

129 FERC ¶ 61,152
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Sudeen G. Kelly, Marc Spitzer,
and Philip D. Moeller.

Carolina Power & Light Company	Docket No. ER99-2311-012
Florida Power Corporation	ER97-2846-015
Duke Energy Carolinas, LLC	ER07-188-007
Entergy Services, Inc.	ER91-569-045
Entergy Power Ventures, LP	ER02-862-012
EWO Marketing, LP	ER01-666-012
Entergy Power, Inc.	ER91-569-047
LG&E Energy Marketing Inc.	ER94-1188-046
Louisville Gas & Electric Company	ER99-1623-015
Kentucky Utilities Company	ER98-4540-015
South Carolina Electric & Gas Company	ER96-1085-014
Southern Company Services, Inc.	ER96-780-023
Alabama Power Company	
Georgia Power Company	
Gulf Power Company	
Mississippi Power Company	
Southern Power Company	
Tampa Electric Company	ER99-2342-013
Guidance on Simultaneous Transmission Import Limit Studies	AD10-2-000

ORDER GRANTING CLARIFICATION AND ESTABLISHING TECHNICAL
CONFERENCE

(Issued November 19, 2009)

1. On July 16, 2009, the Commission issued an order adopting adjusted Simultaneous Transmission Import Limit (SIL) study values for use in analyzing the

southeast region's transmission owners' 2008 updated market power analyses.¹ On August 14, 2009, the Southeast Transmission Owners² filed a request for clarification or, in the alternative, rehearing of the July 16 Order. In this order, we grant the Southeast Transmission Owners' request for clarification and we direct Commission staff to convene a technical conference to provide guidance for performing SIL studies.

I. Background

2. In Order No. 697, the Commission adopted the requirement that SIL studies be used as a basis for transmission access for both the indicative screens and the Delivered Price Test analysis.³ SIL studies measure limits on the amount of capacity that can be imported into a relevant market.⁴ In Order No. 697, the Commission provided guidance regarding how to perform SIL studies, including accounting for specific Open Access Same-Time Information System (OASIS) practices. The Commission stated that the SIL

¹ *Carolina Power & Light Co.*, 128 FERC ¶ 61,039 (2009) (July 16 Order).

² The request for clarification of the July 16 Order was filed by the following: Carolina Power & Light Company; Florida Power Corporation; Duke Energy Carolinas, LLC; Entergy Services, Inc., on behalf of Entergy Arkansas, Inc., Entergy Gulf States Louisiana, L.L.C., Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc., Entergy Texas, Inc., Entergy Power Ventures, LP, EWO Marketing, LP, and Entergy Power, Inc.; E.ON U.S. LLC, on behalf of LG&E Energy Marketing Inc., Louisville Gas & Electric Company and Kentucky Utilities Company; South Carolina Electric & Gas Company; Southern Company Services, Inc., acting as agent for Alabama Power Company, Georgia Power Company, Gulf Power Company, Mississippi Power Company, and Southern Power Company (Southern Companies); and Tampa Electric Company (collectively, Southeast Transmission Owners). The entities included as the "Southeast Transmission Owners" in the request for clarification vary slightly from the entities included as "Southeast Transmission Owners" as described in the July 16 Order. However, for purposes of this order, we will use the one term to refer to both.

³ *Market-Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities*, Order No. 697, FERC Stats. & Regs. ¶ 31,252, at P 19, *clarified*, 121 FERC ¶ 61,260 (2007), *order on reh'g*, Order No. 697-A, FERC Stats. & Regs. ¶ 31,268, *clarified*, 124 FERC ¶ 61,055, *order on reh'g*, Order No. 697-B, FERC Stats. & Regs. ¶ 31,285 (2008), Order No. 697-C, FERC Stats. & Regs. ¶ 31,291 (2009).

⁴ Order No. 697-A, FERC Stats. & Regs. ¶ 31,268 at P 132.

study as described in Appendix E of *AEP Power Marketing, Inc.*⁵ is the only study that meets its requirements.⁶

3. In September 2008, the Southeast Transmission Owners filed updated market power analyses in accordance with the regional reporting schedule adopted in Order No. 697. The updated market power analyses included SIL study results. However, the SIL study results contained large variations among many Southeast Transmission Owners for the same study areas. Therefore, Commission staff requested from the Southeast Transmission Owners further information regarding their SIL studies. Despite two rounds of responses by the Southeast Transmission Owners to Commission staff's data requests, large variations among the Southeast Transmission Owners' revised SIL study results remained.

4. The Commission determined, in the July 16 Order, that the Southeast Transmission Owners had not conducted their SIL studies in accordance with the intent of Appendix E of the April 14 Order and Order No. 697. The Commission explained that because of this, as well as the large variations in the resulting SIL values for the same study areas, it made adjustments to the SIL studies submitted by the Southeast Transmission Owners. The Commission stated that it made these adjustments to ensure that its review of the updated market power analyses of sellers in the southeast region is based on accurate and consistent SIL values for the respective balancing authority areas.⁷

II. Request for Clarification

5. The Southeast Transmission Owners state that without more specificity and detail as to how the Commission adjusted the SIL studies, they are unable to understand how the Commission reached its results and they are unable to implement and comply with the guidance of the July 16 Order in order to reliably construct future SIL studies. The Southeast Transmission Owners request that the Commission provide the data, assumptions and calculations used to adjust the SIL values and apply Appendix E and

⁵ *AEP Power Marketing, Inc.*, 107 FERC ¶ 61,018 (April 14 Order), *order on reh'g*, 108 FERC ¶ 61,026 (2004).

⁶ Order No. 697, FERC Stats. & Regs. ¶ 31,252 at P 19.

⁷ July 16 Order, 128 FERC ¶ 61,039 at P 5. We note that concurrent with the July 16 Order, the Commission issued separate orders addressing the Southeast Transmission Owners' respective updated market power analyses and, in each respective order, the Commission relied upon the Commission-adjusted SIL study results as discussed in the July 16 Order. No requests for rehearing of the separate orders on the Southeast Transmission Owners' updated market power analyses were filed.

specific OASIS practices of the balancing authority areas under study. They support a Commission-facilitated technical conference to review the Commission's adjusted SIL study methodology. In addition, the Southeast Transmission Owners specifically request that the Commission clarify whether it accepted or rejected use of a load-shift scaling methodology when it adjusted the Southeast Transmission Owners' SIL studies.⁸ They state that the July 16 Order seems to indicate that the Commission utilized a hard cap (i.e., ceiling) on reported SIL values set at some measure of load. They also request that the Commission clarify that the adjusted SIL values set forth in the July 16 Order are applicable only to the updated market power analyses and that the Commission did not direct any specific practices with regard to the Southeast Transmission Owners' planning or operation of their respective transmission systems.

III. Discussion

6. As discussed below, we continue to find that the Commission-adjusted SIL values and study methodology provide a fair assessment of each study area's import capability from its aggregated first-tier area and provide a consistent measure for use in the indicative screens by which to evaluate sellers' potential market power in those study areas. As explained in the July 16 Order, there were several problems with the SIL values provided by the Southeast Transmission Owners. The Southeast Transmission Owners, in their request for clarification, contend that the July 16 Order lacks the specificity and detail needed to determine whether the Commission-adjusted SIL values are the result of any computational or other error. As discussed below, we will grant the Southeast Transmission Owners request for clarification and provide further specificity, detail, and guidance.

A. Data, Assumptions, Calculations and Methodologies

7. The Southeast Transmission Owners state that without more specificity and detail on the data, assumptions, calculations and methodologies used by the Commission as part of the Commission-adjusted SIL study, they are unable to implement and comply with the guidance of the July 16 Order to reliably construct their future SIL studies.

8. The Southeast Transmission Owners request that the Commission provide the details necessary to show how the Commission applied OASIS practices historically used by the study area and aggregated first-tier balancing authority areas in order to capture real-life physical limitations that impede power flowing from remote first-tier resources

⁸ As described below, the load-shift scaling method is an energy transfer modeling technique used during the energy transfer calculation portion of the SIL study.

into the seller's area.⁹ They also state that it is unclear whether the Commission's use of SERC Reliability Corporation (SERC) OASIS Studies resulted in an amalgamation and application of all of the Southeast Transmission Owners' OASIS practices, or whether some Southeast Transmission Owner-specific practices were not used in the Commission's analysis. The Southeast Transmission Owners argue that while the July 16 Order contains the basis for utilizing a different methodology to estimate SIL values for non-SERC balancing authority areas, it does not contain a demonstration or explanation as to how that choice accurately captured the real-life physical limitations that impede power flowing from remote first-tier resources into the respective study area, or what alternative choices were considered.

9. We will grant clarification and describe the data, assumptions and calculations the Commission used to calculate the adjusted SIL values. We note that due to the unavailability of certain information, the Commission-adjusted SIL values are not the result of an ideal SIL study.

10. Many of the Southeast Transmission Owners performed SIL studies for study area markets other than their home balancing authority area without full knowledge of OASIS practices in these study areas and first-tier area markets. Generally, when the Commission calculated the adjusted SIL values, it aimed to apply the OASIS practices of the region, as required by Order No. 697; however, the Commission did not have complete information regarding the OASIS practices of each study area and first-tier area. Therefore, the Commission attempted to capture the OASIS practices historically applied by using OASIS models and input data developed by the SERC near-term study group (SERC study group). These studies are intra-regional studies performed by SERC members with the participation of many of the Southeast Transmission Owners using their respective OASIS practices.

⁹ The phrase "real-life physical limitations of first-tier balancing areas" refers to the lists of transmission equipment that should be monitored for overloads during the scaling process. Some Southeast Transmission Owners, in their filings, did not include comprehensive lists of transmission equipment that should be monitored for overloads in each season for first-tier balancing authority areas. In other words, the monitor and contingency files used in their SIL studies were incomplete. Therefore, the energy transfer part of their SIL study would not indicate that transmission limits were reached on this omitted equipment, allowing more power to flow to the study area in the model than could actually flow to the study area in reality.

1. Models

11. The Southeast Transmission Owners request that the Commission provide data which includes the base cases (i.e., transmission model) so that they can understand the adjusted SIL values set forth in the July 16 Order.

12. The Commission relied on the four seasonal OASIS models developed by the SERC study group for four seasons from December 2005-November 2006, which were submitted by the Southeast Transmission Owners in response to the Commission staff's second data request. The four seasonal models developed by the SERC study group reflect 'conditioning' or slight changes the SERC study group made to the base case model such as accounting for the seasonal outages and ratings of transmission and generation facilities.¹⁰

2. Input Files

13. The Southeast Transmission Owners request that the Commission provide the monitor, contingency, and subsystem files used in the Commission-adjusted SIL studies.¹¹

14. Because the SIL study included non-SERC balancing authority areas, the Commission was unable to rely solely on the monitor, contingency, and subsystem files submitted with the SERC study group's OASIS models. Instead, the Commission-adjusted SIL values are the result of two groups of monitor and contingency files: (1) for SERC balancing authority areas, the Commission used files submitted with the SERC study group's OASIS models; and (2) for non-SERC balancing authority areas, the Commission created monitor and contingency files consisting of all transmission facilities above 100 kV. The monitor and contingency files for non-SERC balancing

¹⁰ Specifically, the four seasonal models used are the models submitted by the Southeast Transmission Owners in response to the April 2009 data request: NTSG OASIS October 2005 – 05 Winter ver. 5; NTSG OASIS January 2006 – 06 Spring ver. 5; NTSG OASIS April 2006 – 06 Summer ver. 5; and, NTSG OASIS July 2006 – 06 Fall ver. 5.

¹¹ The associated monitored element file and contingency file are required input data for each seasonal SIL study. The monitored element file is a listing of transmission equipment that must be monitored for overloads during generation scaling for non-contingency and single-contingency conditions for that market for each season. Similarly, the contingency file is a listing of transmission equipment that is removed from service one-at-a-time during each model run, with each removal representing a single-contingency condition. *See* July 16 Order, 128 FERC ¶ 61,039 at P 8.

authority areas can be re-created using the criteria discussed above. Subsystem files for both SERC and non-SERC balancing authority areas are the same files submitted by the Southeast Transmission Owners, except, as discussed below, the Commission scaled all generation, including off-line generation.

3. Transfer Distribution Factor

15. The Southeast Transmission Owners request the transfer distribution factor used to calculate the Commission-adjusted SIL values. The transfer distribution factor is the ratio of the amount of transferred energy that flows on the most limiting transmission facility to the total amount of transferred energy as calculated by the SIL study. A lower transfer distribution factor could result in lower study area SIL values, while a higher transfer distribution factor could result in higher study area SIL values.

16. The two most common transfer distribution factors used by the Southeast Transmission Owners in their filings are three and five percent. The Commission-adjusted study used a transfer distribution factor of three percent, which was the value used by most of the Southeast Transmission Owners in the SIL studies that they submitted with their updated market-based rate analyses.

4. Scaling Methodology

17. The Southeast Transmission Owners state that the language of the July 16 Order suggests that the Commission utilized the generation scaling method and not the load-shift method. The Southeast Transmission Owners state that the July 16 Order does not contain a discussion of the permissibility of the load-shift methodology or the extent to which the Commission's analysis took that methodology into account. They note that Southern Companies utilizes the load-shift methodology in their OASIS practices.

18. The load-shift scaling method is an energy transfer modeling technique used during the energy transfer calculation portion of the SIL study that scales-up load in the study area while simultaneously scaling-down load in the first-tier area; existing generation in the first-tier area is thus available to serve additional load in the study area. Conversely, the generation-shift scaling method increases available uncommitted generation in the first-tier area while simultaneously decreasing generation in the study area.

19. The Commission-adjusted SIL studies used one scaling methodology, the generation-shift scaling methodology, for all study areas and associated first-tier areas to obtain what we believe to be more consistent SIL values. Using the generation-shift methodology to produce the Commission-adjusted SIL values does not preclude the use of the alternative load-shift scaling methodology. As the Commission noted in Order No. 697-A, "[w]e would allow sellers to use load shift methodology to calculate [SIL] while scaling their load beyond the historical peak load, provided they submit adequate support

and justification for the scaling factor used in their load shift methodology and how the resulting SIL number compares had the company used a generation shift methodology.”¹² We believe that using either the load-shift or the generation-shift methodology should produce similar results.

20. The Commission used a generation-shift scaling methodology that scaled all generation including off-line generation. Appendix E of the April 14 Order directs that “the applicant shall scale up available uncommitted generation in the exporting (aggregated first tier areas)...”¹³ The Commission does not have the regional engineering contacts that the Southeast Transmission Owners have through their many regional and inter-regional study groups, which enable them to distinguish available generation from unavailable generation. Therefore, due to the unavailability of information regarding off-line generation, the Commission-adjusted SIL study scaled all generation including off-line generation, despite the guidance in Appendix E.

5. Radial Facilities and Definition of First-Tier Balancing Authority Areas

21. The Southeast Transmission Owners request information on “the treatment applied to radial facilities” and how the Commission-adjusted SIL values “capture real-life physical limitations of first-tier balancing authority areas.”

22. We presume that the request for information on both issues refers to the Southern Company balancing authority area’s interconnection with Florida. Southern Company has two, non-adjacent first-tier areas consisting of certain SERC balancing authority areas to the north and certain Florida Reliability Coordinating Council (Florida Council) balancing authority areas to the south. This is an uncommon situation as most study areas have a contiguous first-tier area. Furthermore, the Southern Company study area

¹² Order No. 697-A, FERC Stats. & Regs. ¶ 31,268 at P 145. We note that Sellers using a load-shift scaling methodology may need to scale load in the study area above the historical peak load during the energy transfer portion of the SIL study when the seller is looking for an overload in any of the monitor and contingency file lists of transmission equipment. If the study area is a significant exporter of energy, the load in the study area might need to be scaled above the historical peak value to “absorb” the energy that is usually exported to the first tier, where the load is being scaled down. The seller would still need to limit the SIL values used in the indicative screens and the Delivered Price Test to seasonal, historical peak load values as those peak values “reasonably simulate the historical conditions that were present including....the actual peak demand.” See April 14 Order, 107 FERC ¶ 61,018 at Appendix E.

¹³ April 14 Order, 107 FERC ¶ 61,018 at Appendix E.

has a significant radial connection to the Florida Council. We presume that the request for information on ‘treatment of radial facilities’ refers to the coal-by-wire interconnection from the Southern Company balancing authority to the Florida Council and the treatment of Southern Company balancing authority exports into Florida on the coal-by-wire facilities.¹⁴

23. The Commission-adjusted SIL values do not take into account the net interchange between the Southern Company balancing authority area and the Florida Council.¹⁵ Specifically, we did not consider the exports from Southern Company to Florida even though the Florida Council is directly interconnected with the Southern Company study area. Ignoring these exports results in negative net interchange for the Southern Company study area. This results in a higher SIL value for the Southern Company study area. The Commission-adjusted SIL values do not consider exports into Florida because we believe the coal-by-wire, radial facilities are electrically part of the Florida Council.

6. Summary of the Data, Assumptions, Calculations and Methodologies

24. As discussed herein, we grant Southeast Transmission Owners’ request for more specificity and detail on the development of the Commission-adjusted SIL values. As discussed above, the Commission has identified the four seasonal models used in the Commission-adjusted SIL study. The Southeast Transmission Owners have these models in their possession as they each submitted them in response to Commission staff’s data request. The contingency, monitor and subsystem files used in the Commission-adjusted study for the SERC balancing authority areas and SERC first-tier areas are the same files supplied with the seasonal models. Furthermore, we have explained the modifications to the contingency and monitor files that we made in order to more accurately capture the

¹⁴ The phrase “coal by wire” refers to power produced by generation plants operating near a coal mine but sent to distant loads over high-voltage transmission lines.

¹⁵ Net area interchange is the sum of a study area’s scheduled energy transactions that is subtracted from the SIL study results to determine the SIL value. In the Commission-adjusted SIL study, the Commission correctly applied net area interchange, thus providing more accurate SIL values. July 16 Order, 128 FERC ¶ 61,039 at P 9. This subtraction implies that a study area which has positive net exports would have a positive sign on its net interchange value. Thus, a study area with net exports would have the positive value of its net interchange subtracted from the initial SIL value, reducing the SIL value. A study area with net imports would have a negative sign on its net interchange value and subtracting this negative value from the initial SIL value would increase the SIL value.

real-life physical limitations of power flows for the non-SERC study areas. The Commission-adjusted SIL study used a transfer distribution factor of three percent and did not take into account the interchange between the Florida Council and the Southern Company study area. Also, as requested, the Commission has discussed the generation scaling methodology used in the Commission-adjusted study. The information provided in this order should enable the Southeast Transmission Owners to replicate the Commission-adjusted SIL study and understand how the Commission reached its results.

B. Limits on SIL Values

25. The Southeast Transmission Owners state that whereas load may be scaled beyond the historical peak load as part of the load-shift method in accordance with Order No. 697-A, the July 16 Order seems to indicate the utilization by the Commission of a hard cap set at some measure of load.

26. We clarify that seasonal, historical peak load is one limitation on the SIL values reported in the indicative screens and the Delivered Price Test.¹⁶ This SIL value limitation applies to both scaling methodologies when conducting a SIL study (load-shift and generation-shift methodologies). Sellers performing load-shift scaling may scale load above the historical peak load during the energy transfer portion of the SIL study. The SIL value reported in the indicative screens and the Delivered Price Test, however, cannot exceed the seasonal historical peak load value.¹⁷

C. Planning and Operation

27. As requested, we clarify that the Commission-adjusted SIL values set forth in the July 16 Order are only for purposes of the updated market power analyses, and that the

¹⁶ The other two limitations are: (1) when transmission equipment reaches an operating limit during the energy transfer calculation portion of the SIL study (these are “the real-life physical limitations of first-tier balancing authority areas that impede power flowing from remote first-tier resources into the seller’s study area” (Order No. 697, FERC Stats. & Regs. ¶ 31,252 at n.361)); and (2) when the available uncommitted generation in the first-tier area is exhausted and no transmission equipment has reached an operating limit during the scaling process (July 16 Order, 128 FERC ¶ 61,039 at P 9).

¹⁷ See Order No. 697, FERC Stats. & Regs. ¶ 31,252 at P 361 & n.366 (“We note that there may be a circumstance where additional supplies could be imported above the market’s study year peak load. If such a circumstance occurs, we will allow the seller to submit a sensitivity analysis in this regard and we will consider such an analysis on a case-by-case basis.”); see also Order No. 697-A, FERC Stats. & Regs. ¶ 31,268 at P 145.

Commission did not direct any specific practices with regard to the Southeast Transmission Owners' planning or operation of their respective transmission systems.

D. Technical Conference

28. We direct Commission staff to convene a technical conference and we establish Docket No. AD10-2-000 for this purpose. The technical conference will focus on how a SIL study should be conducted. This technical conference is intended to provide guidance to the industry so that prospective SIL studies will produce more consistent results.

29. We direct Commission staff to issue a notice setting forth the dates of the technical conference and establishing a date by which interested persons may submit written questions to be addressed at the technical conference. Among other things, the topics to be discussed at the technical conference may include development of seasonal benchmark cases, completeness of SIL study support data files (monitor, contingency, and subsystem files), scaling methodologies, identification of energy transfer limits, transfer distribution factors, OASIS practices, methods to identify available uncommitted generation, application of net area interchange, and alternative methods to adjust net area interchange for a study area with two, non-contiguous first-tier areas.

The Commission orders:

(A) The Southeast Transmission Owners' request for clarification is hereby granted, as discussed in the body of this order.

(B) Commission staff is directed to convene a technical conference, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.