’s review of compliance with the Tariff’s data restrictions found that SCS has been diligent in its efforts to comply with the applicable Tariff requirements related to safeguarding confidential bid and offer information during the review period, and further found no evidence that SCS marketing function employees had any improper access to confidential bid or offer information. Lastly, we did not receive any complaints relating to the Energy Auction or discover other serious matters that would have prompted an interim report to the Commission.

³ Throughout this report, we sometimes refer to the current review period as “Year 14,” and to the previous review period, covering April 24, 2021 through April 23, 2022, as “Year 13.”

II. Clearing Price for Each Energy Auction

During the review period, two DAE auctions cleared for Firm-LD energy (*i.e.*, two auctions matched a buyer’s bid with a seller’s offer) and six DAE auctions cleared for Recallable energy (*i.e.*, six matched a buyer’s bid with a seller’s offer), as shown in Table 1. A total of 1,600 MWh of Firm-LD energy cleared the DAE auction at a weighted average price of [REDACTED]. A total of 9,600 MWh of Recallable energy cleared the DAE auction at a weighted average price of [REDACTED]. In the prior year (Year 13), five DAE auctions cleared (all Firm-LD).

Table 1
DAE Cleared Auctions: Clearing Price and Quantity

Delivery Date	Product	Offer MW	Bid MW	Lowest Offer (\$/MWh)	Highest Bid (\$/MWh)	Cleared MW	Clearing Price (\$/MWh)	Winning Bidders	Total Number of Bidders	Winning Offerors
4/27/2022	Firm-LD	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	81	[REDACTED]	[REDACTED]	[REDACTED]
5/4/2022	Recall	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	83	[REDACTED]	[REDACTED]	[REDACTED]
5/13/2022	Recall	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	88	[REDACTED]	[REDACTED]	[REDACTED]
5/20/2022	Recall	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	129	[REDACTED]	[REDACTED]	[REDACTED]
6/14/2022	Firm-LD	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	153	[REDACTED]	[REDACTED]	[REDACTED]
6/14/2022	Recall	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	134	[REDACTED]	[REDACTED]	[REDACTED]
6/20/2022	Recall	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	130	[REDACTED]	[REDACTED]	[REDACTED]
6/23/2022	Recall	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	119	[REDACTED]	[REDACTED]	[REDACTED]

During the current review period, 395 HAE auctions cleared. This is significantly fewer than the prior year (Year 13), which had 793 cleared auctions, though it is worth noting that Year 13 showed the largest number of clearings in the history of the Auction, and that the number of HAE clearings observed in Year 14 remains higher than in other recent years (201 in Year 12 and 219 in Year 11). The lower number of HAE auction clearings in Year 14 is partially attributable to reduced participation of third parties in the HAE auction during this review period, as discussed in Sections III and IV below. A monthly summary of HAE auction clearings is provided in Table 2, with detail on individual clearings provided in Appendix D. [REDACTED]

[REDACTED] A total of 41,014 MWh cleared through the HAE auction, less than half the amount cleared in Year 13 (87,418 MWh), but more than earlier years. The transaction size ranged from 3 to 400 MW, with a weighted-average clearing price of [REDACTED].

Table 2
Monthly Summary of HAE Auction Clearings

<i>Month</i>	<i>Number of Clearings</i>	<i>Average MW Offered in Cleared Auctions</i>	<i>Average MW Bid in Cleared Auctions</i>	<i>Average MW Cleared</i>	<i>Clearing Price (Weighted Average \$/MWh)</i>
April 24 - 30, 2022	22				
May 2022	60				
June 2022	54				
July 2022	0				
August 2022	14				
September 2022	1				
October 2022	24				
November 2022	28				
December 2022	16				
January 2023	30				
February 2023	9				
March 2023	64				
April 1 - 23, 2023	73				
Total/Average	395				

III. Energy Auction Offerors

Table 3 lists the 26 registered Auction Participants for the Energy Auction. In Year 14, no new Auction Participants were added, and none were removed.

Table 3
Registered Auction Participants during the Review Period

<i>Company Acronym</i>	<i>Company Name</i>
AEC	PowerSouth Energy Cooperative
AECI	Associated Electric Cooperative, Inc.
AEM	ArLight Energy Marketing, LLC
BMLP	Brookfield Energy Marketing LP
CALPINE	Calpine Energy Services, L.P.
CCG	Constellation Energy Commodities Group
COEI	Cooperative Energy, Inc.
CONOCO	ConocoPhillips Company
CPLC	Progress Energy Carolinas, Inc.
DESC	Dominion Energy South Carolina, Inc.
DUK	Duke Energy Carolinas, LLC
EDF	EDF Trading North America, LLC
FEMT	BNP Paribas Energy Trading GP
FPC	Progress Energy Florida, Inc.
JPMVEC	JP Morgan Ventures Energy Corporation
MACQUARIE	Macquarie Energy LLC
MLCI	Merrill Lynch Commodities Inc.
OPC	Oglethorpe Power Corporation
PPL	PPL EnergyPlus, LLC
REMC	Rainbow Energy Marketing Corporation
SOCO	Southern Company Services, Inc.
TEA	The Energy Authority
TNSK	Tenaska Power Services Co.
TVA	Tennessee Valley Authority
UPP	Union Power Partners, LP
WRGS	Westar Energy, Inc.

[REDACTED] (SCS, [REDACTED]) offered hour-ahead energy in the HAE auction, [REDACTED]. Third-party participants [REDACTED] offered energy into a total of [REDACTED] HAE auctions (2.0% of the 8,760 HAE auctions), [REDACTED] auctions with third-party offers observed in Year 13.

[REDACTED] (SCS [REDACTED]), offered Firm-LD energy in at least one DAE auction, and [REDACTED] offered Recallable energy in at least one DAE auction; [REDACTED] in the DAE auction relative to Year 13. Third-party participants submitted offers into a total of [REDACTED] out of 254 Firm-LD DAE auctions [REDACTED] of the 254 Recallable energy DAE auctions.

SCS offered energy into all of the HAE and DAE auctions, as it is required to do, with the following exceptions:

- 21 Firm-LD DAE auctions (8.3% of the 254 Firm-LD DAE auctions),
- 3 Recallable DAE auctions (1.2% of the 254 Recallable DAE auctions), and
- 77 HAE auctions (0.9% of the 8,760 HAE auctions).

The lack of SCS offers into the 21 Firm-LD and the 3 Recallable DAE auctions is explained by the lack of available capacity, in which case SCS was not required to offer energy into these auctions. The lack of offers in 77 HAE auctions did constitute instances of non-compliance, as discussed further in Section VI.A.

Table 4 shows the corresponding amounts of energy offered into the HAE and DAE auctions by each participant. Across all the auctions, 42.0 TWh of energy were offered, a decrease relative to the 51.0 TWh of energy offered in Year 13.

SCS accounted for the vast majority of offered energy in each of the auctions—approximately 99.8%, across both the DAE and HAE auctions. There [REDACTED] in the DAE auction [REDACTED] in the HAE auction. The average amount of capacity offered into the DAE auctions was [REDACTED] of Firm-LD and [REDACTED] of Recallable energy, [REDACTED] the Year 13 averages of [REDACTED] and [REDACTED], respectively. For the HAE auction, an average of [REDACTED] was offered, the Year 13 average [REDACTED].⁴

⁴ Averages reflect total offered quantities across all Firm-LD DAE auctions, Recallable DAE auctions, and HAE auctions, though not all auctions had offers. Since most auctions did have offers, the average quantities across auctions that had an offer was slightly higher: [REDACTED] for Firm-LD, [REDACTED] for Recallable, and [REDACTED] for HAE.

Table 4
Quantity of Energy Offered in DAE and HAE Auctions, by Participant (MWh)

<i>Participant</i>	<i>HAE</i>	<i>DAE</i>	
		<i>Firm LD</i>	<i>Recallable</i>
SOCO	28,021,235 (99.9%)	8,801,600 (99.4%)	5,118,400 (100.0%)

* Figures in parentheses show percent of total energy offered in each Auction, respectively, over the year.

IV. Energy Auction Bidders

Table 5 shows the MWh quantities of energy bids by each participant in the HAE and DAE auctions. SCS and [REDACTED] bid into the HAE auction. Third-party participants bid into [REDACTED] HAE auctions ([REDACTED] of all HAE auctions), which is below the [REDACTED] auctions with third-party bids in Year 13. We note that Year 13 showed the largest number of HAE auctions with third-party bids in the history of the Auction, and that the number observed in Year 14 is still significantly higher than that observed in earlier years ([REDACTED] in Year 12 and [REDACTED] in Year 11). Participation by SCS as a bidder [REDACTED] in Year 13, with SCS placing bids in [REDACTED] of HAE auctions, versus [REDACTED] in Year 13. In the DAE auction, [REDACTED] (SCS [REDACTED]) bid into at least one Firm-LD auction, [REDACTED] bid for Recallable energy. The total number of Firm-LD DAE auctions with third-party bids was [REDACTED] in Year 14, [REDACTED] Firm-LD DAE auctions with third-party bids in Year 13. Third parties placed bids in a total of [REDACTED] Recallable DAE auctions in Year 14, compared [REDACTED] in Year 13.

Across all the auctions, approximately 2.19 TWh of energy bids were submitted, with [REDACTED] of this volume submitted through the HAE auctions. SCS accounted for [REDACTED] of the total bid volume across the DAE and HAE auctions. The average amount of capacity bid into the Firm-LD DAE auctions was [REDACTED], [REDACTED] average in Year 13. The average amount of energy bid into the Recallable DAE auctions was [REDACTED], [REDACTED] in Year 13. For the HAE auction, the average amount of energy bid was [REDACTED] average in Year 13.⁵

⁵ Averages reflect total bid quantities across all Firm-LD DAE auctions, Recallable DAE auctions, and HAE auctions, though not all of these had bids. The average total bid quantity in Firm-LD DAE auctions that had a bid was [REDACTED], the average total bid quantity in Recallable DAE actions that had a bid was [REDACTED], and the average total bid quantity in HAE auctions that had a bid was [REDACTED].

Table 5
Quantity of Energy Bid in DAE and HAE Auctions, by Participant (MWh)

Participant	HAE	DAE	
		Firm LD	Recallable
[REDACTED]			

* Figures in parentheses show percent of total energy bid

V. Changes in Auction and Auction Verification Protocols

A. GULF POWER SALE

As described in the past four annual reports, Southern Companies sold Gulf Power Company (“Gulf Power”) to NextEra Energy, effective January 1, 2019, with Gulf Power continuing to be a member of the Southern Pool for a five-year transition period following the sale. Gulf Power, which was formally merged with Florida Power & Light Company effective January 1, 2021, could elect to leave the Southern Pool prior to the end of the five-year period. The transition period was terminated on July 13, 2022.⁶ We verified that, during the transition period, Southern Companies continued to manage those Gulf Power assets that remained part of the Southern Pool, and Gulf Power’s remaining generation assets and its load obligations continued to be included in the determination of Southern Companies’ offers into the Auction. Beginning on July 14, 2022, and

⁶ Notice of Effective Date for Amended and Restated Southern Company System Intercompany Interchange Contract, Docket No. ER22-1820 (July 29, 2022).

consistent with the termination of the transition period, the remaining Gulf Power assets and load obligations were removed from Southern Companies' computation of offers into the Auction.

B. CHANGES IN MONITORING PROTOCOLS

Our processes and accompanying automated “tools” that make the needed calculations to validate Available Capacity, Seller Offer Prices (“SOPs”), and the clearing price for each Auction are set forth in our protocols. These protocols were created and tested during the initialization phase of our monitoring assignment, prior to the start of the Auction, and have been updated as needed to reflect new information, changes, and improvements. The current versions of our 10 protocols are shown in Appendix A. They include:

Protocol I—Monitoring of SCS's daily load forecasts

Protocol II—Monitoring of SCS's daily load forecast uncertainty (“LFU”) calculations

Protocol III—Monitoring SCS's bilateral transactions into the Southern Balancing Authority Area during the Energy Auction bid periods

Protocol IV—Monitoring of SCS's unit outage data

Protocol V—Verifying DAE Available Capacity calculations and the associated SOPs, as well as the final SOP curve submitted to OATI

Protocol VI—Verifying the HAE Residual Supply Curve calculations and the associated SOPs, as well as verification of the final SOP curve submitted to OATI

Protocol VII—Verifying SCS's compliance with the Tariff regarding the treatment of cleared Recallable energy, when applicable

Protocol VIII—Verifying Energy Auction clearing, when applicable

Protocol IX—Assessing availability of transmission services for energy sold through the Energy Auction

Protocol X—Monitoring of Third-Party Energy Auction Participants

Our protocols are living documents that are modified as needed. In Year 14, there was one change to our protocols, as summarized in Table 6. Only this single change to our protocols during the current review period is discussed here.

Table 6
Summary of Changes to IAM Protocols in Year 14

<i>Protocol</i>	<i>Changes in Year 14</i>
I. Load Forecasting	No changes
II. Load Forecasting Uncertainty	Updated LFU percentages
III. Purchases and Sales	No changes
IV. Outages	No changes
V. DAE Available Capacity and SOP Verification	No changes
VI. HAE Available Capacity and SOP Verification	No changes
VII. Recallable energy Verification	No changes
VIII. Auction Clearing Price Verification	No changes
IX. Assessment of Transmission Services for Energy Auction Purchases	No changes
X. Monitoring of Third-Party Participation	No changes

Protocol II—Load Forecast Uncertainty Protocol

As in previous years, SCS performed an annual revision of LFU percentage values for use in the DAE auction, taking effect on August 1, 2022. We independently verified these values, which are summarized in Appendix C, and have incorporated them into our daily monitoring.

VI. Results of Monitoring

During the current review period, our daily and periodic monitoring activities revealed eleven instances of non-compliance. These are summarized in Table 7 below, grouped into five types:

1. Failure to submit offer curves in the HAE auction due to a deliberate decision by SCS to temporarily suspend HAE auction submissions over a multi-day period (one instance),
2. Failure to submit offer curves in the HAE auction due to technical issues (three instances),
3. Failed offer curve submission in the HAE auction (one instance),
4. Capacity exclusions in the DAE auction (five instances), and
5. Bilateral trade executed during the HAE Auction Bid Period (one instance).

As described in Section III, SCS offered energy into all of the HAE and DAE auctions, as it is required to do, with the following exceptions:

- 21 Firm-LD DAE auctions (8.3% of the 254 Firm-LD DAE auctions),
- 3 Recallable DAE auctions (1.2% of the 254 Recallable-LD DAE auctions), and
- 77 HAE auctions (0.9% of the 8,760 HAE auctions).

The lack of SCS offers into the 21 Firm-LD and the 3 Recallable DAE auctions are explained by the lack of available capacity for those auctions, in which case SCS was not required to offer energy. The lack of offers in 77 HAE auctions did constitute instances of non-compliance. These are described in more detail in Section VI.A below.

In this review period, we observed a similar number of non-compliant events relative to Year 13. The overall frequency of instances of non-compliance continues to be reasonably low.

Table 7
Instances of Non-Compliance in Year 14

<i>Type of Event</i>	<i>Period Affected by Event</i>
I. Failure to submit offer curves in the HAE auction – SCS decision to temporarily suspend HAE auction submissions	1. 71 HAE auctions (between 12/23/2022 HE23 and 12/26/2022 HE21)
II. Failure to submit offer curves in the HAE auction – Technical Issues	2. 1 HAE auction (5/26/2022 HE23) 3. 1 HAE auction (6/7/2022 HE8) 4. 3 HAE auctions (2/24/2023 HE5, 2/25/2023 HE9, and 2/26/2023 HE12)
III. Failed offer curve submission in the HAE auction	5. 1 HAE auction (9/8/2022 HE21)
IV. Capacity exclusions in the DAE auction	6. 1 DAE auction (4/26/2022) 7. 1 DAE auction (9/23/2022) 8. 11 DAE auctions (between 9/27/2022 and 11/11/2022) 9. 1 DAE auction (12/29/2022) 10. 1 DAE auction (2/16/2023)
V. Bilateral trade executed during the HAE Auction Bid Period	11. 1 HAE auction (1/22/2023 HE11)

In the next section, we briefly describe these non-compliant events. For more detail on these issues, see the issue tracking forms included in Appendix B.

A. NON-COMPLIANT EVENTS

The first type of non-compliant event involved the failure to submit offer curves for 71 consecutive HAE auctions beginning on 12/23/2022, as a result of the deliberate decision by SCS to suspend the service that submits offers into the HAE auction. On 1/17/2023 SCS explained that they made the decision to suspend the service that sends offer curves to OATI webMarket [REDACTED]

[REDACTED] . SCS further explained that, over the course of the day on 12/23/2022, [REDACTED]

[REDACTED] . SCS stated that while these changes resulted in SCS having no capacity to offer, they found that their offer submission service was continuing to make offers into OATI webMarket.

Upon investigation, the SCS Technology Organization found a software bug whereby their system incorrectly interpreted the zero MW curves being generated as invalid offer curves. When their

system did not detect a valid offer curve, it relied on previously-developed contingency curves as the basis for submitting offers into OATI webMarket. These contingency curves had been developed earlier in the day and reflected some available capacity, though did not necessarily take into account the latest information on fuel availability and other constraints.

SCS stated that the objective of disabling their offer submission service was to prevent the software from sending contingency curves to OATI webMarket that would show available capacity that was not truly available. SCS explained that if transactions were made for capacity that was not actually available, then traders would have to dedicate time to contact counterparties to clarify that SCS would not be able to serve the sale. SCS stated that, [REDACTED], the decision was made to turn off their offer submission service in order to allow traders to focus on their core duties. [REDACTED] on 12/26/2022, the offer submission service was restored by SCS personnel.

This action resulted in Southern not making offers into a total of 71 auctions between 12/23/2022 HE23 and 12/26/2022 HE21. Brattle analyzed detailed hourly resource level data to determine whether or not capacity should have been offered into each of the auctions in question. Our analysis revealed [REDACTED], some capacity was available and should have been offered into a number of the affected auctions. For 59 of the 71 auctions affected, we confirmed that there was no available capacity for offer into the Auction. For nine of the 71 auctions, our analysis suggests that some capacity was available for submission into the Auction. For the remaining three HAE auctions between 12/23/2022 HE23 and 12/24/2022 HE1 (the first three of the 71 affected auctions), we did not have sufficient information to confirm whether or not there was available capacity at the time an offer might have been submitted. For these three auctions, the only data available from SCS was based on outdated contingency curves developed several hours prior to the delivery hours in question. While an analysis of these outdated data did suggest that capacity appeared to be available at the time the data had been developed several hours earlier, we cannot definitively confirm whether capacity would have been available based on then-current information. [REDACTED]

[REDACTED]

Our analysis of third-party offers revealed that the outcomes of 5 auctions were affected, and that [REDACTED] would have cleared had SCS submitted the correct offers into the auctions in question. [REDACTED]

[REDACTED]

For all the auctions discussed above, we understand that the Tariff requires SCS to calculate and submit offer curves reflecting whatever capacity was actually available, even if it is zero. [REDACTED]

The second type of non-compliant event involved three instances of failure to submit offer curves in the HAE auction (numbers 2–4 in Table 7 above). These events resulted from technical issues around the offer development and submission process, but with different circumstances or root causes depending on the case:

- The first instance occurred as a result of an internal failure, whereby the tool used for submitting offer curves to OATI was temporarily moved to a different server in order to accommodate routine maintenance. The server to which the tool was moved encountered an error with an authentication certificate, which resulted in the failure to connect to OATI and submit an offer curve for 5/26/2022 HE23. This failure to submit an offer did not have an impact on the outcome of the Auction as no third-party bids were submitted for this hour.
- The second instance of this type of event occurred when the system used for submitting offers into OATI did not detect HAE offers, due to a problem with [REDACTED], the tool used to develop offer curves. Contingency curves had been previously developed and were submitted to the OATI platform for the HAE auctions beginning on 6/6/2022 HE21 through 6/7/2022 HE7. Starting with 6/7/2022 HE8, no further contingency curves were available for submission to the OATI platform, preventing the submission of offers for this hour. With the aim of preventing this from happening again in the future, SCS implemented an advanced notification system, which would issue notifications up to 12 hours in advance when contingency curves are in use. This failure to submit an offer did not have an impact on the outcome of the Auction as no third-party bids were submitted for this hour.
- The third instance of this type occurred as the result of an internal failure. SCS explained that, as their IT team worked on implementing a fix to the issue that gave rise to the suspension of HAE auction submissions during December 23–26, 2022, they uncovered another issue that resulted in the three failed submissions on 2/24/2023 HE5, 2/25/2023 HE9, and 2/26/2023 HE12. SCS further explained that they discovered an error by which the service that is used to develop HA offer curves could develop erroneous or incomplete “zero” MW offer curves. This had not been an issue prior to February 2023, as the tool used to submit offer curves to OATI would reject zero MW curves. The error was corrected and a fix was put into production on March 29, 2023. The failure to submit offers did not have an impact on the outcome of the Auction as no third-party bids were submitted for these hours.

The third type of non-compliant event (number 5 in Table 7 above) occurred when SCS attempted to submit an offer curve for the HAE auction for 9/8/2022 HE21, but was unable to successfully establish a connection with OATI to enable offer curve submission. SCS further explained that the failed submission occurred due to a planned OATI network test, in which OATI disabled two redundant network links to test the system’s ability to route traffic via a third link. SCS stated that prior to the event they received a notice about this network test, which indicated that there would not be an impact to SCS’s ability to submit offer curves. OATI stated that no other OATI customers reported problems, and that this network test would not have prevented entities from submitting

bids into webMarket. This failure to submit an offer did not have an impact on the outcome of the Auction as no third-party bids were submitted for this hour.

The fourth type of non-compliant event involved five instances of discrepancies in the computation of available capacity for the DAE auction (numbers 6–10 in Table 7 above). These events resulted from technical issues or administrative oversights around the offer development, but with different circumstances or root causes depending on the case:

- The first of these instances involved an error in the computation of SCS's daily fixed schedule obligations, resulting in the exclusion of [REDACTED] from its computation of Available Capacity for the DAE auction on 4/26/2022. SCS confirmed that the capacity was inadvertently excluded from the DAE auction due to the presence of duplicate entries in the tool that is used to compute Available Capacity. This discrepancy resulted in SCS's offers exceeding the SOP cap. This event had no impact on the Auction outcome as no third-party bids were submitted.
- The second instance of this type occurred as a result of a discrepancy in the outage information for [REDACTED], affecting offers for the DAE auction [REDACTED]. SCS explained that the plant was expected to go on outage [REDACTED] and that this information was incorporated in the computation of Available Capacity for this date. However, the plant canceled the outage and this cancellation was not incorporated in the final computation of Available Capacity. As a result, the unit was excluded from SCS's offers, which resulted in offers exceeding the SOP cap. This event had no impact on the Auction outcome as no third-party bids were submitted.
- The third instance involved discrepancies in unit commitment data [REDACTED] [REDACTED], and affected 11 DAE auction flowdates between [REDACTED]. SCS explained that this was due to a programming error that resulted in the inadvertent exclusion of certain capacity from the DAE auction. Brattle analyzed hourly unit commitment data for the units and dates in question, which affected a maximum of [REDACTED] [REDACTED]. While the capacity [REDACTED] appeared to be reserved for SCS use for the relevant delivery dates, the hourly unit commitment data showed that the capacity in question was not reserved for SCS use and should have been offered into the DAE auction. SCS was able to replicate the error, and implemented a fix to prevent this from occurring in the future. This discrepancy resulted in SCS's offers exceeding the SOP cap. This issue did not have an impact on the outcome of the Auction, either due to the absence of third-party bids, or because the maximum third-party bid was below SCS's minimum offer.
- The fourth of these instances involved an error in the computation of SCS's daily obligations, resulting in the exclusion of [REDACTED] from its computation of Available Capacity for the DAE auction on 12/29/2022. SCS explained that the capacity was inadvertently excluded from the DAE Auction, as the model had not been updated with the most recent load forecast information. This discrepancy resulted in SCS's offers exceeding the SOP cap. This event had no impact on the Auction outcome as no third-party bids were submitted.

- The last instance of this type resulted from an error in the computation of load forecast uncertainty for DAE auction flowdate 2/16/2023. SCS explained that when configuring the daily runs, the user entered the incorrect clearing date. As a result of this error in clearing date, the model incorrectly computed the amount reserved for load forecast uncertainty, resulting in the exclusion of [REDACTED] from the computation of Available Capacity and offers exceeding the SOP cap. This event had no impact on the Auction outcome as no third-party bids were submitted.

The fifth type of non-compliant event in Year 14 involved a bilateral sale into the Southern BAA that was conducted outside of the Energy Auction. On [REDACTED] SCS entered into a bilateral transaction [REDACTED]. The deal took place on [REDACTED]. This event had no impact on the Auction outcome as auction clearing is not affected by the execution of a bilateral sale during the Auction Bid Period.

B. MONITORING OF AUCTION SPREAD POSTING

We have continued to monitor SCS's voluntary bid-offer spread posting policy in Year 14. The bid-offer spread was computed accurately and posted for all auctions that had at least one bid and one offer from different entities, the necessary condition for posting.

VII. Legal Advisor's Report on Compliance with Data Restrictions

The Auction Rules and Participation Rules in the Tariff contain restrictions concerning the treatment of confidential bid and offer information. Van Ness Feldman reviewed Southern Companies' compliance with the Tariff's data restrictions related to confidential bid and offer information, and reports on its review in this Section.

A. ANNUAL REVIEW

Van Ness Feldman conducted its annual review for the fourteenth review period in May and June of 2023. In conducting its review, Van Ness Feldman propounded written inquiries and requests for documents. In addition to reviewing documents and written responses to questions produced by SCS, Van Ness Feldman conducted telephone interviews with the two SCS employees who served in the role of Southern Auction Administrator during the review period. Van Ness Feldman also conducted a phone interview with three representatives of TranServ International, Inc. ("TranServ"), the Independent Auction Administrator, who are responsible for the Independent Auction Administrator functions.

SCS has been fully cooperative during this annual review. It has answered all questions, provided the requested documents, and made its employees available for interviews. TranServ has also been cooperative in making representatives available for interview.

B. FINDINGS

The review conducted by Van Ness Feldman found that SCS has been diligent in its efforts to comply with the Tariff's requirements related to confidential bid and offer information during the review period. Findings on specific Tariff requirements are detailed below.

1. Position of Auction Administrator

The Tariff provides that only employees holding specific positions listed in Section 2.1 of the Participation Rules may serve as Southern Auction Administrators. During the review period, two SCS employees were designated as Southern Auction Administrators. Specifically, one SCS employee served as the primary Southern Auction Administrator and the second served as the back-up Southern Auction Administrator. Each of the Southern Auction Administrators held a position listed in Section 2.1 during the review period: one was a Senior Contract Analyst and later a Project Manager, and the other was a Pool Bill Operations Supervisor. The Southern Auction Administrator who was a Senior Contract Analyst became a Project Manager in May 2022.

Section 2.1 of the Participation Rules provides that a Project Manager who is “[r]esponsible for leading, coordinating, and supporting the development and implementation of policies regarding strategic issues in order to promote consistency in regulatory matters at the federal level,” reports to “Regulatory Affairs and Energy Policy (a subdepartment within the Generation Compliance Organization),” and is “[w]ithin the Compliance Organization, which ultimately reports to the Southern Company Compliance Officer and General Counsel” may serve as a Southern Auction Administrator.⁷ This Southern Auction Administrator's new Project Manager position is consistent with the terms of Section 2.1, except that the Project Manager position is housed in the Operations Compliance department, not Regulatory Affairs and Energy Policy. This discrepancy does not appear to create any incremental risk of noncompliance with the data confidentiality requirements in the Tariff.

In May 2023, following completion of the review period, the Southern Auction Administrator who was Pool Bill Operations Supervisor was promoted to Pool Settlement Manager. Section 2.1 of the Participation Rules provides that a Pool Bill Operations Supervisor, who is “[r]esponsible for providing oversight and direction to Contract Analysts” who are in turn “coordinating, managing and administering contract information related to the [Intercompany Interchange Contract (IIC)], producing the monthly energy billings pursuant to the IIC, and providing support in connection with the preparation and submission of data and other information to regulatory agencies” may serve as a Southern Company Administrator.⁸ The Pool Settlement Manager oversees the work of the Pool Bill Operations Supervisor. Pool Settlement Manager is not a position listed in Section 2.1 of the Participation Rules. This discrepancy does not appear to create any incremental risk of noncompliance with the data confidentiality requirements in the Tariff.

⁷ Participation Rules § 2.1.

⁸ *Id.*

2. Access to Confidential Bid and Offer Information

The Participation Rules require that a Southern Auction Administrator may only access confidential third-party bid or offer information⁹ if directed to do so by the IAM, or for the purpose of complying with posting requirements.¹⁰ The Tariff further provides that “[a]ll Bid Information and Offer Information submitted to the Auction Administrator shall be used by the Auction Administrator only for auction administration and audit purposes.”¹¹

SCS reported that the only handling of confidential third-party bid or offer information by a Southern Auction Administrator during the review period was in connection with the monthly receipt and posting of certain bid and offer information from four months prior.

Consistent with the revised Procedures for Southern Company Energy Auction Administration, dated July 18, 2014, neither of the Southern Auction Administrators had an Auction Administrator user ID for webMarket¹² during the review period. Instead, under those procedures, in the event the Southern Auction Administrator needed to access third-party confidential bid and offer information, the Southern Auction Administrator would have to request a temporary Auction Administrator user ID from the Independent Auction Administrator. The Southern Auction Administrators reported that they did not request a temporary Auction Administrator user ID or access any third-party confidential bid or offer information through webMarket during the review period. TranServ confirmed that it had not issued a temporary Auction Administrator user ID to either of the Southern Auction Administrators during the review period.

The primary Southern Auction Administrator has webMarket user status as Buyer Company Administrator/Buyer Security Administrator/Seller Company Administrator/Seller Security Administrator, which permits her to access Southern Companies’ confidential bid and offer data, but not the bid and offer data of third parties. During the review period, the primary Southern Auction Administrator periodically accessed webMarket to, for instance, reset SCS employee passwords or review data on SCS transactions, but did not use webMarket in ways that would give her access to confidential third-party bid or offer information.¹³ The back-up Southern Auction Administrator did not access webMarket during the review period.

⁹ Bid information and offer information are defined as prices, terms, and conditions under which a bidder offers to purchase or an offeror offers to sell energy in the Auction. Auction Rules §§ 2.4, 2.41.

¹⁰ Participation Rules § 2.1B(b).

¹¹ Auction Rules § 3.5.

¹² “webMarket” is the software program through which the Auction is administered. An SCS user of webMarket would be able to access confidential bid and offer information of a third party only if the user had “Auction Administrator” rights.

¹³ Numerous SCS marketing and trading employees use webMarket in connection with Southern Companies’ participation in the Auction. An SCS user of webMarket, including a Southern Auction Administrator, would be able to access confidential bid and offer information of a third party only if the user had “Auction Administrator” rights. No SCS employee has Auction Administrator rights.

Section 2.1B(d) of the Participation Rules provides that instances in which a Southern Auction Administrator has accessed confidential bid or offer information must be reported “(a) to the Independent Auction Administrator promptly upon its occurrence and (b) to the Independent Auction Monitor within one (1) business day of its occurrence.”¹⁴ There were no such reports made under Section 2.1B(d) during the review period.

In the course of finalizing the confidential version of the annual report submitted to the FERC by the IAM in June 2022, the IAM requested review of the draft report for accuracy and completeness. The primary Southern Auction Administrator reviewed only Appendix B of the draft report, related to auction procedure violations, which did not include confidential third-party bid or offer information. No SCS employee reviewed any other portion of the draft report. SCS’s outside counsel reviewed the entire draft of the confidential version of the report.

The Auction Rules require that SCS post, by the end of each month, bid and offer data (without identification of the bidder or offeror) for the fourth month prior.¹⁵ The Independent Auction Administrator assembles this data, and conveys it to the Southern Auction Administrator before the end of each month. The information provided is promptly conveyed by the Southern Auction Administrator to the SCS employee who posts the data on the Southern Company website. This data is typically posted on the same day it is received by the Southern Auction Administrator.¹⁶ The Southern Auction Administrator does not do a substantive review of the information prior to conveying it to the appropriate SCS employee for posting. The Southern Auction Administrators’ access to this data for this purpose is expressly allowed under the Tariff.¹⁷

3. Secure Storage of Confidential Bid and Offer Information

Confidential bid and offer information accessed by the Southern Auction Administrator must be “stored in a secure physical or electronic location.”¹⁸ SCS reports that it does not possess any physical records of confidential third-party bid or offer information. SCS further reports that it has no electronic records of confidential third-party bid or offer data.

During the review period, both Southern Auction Administrators worked on a hybrid work schedule, working in their offices on some days and working from their respective homes on other days. Both Southern Auction Administrators confirmed that they do not possess any physical or electronic records of confidential third-party bid or offer information at their homes.

¹⁴ Participation Rules § 2.1B(d).

¹⁵ Auction Rules § 4.2.4.

¹⁶ Historical bid and offer information is posted on the Southern Company website. Southern Company, Historical Bids and Offers, <https://www.southerncompany.com/about/energy-auction/historical-bids-and-offers.html> (last visited June 15, 2023).

¹⁷ Participation Rules § 2.1B(b).

¹⁸ *Id.* § 2.1B(d).

4. Prohibition on Marketing and Trading Employee Access to Confidential Bid and Offer Information

The Tariff provides that “[t]hose employees of Southern Companies directly engaged in wholesale electricity marketing and trading shall not have access to Bid Information or Offer Information for any purpose (except to the extent such information is [posted] pursuant to Auction Rules Section 4.2.4).”¹⁹ Van Ness Feldman interviewed the two Southern Auction Administrators, reviewed emails from the Southern Auction Administrators to SCS marketing employees during two one-month sample periods, and reviewed a listing of the webMarket access rights available to all Southern Companies employees. Van Ness Feldman found no evidence that SCS marketing or trading employees received third-party bid or offer information in violation of the Tariff or had improper access to such information during the review period.

5. Other Internal Data Control Restrictions Consistent with Standards of Conduct

The Tariff provides that “[i]n order to ensure that Bid Information and Offer Information is maintained in a manner consistent with the [Tariff], Southern Companies shall impose internal data control restrictions consistent with those used for Standards of Conduct compliance.”²⁰

Access to third-party bid and offer data on the webMarket system is available only to those individuals who are designated on webMarket as Auction Administrators (or IAMs). Neither of the Southern Auction Administrators nor any other SCS employee was designated as an Auction Administrator on the webMarket system during the review period. The only users of webMarket that were designated as Auction Administrators during the review period were employees of Transerv, the Independent Auction Administrator.

As described above, SCS has retained no third-party bid and offer information in physical or electronic form.

The assignment of many auction administration functions to an Independent Auction Administrator operating from Minnesota substantially reduces any risk of inadvertent disclosure to SCS marketing or trading employees. The only handling of confidential third-party bid and offer information by the Southern Auction Administrators during the review period was related to the receipt of historical bid and offer information from the Independent Auction Administrator and forwarding of that information for posting. During the review period, the Independent Auction Administrator employees worked from their respective homes. The Independent Auction Administrator provided assurances that confidentiality of bid and offer information has been maintained during this work-from-home period.

Southern Auction Administrators have not accessed confidential bid and offer information (except for the historical information provided by Transerv to be posted on the Southern Company

¹⁹ Participation Rules § 2.2.

²⁰ *Id.* § 2.3.

website). Access to the areas where the Southern Auction Administrators' offices are located is key card controlled, and marketing and trading personnel do not have access to those restricted areas.

The Southern Company Auction Administrator Protocol provides that “[t]he Auction Administrator and all personnel undertaking wholesale electricity marketing and trading activities for Southern Companies shall be familiar with this Auction Administrator Protocol and the data control restrictions set forth in this section.”²¹ Our interviews with the Southern Auction Administrators indicated that they are well versed in the data control restrictions. The rules for the auction, including data control restrictions and rules on treatment of confidential bid and offer information, are covered in materials made available to SCS employees.

Van Ness Feldman found that the actions outlined above are reasonable steps to ensure that marketing function employees do not have access to third-party bid and offer information, consistent with the internal data control restrictions required by Section 2.3 of the Participation Rules.

6. Summary of Findings

Based on its review, Van Ness Feldman found that SCS has been diligent in its efforts to comply with the applicable Tariff requirements related to safeguarding confidential bid and offer information during the review period. Under the terms of the Tariff, the Southern Auction Administrators have very limited access to confidential third-party bid and offer information. Van Ness Feldman further found no evidence that SCS marketing function employees had any improper access to confidential bid or offer information during the review period.

VIII. Conclusion

We have monitored SCS's participation in the Energy Auction and its compliance with the Tariff during the fourteenth annual review period, April 24, 2022 through April 23, 2023. This report documents each instance during the review period where we have found that SCS's administration of the Energy Auction and its offers into the Energy Auction did not occur in full compliance with the Tariff. To the best of our ability to ascertain, and with the specific exceptions identified in this report, we have found that SCS has complied with the requirements of the Tariff throughout the review period. One notable exception is the failure to submit offer curves into 71 consecutive HAE auctions in December 2022, which resulted from SCS's deliberate decision to suspend the service that submits offers into the HAE auction.

The overall frequency of non-compliant events in Year 14 was similar to the prior review period, and continues to be reasonably low in absolute terms. We found no evidence of attempts to manipulate the Auction or other questionable behavior by any Auction Participant, nor did we receive any complaints regarding the availability or the terms of transmission service needed to accommodate an Energy Auction purchase. Van Ness Feldman's review of compliance with the

²¹ Southern Company, Energy Auction: Auction Administrator Protocol § 1.3 (undated).

Tariff's data restrictions found that SCS has been diligent in its efforts to comply with the applicable Tariff requirements related to safeguarding confidential bid and offer information during the review period, and further found no evidence that SCS marketing function employees had any improper access to confidential bid or offer information. Lastly, we did not receive any complaints relating to the Energy Auction or discover other serious matters that would have prompted an interim report to the Commission.

SCS has provided the data and information necessary for us to adequately monitor its participation in the Energy Auction, and has given us access to its personnel as we have requested. Except as noted above, the several instances identified in this report where SCS did fail to comply fully with specific Tariff provisions appear similar to non-compliant events in previous review periods, in the sense that they appear to result from unintentional technical and administrative errors or system failures. It is probably unrealistic to expect that a complex administrative process such as the Energy Auction, which is overlaid on the even more complex process of managing SCS's power system, could be implemented perfectly, without any errors.

We have continued to monitor Southern Companies' posting of the bid-offer spread, and confirm that the bid-offer spread has been computed accurately and posted when the necessary conditions were met.

In Year 14, Auction participation by third parties, both as offerors and as bidders, was lower than in Year 13. However, we note that Year 13 showed the highest levels of third-party participation in the history of the auction, and that third-party participation in Year 14 remains higher than in other recent years. Similarly, the number of auction clearings in Year 14 was below that in Year 13, but higher than that in other recent years, reflecting the trends in auction participation by third parties.

Since the thirteenth annual report, our basic monitoring philosophy and practices have not changed, though we continue to update our monitoring process to improve the quality of monitoring and streamline the workflow, and to accommodate any changes in the Tariff, SCS's processes, and the Commission's guidance. We appreciate the Commission's continued confidence in our role as the IAM, and we look forward to receiving the Commission's feedback and guidance in the coming year.

APPENDIX A

IAM PROTOCOLS

This appendix contains our complete set of protocols. IAM protocols are living documents that are updated periodically as we gain experience in our monitoring role. This appendix includes the current version of each protocol, but we keep older versions on file, and will be able to provide them to the Commission, if requested.

Protocol I – Load Forecasting.....A-1

Protocol II – Load Forecast UncertaintyA-8

Protocol III – Purchases and SalesA-14

Protocol IV – Outages.....A-23

Protocol V – Day-Ahead Available Capacity and Seller Offer Prices Verification.....A-27

Protocol VI – Hour-Ahead Available Capacity and Seller Offer Prices VerificationA-36

Protocol VII – Recallable Energy Verification.....A-41

Protocol VIII – Auction Clearing Price Verification.....A-48

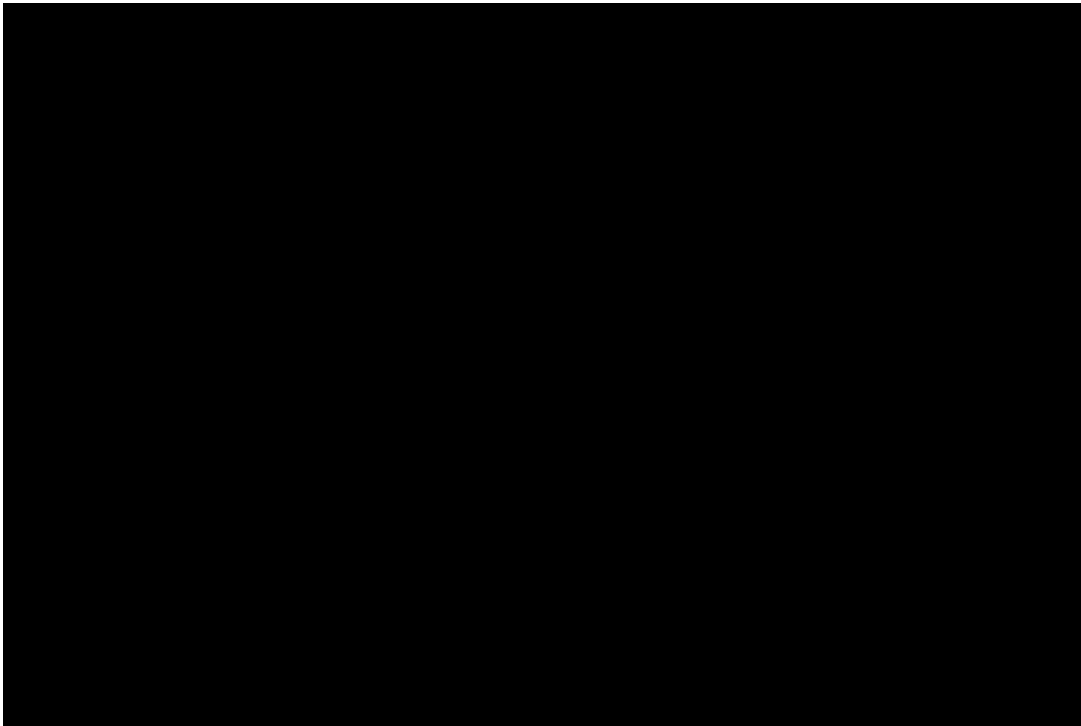
Protocol IX – Assessment of Transmission Services for Energy Auction Purchases.....A-56

Protocol X – Monitoring of Third-Party Participation in the Southern Company
Energy Auction.....A-57

THE REMAINDER OF THIS APPENDIX IS REDACTED

APPENDIX B
IAM ISSUE TRACKING FORMS

I. NON-COMPLIANT EVENTS



..... B-1
..... B-2
..... B-3
..... B-4
..... B-5
..... B-6
..... B-7
..... B-9
..... B-10
..... B-11
..... B-12

THE REMAINDER OF THIS APPENDIX IS REDACTED

APPENDIX C

LOAD FORECASTING UNCERTAINTY PERCENTAGES

This appendix contains the load forecast uncertainty average and maximum percentages calculated by SCS. These numbers were updated and the new load forecast uncertainty (“LFU”) numbers were implemented in [REDACTED] for flow date [REDACTED] onwards.

Prior Average LFU Percentages (Used through DAE delivery day [REDACTED])

	DA0	DA1	DA2	DA3	DA4	DA5	DA6	DA7
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								

Updated Average LFU Percentages (Used from DAE delivery day [REDACTED])

	DA0	DA1	DA2	DA3	DA4	DA5	DA6	DA7
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								

Prior Maximum LFU Percentages
(Used through DAE delivery day [REDACTED])

	DA0	DA1	DA2	DA3	DA4	DA5	DA6	DA7
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								

Updated Maximum LFU Percentages
(Used from DAE delivery day [REDACTED])

	DA0	DA1	DA2	DA3	DA4	DA5	DA6	DA7
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								

APPENDIX D

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY

Delivery Date	Hour Ending (CPT)	Offer MW	Bid MW	Lowest Offer (\$/MWh)	Highest Bid (\$/MWh)	Cleared MW	Clearing Price (\$/MWh)	Winning Bidders	Total Number of Bidders	Winning Offerors
4/24/2022	20						76.31			
4/24/2022	21						69.85			
4/25/2022	17						74.97			
4/25/2022	19						76.89			
4/25/2022	20						76.26			
4/25/2022	21						67.78			
4/25/2022	22						66.22			
4/25/2022	23						53.08			
4/26/2022	11						67.13			
4/26/2022	12						67.51			
4/26/2022	17						67.70			
4/26/2022	18						67.38			
4/26/2022	19						85.00			
4/26/2022	21						66.00			
4/26/2022	22						74.49			
4/27/2022	12						75.81			
4/27/2022	13						88.70			
4/27/2022	15						100.60			
4/27/2022	21						84.72			
4/27/2022	22						66.39			
4/28/2022	18						72.54			
4/30/2022	21						75.91			
5/2/2022	12						78.48			
5/2/2022	22						81.78			
5/2/2022	23						68.00			
5/2/2022	24						71.39			
5/3/2022	1						47.25			
5/3/2022	10						80.69			
5/3/2022	16						84.39			
5/3/2022	17						89.85			
5/3/2022	21						88.61			
5/3/2022	23						72.00			
5/4/2022	8						80.69			
5/5/2022	19						97.70			
5/5/2022	20						91.51			
5/5/2022	21						90.74			
5/5/2022	24						82.00			
5/6/2022	10						90.84			
5/8/2022	1						55.04			
5/10/2022	10						81.45			
5/10/2022	13						90.00			
5/10/2022	14						96.34			
5/10/2022	15						106.00			
5/10/2022	17						102.00			
5/10/2022	18						98.71			
5/10/2022	19						98.16			
5/10/2022	20						88.56			
5/11/2022	9						82.00			
5/11/2022	10						83.70			
5/11/2022	11						92.00			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT)

<i>Delivery Date</i>	<i>Hour Ending (CPT)</i>	<i>Offer MW</i>	<i>Bid MW</i>	<i>Lowest Offer (\$/MWh)</i>	<i>Highest Bid (\$/MWh)</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
5/11/2022	12						93.69			
5/11/2022	13						98.00			
5/11/2022	14						125.56			
5/11/2022	15						115.00			
5/11/2022	16						128.66			
5/11/2022	17						119.73			
5/11/2022	18						118.90			
5/11/2022	19						119.48			
5/11/2022	22						78.37			
5/12/2022	15						105.00			
5/13/2022	17						95.10			
5/13/2022	18						79.42			
5/13/2022	19						80.00			
5/13/2022	22						75.61			
5/13/2022	23						52.04			
5/13/2022	24						72.00			
5/14/2022	1						49.26			
5/14/2022	2						48.54			
5/14/2022	13						86.98			
5/14/2022	20						84.93			
5/14/2022	24						58.00			
5/15/2022	1						50.82			
5/15/2022	19						82.56			
5/15/2022	20						83.00			
5/18/2022	19						115.00			
5/18/2022	20						115.00			
5/18/2022	21						95.84			
5/19/2022	1						57.21			
5/19/2022	2						80.00			
5/19/2022	13						115.00			
5/19/2022	14						126.00			
5/27/2022	22						92.46			
6/5/2022	20						94.18			
6/6/2022	19						86.82			
6/6/2022	20						88.95			
6/6/2022	21						91.27			
6/6/2022	22						86.86			
6/6/2022	23						76.00			
6/6/2022	24						61.56			
6/7/2022	1						59.62			
6/7/2022	17						103.01			
6/7/2022	18						104.02			
6/7/2022	20						104.59			
6/7/2022	21						105.00			
6/7/2022	22						103.14			
6/7/2022	23						88.00			
6/8/2022	18						108.48			
6/8/2022	19						115.00			
6/8/2022	20						110.81			
6/8/2022	21						102.89			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT)

<i>Delivery Date</i>	<i>Hour Ending (CPT)</i>	<i>Offer MW</i>	<i>Bid MW</i>	<i>Lowest Offer (\$/MWh)</i>	<i>Highest Bid (\$/MWh)</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of</i>	<i>Winning Offerors</i>
6/8/2022	23						106.00			
6/8/2022	24						86.05			
6/10/2022	12						96.59			
6/10/2022	13						94.21			
6/12/2022	13						104.85			
6/12/2022	14						100.33			
6/12/2022	15						100.33			
6/12/2022	19						142.00			
6/12/2022	20						102.38			
6/13/2022	1						82.00			
6/13/2022	22						81.55			
6/14/2022	1						89.19			
6/14/2022	2						89.05			
6/14/2022	24						86.72			
6/15/2022	16						125.60			
6/15/2022	17						143.41			
6/15/2022	18						127.71			
6/15/2022	19						146.23			
6/15/2022	21						129.00			
6/15/2022	22						99.00			
6/16/2022	8						97.37			
6/16/2022	9						99.33			
6/18/2022	10						80.00			
6/18/2022	11						75.00			
6/18/2022	12						75.00			
6/18/2022	13						80.00			
6/18/2022	14						80.00			
6/18/2022	15						80.00			
6/19/2022	8						35.00			
6/19/2022	9						40.00			
6/19/2022	10						45.00			
6/19/2022	11						55.00			
6/19/2022	12						60.00			
6/19/2022	13						67.00			
6/19/2022	14						70.00			
6/19/2022	15						75.00			
8/22/2022	17						107.65			
8/22/2022	18						127.25			
8/23/2022	14						127.23			
8/23/2022	16						140.77			
8/23/2022	17						142.19			
8/23/2022	18						152.00			
8/23/2022	19						152.29			
8/24/2022	17						165.00			
8/25/2022	16						126.62			
8/25/2022	17						118.21			
8/25/2022	18						117.20			
8/26/2022	21						93.43			
8/26/2022	22						115.17			
8/27/2022	1						72.57			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT)

<i>Delivery Date</i>	<i>Hour Ending (CPT)</i>	<i>Offer MW</i>	<i>Bid MW</i>	<i>Lowest Offer (\$/MWh)</i>	<i>Highest Bid (\$/MWh)</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
9/20/2022	22						92.46			
10/13/2022	12						78.22			
10/13/2022	14						95.00			
10/13/2022	15						89.47			
10/13/2022	16						100.00			
10/13/2022	17						105.00			
10/13/2022	20						80.00			
10/13/2022	21						82.00			
10/13/2022	22						72.05			
10/14/2022	21						65.57			
10/19/2022	7						110.00			
10/19/2022	8						112.37			
10/20/2022	5						66.16			
10/20/2022	18						60.16			
10/20/2022	19						73.41			
10/20/2022	20						73.41			
10/21/2022	7						73.41			
10/21/2022	8						66.95			
10/21/2022	10						52.00			
10/22/2022	10						49.00			
10/22/2022	11						48.00			
10/25/2022	8						55.00			
10/27/2022	21						58.14			
10/28/2022	11						54.78			
10/30/2022	21						51.58			
11/1/2022	9						49.87			
11/4/2022	22						33.84			
11/6/2022	18						52.30			
11/6/2022	19						46.00			
11/6/2022	20						48.00			
11/6/2022	21						43.06			
11/6/2022	22						38.32			
11/6/2022	23						31.00			
11/7/2022	18						80.00			
11/10/2022	18						42.76			
11/11/2022	9						39.19			
11/11/2022	11						50.30			
11/11/2022	12						48.89			
11/11/2022	13						52.00			
11/11/2022	16						53.00			
11/11/2022	17						62.29			
11/11/2022	18						62.29			
11/12/2022	15						48.03			
11/13/2022	13						39.86			
11/13/2022	14						37.51			
11/13/2022	15						36.06			
11/13/2022	16						48.86			
11/13/2022	17						62.29			
11/13/2022	18						62.29			
11/14/2022	19						55.52			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT)

<i>Delivery Date</i>	<i>Hour Ending (CPT)</i>	<i>Offer MW</i>	<i>Bid MW</i>	<i>Lowest Offer (\$/MWh)</i>	<i>Highest Bid (\$/MWh)</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
11/16/2022	19						75.00			
11/17/2022	20						79.85			
11/27/2022	2						48.13			
12/1/2022	9						64.97			
12/1/2022	10						73.92			
12/1/2022	11						51.99			
12/1/2022	18						83.11			
12/2/2022	9						73.00			
12/3/2022	16						53.86			
12/4/2022	9						54.79			
12/5/2022	17						57.16			
12/5/2022	18						56.81			
12/11/2022	21						50.00			
12/11/2022	23						35.33			
12/13/2022	4						57.20			
12/23/2022	9						116.75			
12/23/2022	20						422.62			
12/23/2022	21						439.12			
12/26/2022	22						127.81			
1/2/2023	9						26.76			
1/2/2023	10						27.82			
1/2/2023	13						28.75			
1/4/2023	1						25.98			
1/4/2023	8						34.21			
1/4/2023	13						28.81			
1/4/2023	14						29.57			
1/4/2023	15						31.59			
1/4/2023	16						36.10			
1/4/2023	19						44.14			
1/5/2023	7						38.46			
1/5/2023	8						37.31			
1/5/2023	9						29.21			
1/5/2023	10						30.20			
1/6/2023	23						39.71			
1/6/2023	24						32.93			
1/9/2023	8						40.29			
1/9/2023	9						40.00			
1/11/2023	14						27.98			
1/11/2023	15						27.90			
1/11/2023	16						34.00			
1/11/2023	17						41.21			
1/13/2023	11						38.93			
1/13/2023	19						51.64			
1/16/2023	4						42.19			
1/21/2023	15						30.23			
1/22/2023	12						33.37			
1/22/2023	13						32.55			
1/22/2023	14						28.85			
1/23/2023	23						33.66			
2/7/2023	6						28.57			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT)

<i>Delivery Date</i>	<i>Hour Ending (CPT)</i>	<i>Offer MW</i>	<i>Bid MW</i>	<i>Lowest Offer (\$/MWh)</i>	<i>Highest Bid (\$/MWh)</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
2/14/2023	14						19.00			
2/18/2023	6						31.00			
2/18/2023	7						31.00			
2/25/2023	11						23.92			
2/25/2023	12						23.92			
2/25/2023	13						23.92			
2/25/2023	14						23.91			
2/26/2023	17						27.78			
3/4/2023	16						26.67			
3/12/2023	21						25.50			
3/12/2023	24						20.58			
3/13/2023	1						25.00			
3/13/2023	2						21.24			
3/13/2023	6						27.94			
3/13/2023	8						30.54			
3/13/2023	9						33.13			
3/13/2023	10						33.92			
3/13/2023	11						34.90			
3/13/2023	13						28.19			
3/13/2023	14						27.16			
3/13/2023	15						26.96			
3/13/2023	16						26.90			
3/13/2023	17						27.12			
3/13/2023	18						29.71			
3/13/2023	19						33.13			
3/13/2023	20						34.51			
3/13/2023	21						29.77			
3/13/2023	22						27.78			
3/13/2023	23						27.92			
3/14/2023	6						27.94			
3/14/2023	8						41.38			
3/14/2023	9						31.61			
3/14/2023	24						35.61			
3/15/2023	1						34.35			
3/15/2023	5						34.00			
3/15/2023	9						39.60			
3/15/2023	24						33.00			
3/16/2023	5						31.18			
3/16/2023	6						35.83			
3/16/2023	8						29.15			
3/16/2023	9						31.18			
3/16/2023	10						28.14			
3/17/2023	14						28.89			
3/17/2023	15						29.11			
3/17/2023	16						32.63			
3/17/2023	17						33.13			
3/17/2023	18						33.13			
3/17/2023	19						33.13			
3/19/2023	23						29.62			
3/19/2023	24						29.10			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT)

<i>Delivery Date</i>	<i>Hour Ending (CPT)</i>	<i>Offer MW</i>	<i>Bid MW</i>	<i>Lowest Offer (\$/MWh)</i>	<i>Highest Bid (\$/MWh)</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
3/20/2023	1						33.41			
3/20/2023	2						28.76			
3/20/2023	6						50.03			
3/20/2023	7						50.26			
3/20/2023	8						50.26			
3/20/2023	9						43.34			
3/20/2023	10						28.76			
3/20/2023	11						29.10			
3/20/2023	12						22.83			
3/20/2023	15						27.78			
3/20/2023	16						23.15			
3/20/2023	17						25.49			
3/23/2023	17						41.17			
3/24/2023	8						28.79			
3/24/2023	10						27.28			
3/24/2023	11						26.70			
3/24/2023	14						24.65			
3/25/2023	11						26.59			
3/25/2023	12						26.88			
3/25/2023	14						26.60			
3/25/2023	15						28.78			
3/26/2023	15						28.78			
4/1/2023	12						28.90			
4/1/2023	13						28.90			
4/1/2023	14						22.39			
4/1/2023	15						28.90			
4/1/2023	16						28.90			
4/1/2023	17						25.31			
4/1/2023	18						24.24			
4/2/2023	1						16.66			
4/2/2023	9						25.59			
4/2/2023	10						25.43			
4/2/2023	11						25.34			
4/2/2023	18						25.00			
4/2/2023	19						28.90			
4/2/2023	20						28.90			
4/2/2023	21						28.06			
4/2/2023	22						24.24			
4/2/2023	23						21.67			
4/3/2023	20						26.79			
4/3/2023	21						27.14			
4/4/2023	19						43.35			
4/4/2023	20						43.35			
4/4/2023	24						25.17			
4/5/2023	19						39.31			
4/5/2023	20						39.31			
4/5/2023	23						20.21			
4/6/2023	8						28.00			
4/6/2023	9						26.34			
4/6/2023	10						25.99			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT)

<i>Delivery Date</i>	<i>Hour Ending (CPT)</i>	<i>Offer MW</i>	<i>Bid MW</i>	<i>Lowest Offer (\$/MWh)</i>	<i>Highest Bid (\$/MWh)</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
4/6/2023	11						27.85			
4/6/2023	12						25.99			
4/6/2023	23						30.13			
4/6/2023	24						25.99			
4/7/2023	12						23.74			
4/7/2023	17						27.29			
4/9/2023	8						27.54			
4/9/2023	9						28.68			
4/9/2023	10						27.90			
4/9/2023	16						16.57			
4/9/2023	17						15.91			
4/11/2023	6						30.00			
4/11/2023	19						25.99			
4/12/2023	19						25.58			
4/13/2023	6						27.08			
4/13/2023	18						30.28			
4/13/2023	19						30.28			
4/13/2023	20						30.28			
4/14/2023	17						27.53			
4/14/2023	18						37.00			
4/14/2023	19						23.42			
4/14/2023	20						28.33			
4/14/2023	21						33.00			
4/14/2023	23						23.92			
4/15/2023	15						23.71			
4/15/2023	16						23.21			
4/16/2023	1						13.85			
4/18/2023	8						27.64			
4/18/2023	9						26.66			
4/18/2023	17						26.65			
4/18/2023	18						27.25			
4/19/2023	6						27.76			
4/19/2023	7						28.32			
4/19/2023	8						26.88			
4/20/2023	1						21.00			
4/20/2023	6						27.52			
4/20/2023	7						28.33			
4/20/2023	8						26.37			
4/20/2023	9						26.45			
4/21/2023	18						30.37			
4/21/2023	19						40.00			
4/21/2023	20						26.76			
4/21/2023	21						25.30			
4/22/2023	23						24.66			
4/23/2023	22						23.01			
Total/Average	—									

Exhibit B

Explanation for Redactions in Public Version of the Independent Auction Monitor's Annual Informational Report

Exhibit B

EXPLANATION FOR REDACTIONS IN PUBLIC VERSION OF THE INDEPENDENT AUCTION MONITOR'S ANNUAL INFORMATIONAL REPORT

The table below provides justifications for the redactions of confidential and privileged information that have been made to the public version of the Report. In the first column of the table, Southern Companies have grouped the justifications for confidential and privileged treatment into five categories. In the second column, Southern Companies have listed the Report page numbers that contain such information. Confidential and privileged information permeates large portions of the Appendices – these portions have been redacted in their entirety.

In developing this table, Southern Companies have endeavored to provide the requisite specificity expected by the Commission for assertions of privileged and confidential treatment. Should the Commission have any question regarding the information contained in this table or its application to the public version of the Report, or if the Commission desires further clarification or elaboration as to any of the justifications described, Southern Companies welcome the opportunity to assist.

Justification for privileged treatment under 18 C.F.R. §§ 388.107 and 388.112	Page of Report
Release of data/information could constitute a violation of the Commission’s market-based rate affiliate restrictions and the Separation of Functions and Communications Protocol applicable to Southern Power Company and its subsidiaries, as set forth in Southern Companies’ market-based rate tariff.	12, 13, 15, 16, Appendix B,
Data reflects system forecast, planning, generator or other equipment-specific information, which are commercially valuable, necessary to Southern Companies’ participation in the marketplace, not yet public, and the release of which could give others in the marketplace a competitive advantage against Southern Companies, to the detriment and harm of their retail customers.	12, 13, 15, 16 Appendix A, Appendix B, Appendix C
Data reflects Energy Auction bid and/or offer information and related non-public Energy Auction information related to one or more Energy Auction participants (including Southern Companies), which are commercially valuable and not yet public, which could be used to the competitive disadvantage of Energy Auction participants, and which Southern Companies are obligated to keep confidential in accordance with their market-based rate tariff and applicable orders of the Commission regarding the Energy Auction.	3, 4, 5, 6, 7, 8, 9

<p align="center">Justification for privileged treatment under 18 C.F.R. §§ 388.107 and 388.112</p>	<p align="center">Page of Report</p>
<p>Data/information reflects generator reference prices and generator-specific cost and/or cost inputs, which are commercially valuable, necessary to Southern Companies’ participation in the marketplace, not yet public, and the release of which could give others in the marketplace a competitive advantage against Southern Companies, to the detriment and harm of their retail customers.</p>	
<p>Data/information reflects Southern Companies’ internal, trade secret and proprietary systems and processes and other intellectual property, which are commercially valuable, necessary to Southern Companies’ participation in the marketplace, not yet public, and the release of which could give others in the marketplace a competitive advantage against Southern Companies, to the detriment and harm of their retail customers.</p>	<p>14 Appendix A, Appendix B, Appendix C</p>