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June 28, 2022

Via Electronic Filing

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

RE: *Thirteenth 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 thirteenth 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).

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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 Murphy

Attachments

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



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Exhibit A

Independent Auction Monitor's Annual Informational Report

(Public Version—Redacted)

Informational Report for The Southern Companies' Energy Auction

April 24, 2021 to April 23, 2022

PREPARED FOR



THE FEDERAL ENERGY
REGULATORY COMMISSION

SUBMITTED BY

The Brattle Group
Independent Auction Monitor

JUNE 28, 2022



Informational Report
for
The Southern Companies' Energy Auction
April 24, 2021 to April 23, 2022

Docket Nos. ER09-88, ER17-514

June 28, 2022

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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.

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I. Introduction and Overview

This is the thirteenth annual report reviewing the Southern Companies’¹ 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, 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, 2021 through April 23, 2022.³ 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.

II. Clearing Price for Each Energy Auction

During the review period, five DAE auctions cleared for Firm-LD energy (*i.e.* five auctions matched a buyer’s bid with a seller’s offer) and no DAE auctions cleared for Recallable energy (*i.e.* none matched a buyer’s bid with a seller’s offer), as shown in Table 1. A total of 7,200 MWh of Firm-LD energy cleared the DAE auction at a weighted average price of [REDACTED]. In Year 12, no DAE auctions cleared.

Table 1
DAE Cleared Auctions: Clearing Price and Quantity

<i>Delivery Date</i>	<i>Product</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>
1/19/2022	Firm-LD	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	51.17	[REDACTED]	[REDACTED]	[REDACTED]
1/21/2022	Firm-LD	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	62.09	[REDACTED]	[REDACTED]	[REDACTED]
1/27/2022	Firm-LD	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	54.69	[REDACTED]	[REDACTED]	[REDACTED]
1/28/2022	Firm-LD	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	54.45	[REDACTED]	[REDACTED]	[REDACTED]
4/7/2022	Firm-LD	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	69.98	[REDACTED]	[REDACTED]	[REDACTED]

³ Throughout this report, we sometimes refer to the current review period as “Year 13,” and to the previous review period, covering April 24, 2020 through April 23, 2021, as “Year 12.”

During the current review period, 793 HAE auctions cleared, almost four times the number of clearings in Year 12 (201). This is the largest number of clearings in the history of the Auction, and is largely attributable to the greater participation of third-party bidders in the HAE auction in this review period. Because of the large number of HAE auctions cleared in this review period, a monthly summary is provided in Table 2, with detail on individual clearings provided in Appendix D. [REDACTED]

[REDACTED] A total of 87,418 MWh cleared through the HAE auction, over five times the amount cleared in Year 12. The transaction size ranged from 4 to 403 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, 2021	6	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
May 2021	11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
June 2021	7	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
July 2021	11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
August 2021	10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
September 2021	29	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
October 2021	37	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
November 2021	68	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
December 2021	70	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
January 2022	239	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
February 2022	160	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
March 2022	56	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
April 1 - 23, 2022	89	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total/Average	793	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

III. Energy Auction Offerors

Table 3 lists the 26 registered Auction Participants for the Energy Auction. In Year 13, 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	ArcLight 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.

(SCS [REDACTED]) offered hour-ahead energy in the HAE auction, [REDACTED]. Third-party participants [REDACTED] offered energy into a total of [REDACTED] HAE auctions [REDACTED] of the 8,760 HAE auctions), [REDACTED] auctions with third-party offers observed in Year 12.

(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 than in Year 12. Third-party participants submitted offers into a total of [REDACTED] out of 256 Firm-LD DAE auctions [REDACTED].

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

- 1 Firm-LD DAE auction,
- 1 Recallable DAE auction, and
- 8 HAE auctions (0.09% of the 8,760 HAE auctions).

The lack of SCS offers into the Firm LD and Recallable DAE auctions on 6/1/2021, and into the 8 HAE auctions over multiple periods, did constitute instances of non-compliance. This is 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, 51.0 TWh of energy were offered, almost the same as the 51.1 TWh of energy offered in Year 12.

SCS accounted for the vast majority of offered energy in each of the auctions—approximately 99.9%, across both the DAE and HAE auctions. There [REDACTED] in the DAE auction and [REDACTED] in the HAE auction. The average amount of energy offered into the DAE auctions was [REDACTED] of Firm-LD and [REDACTED] of Recallable energy, [REDACTED] the Year 12 averages of [REDACTED] and [REDACTED], respectively. For the HAE auction, an average of [REDACTED] was offered, [REDACTED] the Year 12 average [REDACTED].⁴

⁴ Averages reflect total offered quantities across all Firm-LD DAE, Recallable DAE, and HAE auctions, though not all of these 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)

Participant	HAE		DAE			
			Firm LD	Recallable		
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]		
SOCO	34,744,406	(99.9%)	10,896,000	(99.8%)	5,311,200	(100.0%)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]		

* 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 the largest number of auctions with third-party bids in the history of the Auction, and [REDACTED]. Participation by SCS as a bidder [REDACTED] in Year 12, with SCS placing bids in [REDACTED] of HAE auctions, versus [REDACTED] in Year 12. In the DAE auctions, [REDACTED] (SCS [REDACTED]) bid into at least one Firm-LD auction. [REDACTED] bid for Recallable energy in the DAE auctions. The total number of DAE auctions with third-party bids was [REDACTED] in Year 13, [REDACTED] auctions with third-party bids in Year 12.

Across all the auctions, approximately 1.97 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 energy bid into the Firm-LD DAE auctions was [REDACTED], [REDACTED] average in Year 12. The average amount of energy bid into the Recallable DAE auctions was [REDACTED].

██████████ in Year 12. For the HAE auction, the average amount of energy bid was ██████████ in Year 12.⁵

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 in each Auction, respectively, over the year.

V. Changes in Auction and Auction Verification Protocols

A. GULF POWER SALE

As described in the past three annual reports, Southern Companies sold Gulf Power Company (“Gulf Power”) to NextEra Energy, effective January 1, 2019, but Gulf Power continues 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, may elect to leave the Southern Pool prior to the end of the five-year period, and has indicated through

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

public information that it is now targeting mid-2022 for departure.⁶ During the transition period, Southern Companies will continue to manage those Gulf Power assets that remain part of the Southern Pool, and Gulf Power’s remaining generation assets and its load obligations will continue to be included in the determination of Southern Companies’ offers into the Auction. For Auction purposes, the affected units are to be removed from the computation of Available Capacity on a schedule that reflects the timing of the transfer of operational control for each specific unit. In all instances, as the transfer of units proceeds, we will monitor to confirm that each unit is treated for Auction purposes as if it were still an SCS unit, until operational control of that unit is transferred.

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 13, 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.

⁶ Florida Power & Light Company and Gulf Power Company’s 2021-2030 Ten Year Power Plant Site Plan at 5, 83, Docket No. 20200000-OT (Fla. Pub. Serv. Comm’n filed Apr. 1, 2021), available at <http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2021/Florida%20Power%20and%20Light%20and%20Gulf%20Power%20Company.pdf>.

Table 6
Summary of Changes to IAM Protocols in Year 13

<i>Protocol</i>	<i>Changes in Year 13</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 2, 2021. 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 four types:

1. Failures to submit offer curves for the HAE auctions (four instances),
2. Failed offer curve submissions for the HAE and DAE auctions (four instances),
3. Discrepancy in unit commitment in the DAE auction (one instance), and
4. Discrepancies in unit cost calculations in HAE auctions (two instances).

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:

- 1 Firm-LD DAE auction,
- 1 Recallable DAE auction, and
- 8 HAE auctions (0.09% of the 8,760 HAE auctions).

The lack of SCS offers into the Firm LD and Recallable DAE auctions on 6/1/2021, and into the 8 HAE auctions over multiple periods, constituted instances of non-compliance. These are described in more detail in Section VI.A below.

In this review period, we observed a moderate increase in the overall number of non-compliant events relative to recent years, particularly Year 12 which had just one non-compliant event. Still, the overall frequency of instances of non-compliance continues to be reasonably low.

Table 7
Instances of Non-Compliance in Year 13

<i>Type of Event</i>	<i>Period Affected by Event</i>
I. Failure to submit offer curves in the HAE auction	1. 1 HAE auction (9/15/2021 HE3) 2. 1 HAE auction (10/17/2021 HE23) 3. 1 HAE auction (12/8/2021 HE6) 4. 1 HAE auction (3/29/2022 HE13)
II. Failed offer curve submissions in the HAE and DAE auctions	5. 2 HAE auctions (5/11/2021 HE22 and HE23) 6. 1 DAE Firm and 1 Recallable energy auction (6/1/2021) 7. 1 HAE auction (9/26/2021 HE5) 8. 1 HAE auction (10/11/2021 HE21)
III. Discrepancy in unit commitment in the DAE auction	9. 1 DAE auction (10/13/2021)
IV. Discrepancies in unit cost calculations in the HAE auction	10. 1 HAE auction (11/30/2021 HE10) 11. 3 HAE auctions (1/15/2022 HE10, 2/10/2022 HE10, 2/11/2022 HE10)

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 four instances of failure to submit offer curves for HAE auctions. 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 when the system used for submitting offers into OATI did not detect HAE offers, due to a problem with ██████, 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 9/14/2021 HE16 through 9/15/2021 HE2. For 9/15/2021 HE3, no further contingency curves were available for submission to the OATI platform, preventing the submission of offers for this hour. 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 ██████, the tool used to develop offer curves. Contingency curves were submitted to the OATI platform for the HAE Auctions beginning on 10/17/2021 HE12 through 10/17/2021 HE22. Starting with 10/17/2021 HE23, no further contingency curves were available, resulting in a failure to submit offers for this hour. The outcome of this auction was not affected as no third-party bids were submitted for this hour.

- In the third instance, SCS personnel received a notification about an error in the tool used to submit offers into OATI. SCS determined that curves were not detected beginning 12/7/2021 HE18. Contingency curves had been previously developed and were submitted to the OATI platform for the HAE Auctions beginning on 12/7/2021 HE18 through 12/8/2021 HE5. Starting with 12/8/2021 HE6, no further contingency curves were available for submission to the OATI platform, resulting in a failure to submit offers for this hour. SCS stated that they should have received email warnings that offers were based on contingency curves, but discovered that this warning system failed as it had not been properly configured. This failure prevented a total of 118 MW from clearing (if offers had been made at the SOP cap), with Southern Company participating as the seller.
- The last instance of this type occurred as the result of an internal failure. SCS explained that a piece of software that enables the connection to OATI was not able to successfully read an authentication certificate required for offer submission. As a result, SCS was unable to submit an offer curve for 3/29/2022 HE23. The failure to submit offers did not have an impact on the outcome of the Auction as no third-party bids were submitted for this hour.

The second type of non-compliant event involved four instances when SCS's attempted offer curve submissions were not properly processed due to technical issues. The circumstances or root causes of these instances depended on the case:

- The first instance occurred as a result of an OATI service undergoing a scheduled maintenance outage. While OATI informed SCS that they did not expect the outage to affect offer submission, the maintenance outage nonetheless prevented SCS from submitting offers for 5/11/2021 HE22 and HE23. OATI explained that this maintenance event would not have prevented entities from submitting bids into webMarket, but that no bid submissions had been attempted. Due to this absence of third-party bids in these hours, these failed offer submissions had no impact on the outcome of the Auction.
- The next instance affected the Firm LD and Recallable DAE auctions on 6/1/2021. SCS explained that this failure occurred because TransServ International, the Independent Auction Administrator, failed to change the system settings for the Bid Period for DAE Auction day 6/1/2021 in the webMarket platform. Such a change was required to allow bids and offers to be processed under a different-than-normal schedule corresponding to the Memorial Day Holiday on Monday 5/31/2021. As a result, SCS was unable to submit offers on Friday 5/28/2021 for the DAE Auction day of Tuesday 6/1/2021. In addition to preventing SCS from submitting offers, this event also prevented third parties from submitting bids (and offers). Because the IAM cannot determine whether bids would have been submitted had the Bid Period been appropriately defined, we are not able to determine whether there was an impact to the Auction outcome.
- The third instance of this type occurred when SCS attempted to submit an offer curve for 9/26/2021 HE5. SCS explained that on this hour, the OATI interface responded with a validation error. The OATI network and system teams reviewed available audit

records, and reported that they were unable to identify the source of the problem. OATI was not able to determine whether the issue that prevented SCS from submitting offers also would have impacted the ability of third parties to submit bids, though it did not receive reports from third parties related to attempted bid submissions for the hour in question. Since we are unable to determine whether third-party bids would have been submitted, we are not able to determine whether this instance had an impact on the Auction outcome.

- The final instance of this type affected offer submissions for 10/11/2021 HE21. SCS explained that the failed submission occurred due to a planned OATI network outage, and that SCS did not receive a notice from OATI about this planned outage. OATI stated that the outage that prevented SCS from submitting offers also would have impacted the ability of third parties to submit bids. Again, since the IAM is unable to determine whether third-party bids would have been submitted in the absence of the outage, we are not able to determine whether there was an impact on the Auction outcome.

The third type of non-compliant event involved a unit commitment discrepancy in the DAE auction for 10/13/2021. For this DAE auction flowdate, SCS excluded [REDACTED] that appeared to be reserved for SCS use during the relevant delivery period. However, the hourly unit commitment data for this flowdate showed that [REDACTED] was not committed and not otherwise constrained, and thus should have been offered into the DAE auction. As a result, [REDACTED] was excluded from the DAE Auction. This event had no impact on the Auction outcome as no third-party bids were submitted.

The fourth type of non-compliant event involved two instances of discrepancies in the cost calculations for a number of units, due to the use of inconsistent unit ratings or fuel price data:

- The first of these instances involved a cost calculation discrepancy affecting offers for 11/30/2021 HE10. SCS explained that the model used for the computation of HAE auction SOP caps used an incorrect maximum rating for a particular unit due to an erroneous reading of the real-time maximum rating from their data source. Using this incorrect maximum rating in the computation of offer prices resulted in offers for this unit that exceeded the SOP cap for a total of 58MW. This event had no impact on the Auction outcome as no third-party bids were submitted.
- The second instance affected three HAE auctions: 1/15/2022 HE10, 2/10/2022 HE10, and 2/11/2022 HE10. For the HAE Auction on 1/15/2022 HE10, SCS explained that the model used for the computation of HAE auction SOP caps used an incorrect fuel price [REDACTED]. The same issue also affected offers on 2/10/2022 HE10 and 2/11/2022 HE10. On each of the dates mentioned above, using an incorrect fuel price resulted in offer prices for these units that exceeded the SOP cap. The outcomes of these three auctions were not affected as no third-party bids were submitted.

B. ADDITIONAL EVENTS

We identified two additional events that, while not necessarily violations of the Tariff, are noted below for completeness. Both involve the monitoring of bilateral sales into the Southern Balancing Authority Area (“BAA”) that are conducted outside of the Energy Auction. The Tariff prohibits Southern from entering into bilateral transactions within the Bid Period (from 25 minutes before the hour until 10 minutes before the hour) for products that can be transacted within the Auction. On a quarterly basis, we perform a sampling of bilateral sales transaction records and request all trading records (*e.g.*, phone conversations, instant messages between traders, *etc.*) for each of the trades in the sample. We then independently review this documentation to determine whether each deal was compliant with the Tariff.

- For three out of 140 bilateral sales identified in the samples in Year 13, despite searching for documentation and reaching out to counterparties and technical support, SCS was unable to locate and provide supporting documentation for our review. SCS explained that during the quarterly audit, SCS discovered that an individual trader’s instant messages had not been recorded. SCS provided documentation of an exchange with the instant message platform vendor verifying that the vendor was also unable to retrieve the requested instant messages. SCS further stated that the issue that caused instant messages to fail to be recorded has since been corrected.
- One additional instance involved the negotiation of a bilateral transaction during the Bid Period of an HAE auction. On [REDACTED], a Southern trader discussed pricing for a transaction inside of the Bid Period, though the deal was not finalized until after the Bid Period closed.

C. MONITORING OF AUCTION SPREAD POSTING

We have continued to monitor SCS’s voluntary bid-offer spread posting policy in Year 13. We can confirm that a bid-offer spread was posted for all auctions that had at least one bid and one offer from different entities, which is the necessary condition for posting. When a bid-offer spread was reported, the reported spread was computed accurately.

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. The law firm of Van Ness Feldman, LLP 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. THIRTEENTH ANNUAL REVIEW

Van Ness Feldman conducted its annual review for the thirteenth review period in May and June of 2022. 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 four 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 the 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. During the review period, each of the Southern Auction Administrators held a position listed in Section 2.1: one was a Senior Contract Analyst, and the other was a Pool Bill Operations Supervisor.

In May 2022, following completion of the review period, the Southern Auction Administrator who was a Senior Contract Analyst changed position, and is now a Project Manager. 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 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.

⁷ Participation Rules § 2.1.

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 information⁸ if directed to do so by the IAM, or for the purpose of complying with posting requirements.⁹ 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.”¹⁰

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 webMarket¹¹ 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.¹² The back-up Southern Auction Administrator did not access webMarket during the review period.

⁸ 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.

⁹ Participation Rules § 2.1B(b).

¹⁰ Auction Rules § 3.5.

¹¹ “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.

¹² 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.

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.”¹³ 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 2021, 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.¹⁴ The Independent Auction Administrator assembles this data, and conveys it to the Southern Auction Administrator on or about the 23rd 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.¹⁵ 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.¹⁶

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.”¹⁷ 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 primarily from their respective homes because of the COVID-19 pandemic. 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.

¹³ Participation Rules § 2.1B(d).

¹⁴ Auction Rules § 4.2.4.

¹⁵ 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, 2022).

¹⁶ Participation Rules § 2.1B(b).

¹⁷ *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 made available [to Auction Participants] pursuant to Auction Rules Section 4.2.4).”¹⁸ 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.”¹⁹

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 was designated as an Auction Administrator on the webMarket system during the review period.

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 because of the COVID-19 pandemic. 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 website) while working from home during the review period.

¹⁸ *Id.* § 2.2.

¹⁹ *Id.* § 2.3.

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.”²⁰ Our interviews with the Southern Auction Administrators indicated that they are well versed in the data control restrictions.

A Southern Auction Administrator provided training for SCS personnel involved in the Auction on February 23, 2022, to refresh knowledge of the auction rules. This training covered the restrictions concerning treatment of confidential bid and offer information.

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 thirteenth annual review period, April 24, 2021 through April 23, 2022. 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.

The overall frequency of non-compliant events in Year 13 increased relative to the prior review period, but 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 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

²⁰ Southern Company, Energy Auction: Auction Administrator Protocol § 1.3 (undated).

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. 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 posted when the necessary conditions were met, and that it was computed accurately.

Regarding Auction participation by third parties, the Year 13 HAE auctions had [REDACTED]. The number of HAE auctions offered into by third parties [REDACTED] the number of HAE auctions with third-party bidders [REDACTED]. This is the largest number of auctions with third-party bids in the history of the Auction. The DAE auctions saw [REDACTED]. Third parties offered into [REDACTED] for Firm-LD energy and into [REDACTED] for Recalable energy [REDACTED]; they bid into [REDACTED].

The number of auction clearings and the amount of energy cleared has increased significantly in the HAE auctions relative to Year 12. This is largely attributable to the greater participation of third-party bidders in the HAE auction in this review period. Overall, 87,418 MWh cleared through the HAE auction, over five times the 16,263 MWh cleared in Year 12. The number of cleared HAE auctions increased to 793 in Year 13 (about 9.1% of all HAE auctions), up from 201 in Year 12. The number of auction clearings and the amount of energy cleared in the DAE auctions also increased relative to Year 12 (which had no clearings). Overall, 7,200 MWh cleared through the DAE auctions in Year 13.

Since the twelfth 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

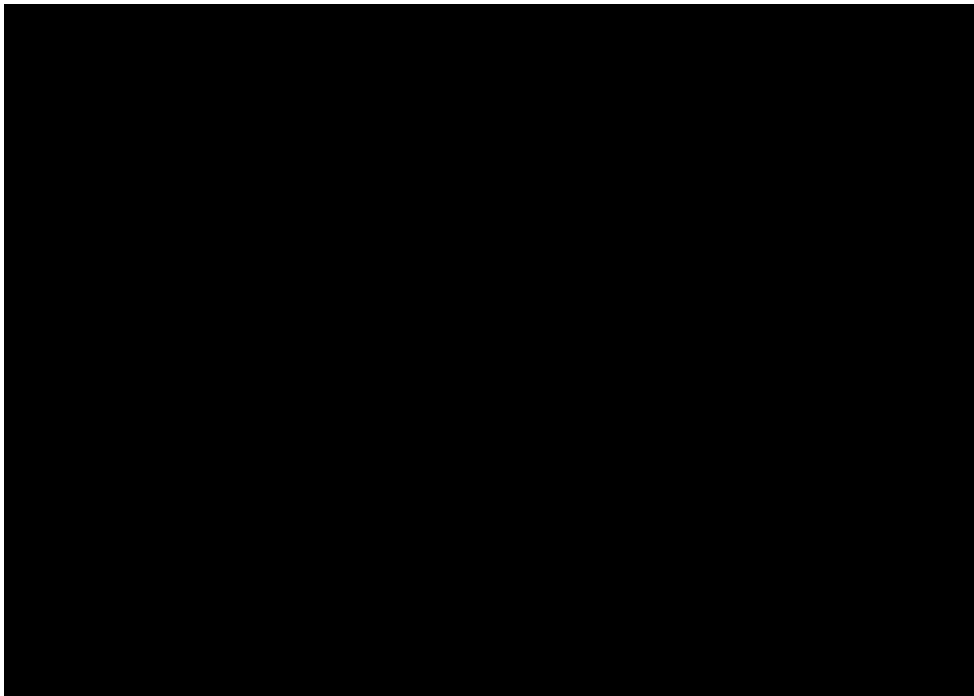
Protocol IX – Assessment of Transmission Services for Energy Auction Purchases.....A-56

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-8
	..... B-9
	..... B-10
	..... B-11

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])

Jan	[REDACTED]
Feb	[REDACTED]
Mar	[REDACTED]
Apr	[REDACTED]
May	[REDACTED]
Jun	[REDACTED]
Jul	[REDACTED]
Aug	[REDACTED]
Sep	[REDACTED]
Oct	[REDACTED]
Nov	[REDACTED]
Dec	[REDACTED]

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

Jan	[REDACTED]
Feb	[REDACTED]
Mar	[REDACTED]
Apr	[REDACTED]
May	[REDACTED]
Jun	[REDACTED]
Jul	[REDACTED]
Aug	[REDACTED]
Sep	[REDACTED]
Oct	[REDACTED]
Nov	[REDACTED]
Dec	[REDACTED]

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

<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>
4/24/2021	20						34.98			
4/24/2021	24						21.21			
4/25/2021	1						17.94			
4/25/2021	2						18.81			
4/25/2021	12						20.79			
4/29/2021	17						30.00			
5/18/2021	7						19.00			
5/18/2021	8						19.00			
5/18/2021	9						19.00			
5/21/2021	11						20.00			
5/21/2021	12						25.00			
5/22/2021	8						18.00			
5/22/2021	9						18.00			
5/22/2021	10						18.00			
5/22/2021	11						18.00			
5/22/2021	12						22.00			
5/23/2021	9						15.00			
6/19/2021	20						24.00			
6/20/2021	3						22.94			
6/20/2021	4						23.83			
6/20/2021	5						23.83			
6/24/2021	24						23.70			
6/29/2021	15						58.47			
6/29/2021	18						61.21			
7/2/2021	24						26.49			
7/11/2021	8						19.00			
7/11/2021	9						22.00			
7/11/2021	10						24.00			
7/12/2021	19						35.00			
7/26/2021	20						56.27			
7/26/2021	21						47.34			
7/27/2021	1						28.74			
7/27/2021	23						46.00			
7/27/2021	24						29.72			
7/29/2021	17						56.20			
8/1/2021	9						29.00			
8/6/2021	23						40.00			
8/12/2021	17						55.33			
8/12/2021	18						55.22			
8/16/2021	23						32.16			
8/17/2021	23						31.35			
8/17/2021	24						26.78			
8/18/2021	19						71.56			
8/31/2021	21						42.33			
8/31/2021	22						34.27			
9/3/2021	15						42.00			
9/12/2021	22						40.48			
9/12/2021	23						35.98			
9/12/2021	24						34.74			
9/13/2021	1						33.91			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT.)

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
9/17/2021	12						57.28			
9/17/2021	15						70.35			
9/17/2021	16						69.94			
9/17/2021	17						73.87			
9/17/2021	18						74.96			
9/18/2021	16						73.60			
9/18/2021	18						72.57			
9/19/2021	18						57.38			
9/19/2021	19						56.28			
9/19/2021	21						59.38			
9/19/2021	23						37.60			
9/19/2021	24						50.00			
9/27/2021	12						58.47			
9/27/2021	13						53.63			
9/27/2021	14						53.63			
9/27/2021	19						58.47			
9/29/2021	12						62.94			
9/29/2021	14						66.00			
9/29/2021	15						66.00			
9/29/2021	19						64.97			
9/30/2021	13						59.56			
9/30/2021	14						60.73			
9/30/2021	15						61.48			
9/30/2021	18						61.48			
10/1/2021	13						63.85			
10/1/2021	20						61.61			
10/2/2021	1						39.04			
10/2/2021	19						72.72			
10/3/2021	12						70.00			
10/3/2021	24						58.21			
10/4/2021	21						64.70			
10/5/2021	13						71.72			
10/5/2021	19						71.72			
10/6/2021	7						68.74			
10/6/2021	20						73.52			
10/7/2021	1						56.00			
10/7/2021	18						95.00			
10/8/2021	1						55.00			
10/8/2021	12						64.67			
10/8/2021	23						61.29			
10/11/2021	1						45.08			
10/12/2021	16						62.29			
10/12/2021	18						77.00			
10/12/2021	19						90.00			
10/13/2021	13						61.00			
10/13/2021	16						75.00			
10/13/2021	18						92.00			
10/14/2021	16						62.50			
10/15/2021	12						64.09			
10/15/2021	14						85.50			

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</i>	<i>Highest Bid</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
10/15/2021	15						90.00			
10/15/2021	19						68.93			
10/15/2021	24						42.96			
10/16/2021	1						38.52			
10/23/2021	17						58.46			
10/24/2021	18						58.66			
10/25/2021	18						58.43			
10/26/2021	1						37.94			
10/26/2021	2						46.18			
10/26/2021	3						39.94			
10/26/2021	19						66.47			
11/3/2021	8						53.42			
11/4/2021	20						59.93			
11/4/2021	21						59.53			
11/4/2021	22						58.09			
11/5/2021	4						45.71			
11/5/2021	7						75.81			
11/6/2021	6						35.76			
11/6/2021	24						54.79			
11/8/2021	6						100.00			
11/8/2021	7						96.52			
11/8/2021	8						94.47			
11/13/2021	6						53.23			
11/14/2021	13						36.14			
11/15/2021	13						38.38			
11/19/2021	16						39.61			
11/19/2021	20						54.00			
11/19/2021	24						51.34			
11/20/2021	1						55.00			
11/20/2021	2						47.86			
11/20/2021	8						52.60			
11/20/2021	11						42.10			
11/20/2021	12						38.49			
11/20/2021	13						37.11			
11/20/2021	14						37.41			
11/20/2021	15						37.64			
11/20/2021	16						37.91			
11/20/2021	17						52.89			
11/20/2021	18						58.66			
11/20/2021	20						51.28			
11/20/2021	23						35.04			
11/21/2021	1						41.17			
11/21/2021	2						39.16			
11/21/2021	3						39.00			
11/21/2021	4						48.99			
11/21/2021	5						50.95			
11/21/2021	6						42.00			
11/21/2021	8						38.81			
11/21/2021	9						38.23			
11/21/2021	10						37.03			

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>
11/21/2021	11						36.82			
11/21/2021	12						36.30			
11/21/2021	13						35.51			
11/21/2021	14						35.34			
11/21/2021	15						35.98			
11/21/2021	16						37.58			
11/21/2021	19						57.45			
11/21/2021	20						55.23			
11/21/2021	21						34.96			
11/21/2021	22						44.26			
11/21/2021	23						37.51			
11/21/2021	24						35.75			
11/24/2021	2						64.82			
11/24/2021	3						55.38			
11/25/2021	13						38.79			
11/25/2021	14						34.79			
11/26/2021	16						36.94			
11/26/2021	17						39.74			
11/27/2021	8						51.64			
11/27/2021	9						51.46			
11/27/2021	12						40.82			
11/27/2021	13						37.83			
11/27/2021	14						36.83			
11/27/2021	15						36.59			
11/27/2021	16						39.06			
11/28/2021	10						35.24			
11/30/2021	7						91.03			
11/30/2021	8						60.38			
11/30/2021	9						50.36			
12/1/2021	18						55.86			
12/1/2021	19						51.14			
12/1/2021	20						63.87			
12/1/2021	21						64.44			
12/1/2021	22						48.61			
12/1/2021	23						46.97			
12/2/2021	7						54.86			
12/2/2021	19						52.25			
12/2/2021	20						47.69			
12/2/2021	21						47.42			
12/6/2021	22						41.34			
12/6/2021	24						28.77			
12/7/2021	12						45.00			
12/7/2021	13						41.33			
12/7/2021	16						45.62			
12/7/2021	18						45.62			
12/7/2021	20						44.47			
12/7/2021	22						38.80			
12/7/2021	24						28.08			
12/8/2021	12						54.90			
12/8/2021	13						46.80			

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>
12/8/2021	14						41.81			
12/8/2021	15						42.58			
12/8/2021	24						40.12			
12/10/2021	19						53.30			
12/10/2021	20						46.57			
12/10/2021	21						39.59			
12/11/2021	19						44.99			
12/11/2021	20						38.64			
12/11/2021	21						40.08			
12/11/2021	23						29.52			
12/11/2021	24						23.30			
12/12/2021	18						47.40			
12/12/2021	19						46.47			
12/12/2021	20						42.00			
12/12/2021	21						47.98			
12/12/2021	22						41.75			
12/12/2021	23						40.07			
12/12/2021	24						39.95			
12/13/2021	1						38.71			
12/13/2021	7						71.02			
12/13/2021	8						50.15			
12/13/2021	9						44.05			
12/13/2021	20						46.48			
12/13/2021	22						43.05			
12/13/2021	23						48.79			
12/13/2021	24						39.88			
12/15/2021	1						31.16			
12/15/2021	7						59.13			
12/16/2021	20						44.00			
12/16/2021	22						40.83			
12/17/2021	16						45.68			
12/17/2021	17						45.40			
12/17/2021	18						50.51			
12/19/2021	17						47.62			
12/20/2021	6						42.68			
12/20/2021	9						45.74			
12/20/2021	11						49.25			
12/20/2021	12						42.68			
12/21/2021	8						45.74			
12/21/2021	15						46.54			
12/22/2021	8						46.82			
12/22/2021	9						46.82			
12/22/2021	12						41.98			
12/24/2021	11						40.44			
12/30/2021	13						37.00			
12/30/2021	16						35.25			
12/30/2021	18						34.03			
12/31/2021	13						30.85			
12/31/2021	14						35.95			
1/3/2022	20						44.47			

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>
1/3/2022	21						50.00			
1/3/2022	22						46.44			
1/3/2022	23						46.39			
1/4/2022	1						42.93			
1/4/2022	2						42.78			
1/4/2022	3						45.93			
1/4/2022	5						44.74			
1/4/2022	6						44.74			
1/4/2022	7						53.32			
1/4/2022	8						46.20			
1/4/2022	12						42.23			
1/4/2022	18						47.21			
1/4/2022	19						44.18			
1/4/2022	20						40.00			
1/4/2022	21						42.00			
1/4/2022	23						36.69			
1/7/2022	20						56.27			
1/7/2022	21						56.14			
1/8/2022	6						44.87			
1/8/2022	7						83.44			
1/8/2022	21						39.46			
1/10/2022	24						42.58			
1/11/2022	18						59.57			
1/11/2022	19						59.20			
1/11/2022	20						59.57			
1/11/2022	21						53.51			
1/11/2022	22						51.27			
1/11/2022	23						44.87			
1/14/2022	8						54.29			
1/14/2022	9						43.81			
1/14/2022	10						31.30			
1/14/2022	15						35.27			
1/14/2022	16						35.71			
1/15/2022	7						56.18			
1/15/2022	8						56.34			
1/15/2022	18						54.42			
1/15/2022	19						55.09			
1/15/2022	20						53.76			
1/15/2022	21						51.40			
1/15/2022	22						51.01			
1/15/2022	23						29.55			
1/16/2022	1						42.56			
1/16/2022	5						49.86			
1/16/2022	6						52.41			
1/16/2022	7						56.01			
1/16/2022	8						63.96			
1/16/2022	9						59.86			
1/16/2022	10						59.49			
1/16/2022	11						58.02			
1/16/2022	12						63.84			

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>
1/16/2022	13						59.05			
1/16/2022	14						59.81			
1/16/2022	15						59.07			
1/16/2022	16						63.30			
1/16/2022	17						63.30			
1/16/2022	18						63.30			
1/16/2022	19						55.51			
1/16/2022	20						100.00			
1/16/2022	21						75.00			
1/16/2022	22						70.00			
1/16/2022	24						59.38			
1/17/2022	1						43.77			
1/17/2022	2						43.77			
1/17/2022	3						43.72			
1/17/2022	11						44.51			
1/17/2022	12						44.73			
1/17/2022	13						44.61			
1/17/2022	14						50.47			
1/17/2022	15						50.67			
1/17/2022	16						55.58			
1/17/2022	18						63.38			
1/17/2022	19						63.38			
1/17/2022	20						65.87			
1/17/2022	21						58.71			
1/17/2022	22						45.66			
1/17/2022	23						45.81			
1/17/2022	24						43.97			
1/18/2022	5						54.07			
1/18/2022	6						60.00			
1/18/2022	8						50.41			
1/18/2022	9						56.54			
1/18/2022	12						43.67			
1/18/2022	13						41.49			
1/18/2022	14						36.62			
1/18/2022	15						34.81			
1/18/2022	16						36.12			
1/18/2022	17						45.72			
1/18/2022	19						59.00			
1/18/2022	20						54.96			
1/18/2022	21						47.00			
1/18/2022	22						49.27			
1/18/2022	23						44.00			
1/19/2022	1						42.60			
1/19/2022	2						43.64			
1/19/2022	3						43.53			
1/19/2022	4						50.82			
1/19/2022	5						59.74			
1/19/2022	6						56.77			
1/19/2022	7						67.14			
1/19/2022	8						45.96			

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>
1/19/2022	9						45.78			
1/19/2022	10						33.17			
1/19/2022	11						33.11			
1/19/2022	14						34.72			
1/19/2022	15						34.35			
1/19/2022	16						40.48			
1/19/2022	19						52.47			
1/19/2022	20						54.26			
1/19/2022	22						30.16			
1/19/2022	23						46.59			
1/20/2022	10						61.31			
1/20/2022	18						80.00			
1/20/2022	20						64.00			
1/21/2022	7						68.00			
1/21/2022	8						64.48			
1/21/2022	9						71.52			
1/21/2022	12						63.54			
1/21/2022	14						53.88			
1/21/2022	15						55.00			
1/21/2022	17						66.01			
1/21/2022	18						55.14			
1/21/2022	19						54.80			
1/21/2022	20						52.86			
1/21/2022	21						53.19			
1/21/2022	22						34.81			
1/21/2022	23						48.54			
1/21/2022	24						42.25			
1/22/2022	1						48.41			
1/22/2022	2						48.55			
1/22/2022	3						50.69			
1/22/2022	4						50.29			
1/22/2022	5						50.92			
1/22/2022	6						49.96			
1/22/2022	7						52.17			
1/22/2022	8						53.62			
1/22/2022	9						52.95			
1/22/2022	10						53.49			
1/22/2022	12						40.93			
1/22/2022	13						40.81			
1/22/2022	14						40.09			
1/22/2022	15						41.02			
1/22/2022	19						53.04			
1/22/2022	20						53.32			
1/22/2022	22						52.90			
1/22/2022	23						44.76			
1/22/2022	24						45.19			
1/23/2022	3						57.71			
1/23/2022	4						57.71			
1/23/2022	6						52.12			
1/23/2022	7						57.71			

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>
1/23/2022	8						53.13			
1/23/2022	9						54.24			
1/23/2022	10						53.48			
1/23/2022	11						44.53			
1/23/2022	12						41.59			
1/23/2022	19						46.62			
1/23/2022	20						50.00			
1/24/2022	6						57.71			
1/24/2022	7						57.79			
1/24/2022	8						54.88			
1/24/2022	9						49.16			
1/24/2022	10						44.92			
1/24/2022	11						40.00			
1/24/2022	12						30.29			
1/24/2022	13						33.98			
1/24/2022	14						29.94			
1/24/2022	15						29.77			
1/24/2022	16						30.49			
1/24/2022	17						41.31			
1/24/2022	18						43.19			
1/24/2022	19						42.77			
1/24/2022	20						42.55			
1/25/2022	6						43.24			
1/26/2022	12						41.45			
1/26/2022	18						48.00			
1/26/2022	19						48.80			
1/26/2022	21						47.88			
1/27/2022	5						47.17			
1/27/2022	6						78.49			
1/28/2022	1						41.56			
1/28/2022	8						55.53			
1/28/2022	9						51.72			
1/28/2022	10						44.90			
1/28/2022	11						43.23			
1/28/2022	12						42.70			
1/28/2022	13						42.62			
1/28/2022	14						42.32			
1/28/2022	15						43.09			
1/28/2022	16						42.88			
1/28/2022	17						47.43			
1/28/2022	18						54.65			
1/28/2022	19						60.00			
1/28/2022	20						60.90			
1/28/2022	22						49.32			
1/28/2022	23						53.01			
1/29/2022	6						57.07			
1/29/2022	8						48.30			
1/29/2022	9						55.08			
1/29/2022	10						59.50			
1/29/2022	11						56.66			

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</i>	<i>Highest Bid</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
1/29/2022	18						78.48			
1/29/2022	19						76.00			
1/29/2022	21						76.04			
1/29/2022	22						80.29			
1/29/2022	23						70.97			
1/30/2022	2						80.00			
1/30/2022	7						113.96			
1/30/2022	9						89.32			
1/30/2022	10						56.24			
1/30/2022	11						40.38			
1/30/2022	12						43.78			
1/30/2022	13						44.19			
1/30/2022	14						42.42			
1/30/2022	15						41.72			
1/30/2022	16						42.59			
1/30/2022	17						50.00			
1/30/2022	20						73.20			
1/30/2022	21						58.32			
1/30/2022	22						58.00			
1/30/2022	23						52.23			
1/30/2022	24						45.13			
1/31/2022	1						44.13			
1/31/2022	2						45.26			
1/31/2022	3						58.00			
1/31/2022	4						66.26			
1/31/2022	5						68.48			
1/31/2022	6						80.00			
1/31/2022	7						81.94			
1/31/2022	8						82.95			
1/31/2022	10						67.63			
1/31/2022	11						39.27			
1/31/2022	12						42.85			
1/31/2022	17						45.74			
1/31/2022	19						80.00			
1/31/2022	20						67.34			
1/31/2022	21						66.00			
1/31/2022	22						61.35			
1/31/2022	23						46.20			
2/1/2022	5						65.50			
2/1/2022	7						99.73			
2/1/2022	8						76.04			
2/1/2022	9						55.87			
2/1/2022	10						57.92			
2/1/2022	22						40.02			
2/1/2022	23						37.58			
2/2/2022	10						46.04			
2/2/2022	11						44.32			
2/2/2022	19						64.30			
2/2/2022	23						35.32			
2/3/2022	11						48.00			

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>
2/3/2022	15						46.33			
2/3/2022	16						46.27			
2/3/2022	17						55.00			
2/4/2022	6						46.70			
2/4/2022	9						47.28			
2/4/2022	10						45.59			
2/4/2022	11						45.53			
2/4/2022	12						46.17			
2/4/2022	13						45.48			
2/4/2022	14						45.76			
2/4/2022	15						45.78			
2/4/2022	16						47.86			
2/4/2022	19						60.00			
2/4/2022	23						58.00			
2/5/2022	12						54.00			
2/5/2022	13						42.93			
2/5/2022	14						40.83			
2/5/2022	15						40.00			
2/5/2022	17						42.79			
2/5/2022	24						55.77			
2/6/2022	9						52.00			
2/6/2022	10						37.75			
2/6/2022	11						36.91			
2/6/2022	12						43.97			
2/6/2022	13						41.77			
2/6/2022	14						40.56			
2/6/2022	15						39.89			
2/6/2022	16						40.88			
2/6/2022	17						43.89			
2/6/2022	18						45.25			
2/6/2022	20						60.00			
2/6/2022	21						44.78			
2/6/2022	22						44.01			
2/6/2022	23						43.14			
2/6/2022	24						42.29			
2/7/2022	14						59.86			
2/7/2022	15						55.88			
2/7/2022	16						58.69			
2/7/2022	17						70.42			
2/7/2022	18						74.74			
2/7/2022	19						69.36			
2/7/2022	20						54.95			
2/7/2022	21						52.38			
2/7/2022	22						59.18			
2/7/2022	23						44.52			
2/8/2022	1						43.50			
2/8/2022	2						43.49			
2/8/2022	6						61.15			
2/8/2022	7						75.12			
2/8/2022	24						42.00			

HAE CLEARED AUCTIONS: CLEARING PRICE AND QUANTITY (CONT.)

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
2/10/2022	4						43.23			
2/10/2022	24						31.87			
2/11/2022	1						30.63			
2/11/2022	2						30.11			
2/11/2022	3						30.86			
2/11/2022	4						40.00			
2/11/2022	5						43.31			
2/12/2022	21						40.03			
2/12/2022	23						29.60			
2/12/2022	24						29.40			
2/13/2022	10						45.00			
2/13/2022	11						43.65			
2/13/2022	12						41.75			
2/13/2022	13						41.24			
2/13/2022	14						39.52			
2/13/2022	16						39.90			
2/13/2022	17						42.01			
2/13/2022	18						43.50			
2/13/2022	19						43.36			
2/13/2022	23						42.16			
2/13/2022	24						42.80			
2/14/2022	6						45.61			
2/14/2022	7						57.26			
2/14/2022	8						57.17			
2/14/2022	17						42.88			
2/14/2022	19						43.83			
2/14/2022	20						43.27			
2/14/2022	21						43.29			
2/14/2022	23						40.76			
2/14/2022	24						42.95			
2/15/2022	1						42.94			
2/15/2022	6						48.89			
2/15/2022	7						57.18			
2/15/2022	8						54.18			
2/15/2022	9						48.74			
2/15/2022	10						45.71			
2/15/2022	18						47.47			
2/15/2022	19						44.34			
2/15/2022	20						45.18			
2/15/2022	21						44.12			
2/15/2022	22						43.81			
2/15/2022	23						43.78			
2/16/2022	4						42.00			
2/16/2022	6						47.65			
2/16/2022	7						48.73			
2/17/2022	23						29.20			
2/17/2022	24						30.65			
2/18/2022	2						39.06			
2/18/2022	3						39.61			
2/18/2022	9						47.69			

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>
2/18/2022	10						43.85			
2/18/2022	23						48.33			
2/19/2022	8						47.70			
2/19/2022	9						50.00			
2/19/2022	10						31.19			
2/19/2022	14						34.95			
2/19/2022	15						33.52			
2/19/2022	24						42.51			
2/20/2022	8						46.57			
2/20/2022	14						32.68			
2/21/2022	8						44.73			
2/21/2022	10						36.57			
2/21/2022	21						48.79			
2/22/2022	11						42.00			
2/22/2022	14						41.22			
2/22/2022	15						39.08			
2/22/2022	16						40.32			
2/22/2022	17						43.65			
2/22/2022	19						36.05			
2/22/2022	20						52.00			
2/22/2022	22						43.01			
2/22/2022	23						31.59			
2/23/2022	8						50.00			
2/23/2022	13						42.38			
2/23/2022	14						42.76			
2/23/2022	15						41.85			
2/23/2022	16						42.50			
2/23/2022	17						44.14			
2/23/2022	19						54.00			
2/23/2022	20						48.44			
2/23/2022	21						47.00			
2/23/2022	22						40.00			
2/23/2022	23						32.23			
2/23/2022	24						31.43			
2/24/2022	1						42.00			
2/24/2022	14						52.78			
2/24/2022	15						44.06			
2/24/2022	16						51.67			
2/24/2022	18						60.00			
2/24/2022	20						48.34			
2/24/2022	23						31.76			
2/24/2022	24						32.54			
2/25/2022	3						39.15			
2/25/2022	4						36.00			
2/25/2022	7						42.88			
2/27/2022	16						44.78			
2/27/2022	17						43.47			
2/28/2022	6						42.06			
3/1/2022	19						57.87			
3/4/2022	18						43.73			

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>
3/4/2022	19						44.15			
3/4/2022	20						43.42			
3/4/2022	22						35.56			
3/4/2022	23						32.54			
3/4/2022	24						29.10			
3/5/2022	1						30.66			
3/5/2022	2						31.06			
3/6/2022	1						31.63			
3/6/2022	13						39.54			
3/6/2022	18						45.08			
3/6/2022	19						45.10			
3/6/2022	20						43.88			
3/10/2022	8						44.70			
3/12/2022	10						50.00			
3/12/2022	11						54.57			
3/12/2022	12						47.88			
3/12/2022	13						35.54			
3/12/2022	14						47.55			
3/12/2022	15						46.65			
3/12/2022	16						39.45			
3/12/2022	17						48.08			
3/12/2022	18						64.06			
3/12/2022	19						67.89			
3/13/2022	8						62.77			
3/13/2022	9						50.05			
3/13/2022	10						55.71			
3/13/2022	11						34.51			
3/13/2022	12						32.68			
3/22/2022	14						45.00			
3/24/2022	11						47.43			
3/24/2022	12						44.70			
3/24/2022	13						42.59			
3/24/2022	14						46.64			
3/24/2022	15						45.93			
3/24/2022	23						40.94			
3/24/2022	24						37.15			
3/25/2022	24						33.87			
3/26/2022	2						37.62			
3/26/2022	3						37.36			
3/26/2022	4						37.79			
3/26/2022	5						39.25			
3/26/2022	6						41.58			
3/28/2022	17						41.26			
3/28/2022	18						50.00			
3/28/2022	22						56.06			
3/29/2022	19						61.88			
3/29/2022	21						57.26			
3/30/2022	24						37.00			
3/31/2022	17						65.00			
3/31/2022	18						59.02			

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</i>	<i>Highest Bid</i>	<i>Cleared MW</i>	<i>Clearing Price (\$/MWh)</i>	<i>Winning Bidders</i>	<i>Total Number of Bidders</i>	<i>Winning Offerors</i>
3/31/2022	19						70.00			
3/31/2022	21						55.16			
3/31/2022	22						54.25			
3/31/2022	24						38.25			
4/1/2022	1						42.54			
4/1/2022	2						40.91			
4/1/2022	10						46.19			
4/1/2022	11						44.89			
4/1/2022	12						42.03			
4/1/2022	13						42.68			
4/2/2022	16						49.17			
4/5/2022	9						57.56			
4/5/2022	11						68.68			
4/5/2022	12						61.92			
4/5/2022	13						70.00			
4/5/2022	14						59.04			
4/5/2022	15						63.71			
4/5/2022	16						64.10			
4/5/2022	17						73.84			
4/5/2022	18						76.49			
4/5/2022	19						77.65			
4/5/2022	20						75.88			
4/5/2022	21						63.36			
4/6/2022	7						61.92			
4/6/2022	9						66.00			
4/6/2022	10						72.73			
4/6/2022	11						72.69			
4/6/2022	12						61.97			
4/6/2022	13						74.00			
4/6/2022	15						79.00			
4/6/2022	17						82.07			
4/6/2022	18						77.99			
4/6/2022	19						75.58			
4/6/2022	20						60.73			
4/7/2022	1						39.47			
4/8/2022	2						46.17			
4/8/2022	3						46.38			
4/8/2022	4						48.17			
4/8/2022	19						66.45			
4/8/2022	22						62.88			
4/8/2022	23						68.00			
4/8/2022	24						65.43			
4/9/2022	13						52.80			
4/9/2022	14						49.97			
4/9/2022	16						49.78			
4/9/2022	24						54.64			
4/10/2022	1						60.00			
4/10/2022	6						68.03			
4/13/2022	14						77.21			
4/13/2022	16						74.00			

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>
4/13/2022	17						77.21			
4/13/2022	21						69.72			
4/13/2022	22						68.32			
4/14/2022	11						69.54			
4/14/2022	14						69.17			
4/15/2022	10						52.39			
4/18/2022	15						100.15			
4/18/2022	18						99.26			
4/18/2022	19						93.79			
4/18/2022	20						95.22			
4/18/2022	21						73.93			
4/18/2022	23						70.00			
4/19/2022	8						69.61			
4/19/2022	16						56.17			
4/19/2022	24						58.10			
4/20/2022	1						55.96			
4/20/2022	2						55.42			
4/20/2022	3						55.50			
4/20/2022	4						56.95			
4/20/2022	5						79.06			
4/20/2022	6						100.00			
4/20/2022	8						87.68			
4/20/2022	9						77.51			
4/20/2022	10						61.42			
4/20/2022	11						57.19			
4/20/2022	12						53.99			
4/20/2022	13						52.78			
4/20/2022	14						56.59			
4/20/2022	15						65.00			
4/20/2022	16						60.00			
4/20/2022	19						95.63			
4/20/2022	20						111.53			
4/20/2022	21						73.95			
4/20/2022	22						73.05			
4/20/2022	23						78.02			
4/20/2022	24						48.10			
4/21/2022	1						52.74			
4/21/2022	20						74.71			
4/21/2022	23						75.76			
4/22/2022	20						67.42			
4/23/2022	19						72.97			
4/23/2022	20						82.00			
4/23/2022	21						67.14			
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. Because confidential and privileged information permeates virtually all aspects of the Appendices, Brattle and Southern Companies agreed that those portions of the Report should be 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
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, Appendix A, 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.	2, 3, 4, 5, 6, 7, 19, Appendix D

<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>12</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>10, 12, Appendix A, Appendix B, Appendix C</p>