

Attachment B

Affidavit of Aaron Melda and Lonnie Bellar

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Southern Company Services, Inc.

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Docket No. ER21-____-000

JOINT AFFIDAVIT OF AARON MELDA AND LONNIE BELLAR
ON BEHALF OF
THE MEMBERS OF THE SOUTHEAST ENERGY EXCHANGE MARKET

Introduction

1. Our names are Aaron Melda and Lonnie Bellar. Mr. Melda’s business address is 1100 Market Street, Chattanooga, Tennessee, 37402. Mr. Bellar’s business address is 220 W. Main Street, Louisville, Kentucky, 40202.
2. Aaron Melda is Senior Vice President Transmission & Power Supply at the Tennessee Valley Authority (“TVA”). In that role, he is responsible for safe and reliable execution of operations, power supply, maintenance, and construction activity on TVA’s transmission system. Mr. Melda has more than 20 years of experience in leadership roles throughout the electric utility industry. He previously served as Vice President, Transmission Operations & Power Supply, where he was responsible for the safe, reliable, real-time operation of TVA’s bulk transmission system and power supply. Prior to that, Mr. Melda served as Vice President, Enterprise Planning, where he was responsible for TVA’s strategic planning process, long range financial plan, load and commodity forecasting, commodity risk oversight, and fleet asset planning and strategy. He also served as Executive Director, Watts Bar Nuclear Unit 2 Completion, where he was responsible for the safe, high quality start-up and turnover of Watts Bar Nuclear U2. Prior to this role, he served TVA as the Senior Vice President, Operations Support where he led Engineering, Training, and Support Services. In addition to these roles, he also has experience as a Plant Manager, Projects Manager, and Field Engineer. He received his Bachelor of Science degree in Mechanical Engineering from the Georgia Institute of Technology and a Master’s degree in Business Administration from Vanderbilt University.
3. Lonnie Bellar is the Chief Operating Officer (“COO”) of Louisville Gas & Electric Company and Kentucky Utilities Company (“LG&E/KU”). In that role, he is responsible for oversight and direction of all operational areas of the business of LG&E/KU, including power generation, energy supply and analysis, electric distribution and transmission, gas transmission, distribution and storage, safety, and environmental and customer services. Mr. Bellar has been at LG&E/KU since 1987, where he has served in various management positions within generation planning and generation services, financial planning and controlling, electric transmission, state regulation and rates, and gas operations. In January 2017, he became Senior Vice President of Operations and served in that position until he became COO in March 2018. He received his dual-degree bachelor’s in engineering arts from Georgetown College and in electrical engineering from the University of Kentucky.

4. Our companies are among the 14 founding Members¹ of the Southeast Energy Exchange Market (“Southeast EEM”). We are jointly presenting this affidavit in support of the Southeast EEM proposal, which represents a delicate balance, both to entities like LG&E/KU that are subject to the jurisdiction of the Federal Energy Regulatory Commission (“Commission” or “FERC”), and entities like TVA that are not. This is not the first effort to develop a regional market in the Southeast, as the Commission knows,² but it is the first one to enjoy such broad support from the transmission owners and load serving entities in the region.
5. This joint affidavit provides an overview of the Southeast EEM, its expected benefits, and the core principles and reasoning that have driven Members’ decision-making in the formation of this enhanced bilateral market and enabled consensus across this diverse group of entities. Deeper detail on the proposed operation of the Southeast EEM is provided in the joint affidavit of Mr. Corey Sellers of Southern Company and Mr. Chris McGeeney of Associated Electric Cooperative, Inc., included with this submission as Attachment C (the “Operations Affidavit”). Dr. Susan Pope of FTI Consulting provides her opinion that the Southeast EEM presents additional opportunities for the benefit of buyers, sellers and their customers in the existing Southeast bilateral energy market and will not present any additional market power concerns or market manipulation opportunities. Dr. Pope’s affidavit is included with this filing as Attachment D (the “Economic Affidavit”). And Andrew Rea of Guidehouse sponsors a report prepared by Guidehouse and Charles River Associates demonstrating the benefits expected from the Southeast EEM (“Benefits Analysis”). The Guidehouse affidavit and Benefits Study are included with this filing as Attachments E and E-1, respectively.

The Southeast Today

6. The Southeast EEM is an enhancement of the existing bilateral market in the Southeast that is intended to reduce customer costs across the region by providing additional opportunities for bilateral trades, rather than creating an entirely new market system. Accordingly, in order to understand the Southeast EEM, it is first necessary to understand today’s electricity markets in the Southeast.
7. Much of the Southeast is served by entities that are not subject to FERC’s jurisdiction, with the federal government (*e.g.*, TVA), local governments, electric cooperatives, and municipalities playing large roles. In addition, the region includes a number of vertically integrated utilities regulated by the Commission. Each of these entities has its own set of goals, but all share a desire to reduce customer costs by increasing efficiencies.

¹ When we refer to Members, we are talking about those entities that have executed the Southeast Energy Exchange Market Agreement (“Southeast EEM Agreement”). Capitalized terms used herein have the meaning given them in the Southeast EEM Agreement.

² An approximately four-year effort in the wake of Order No. 2000 was unsuccessful.

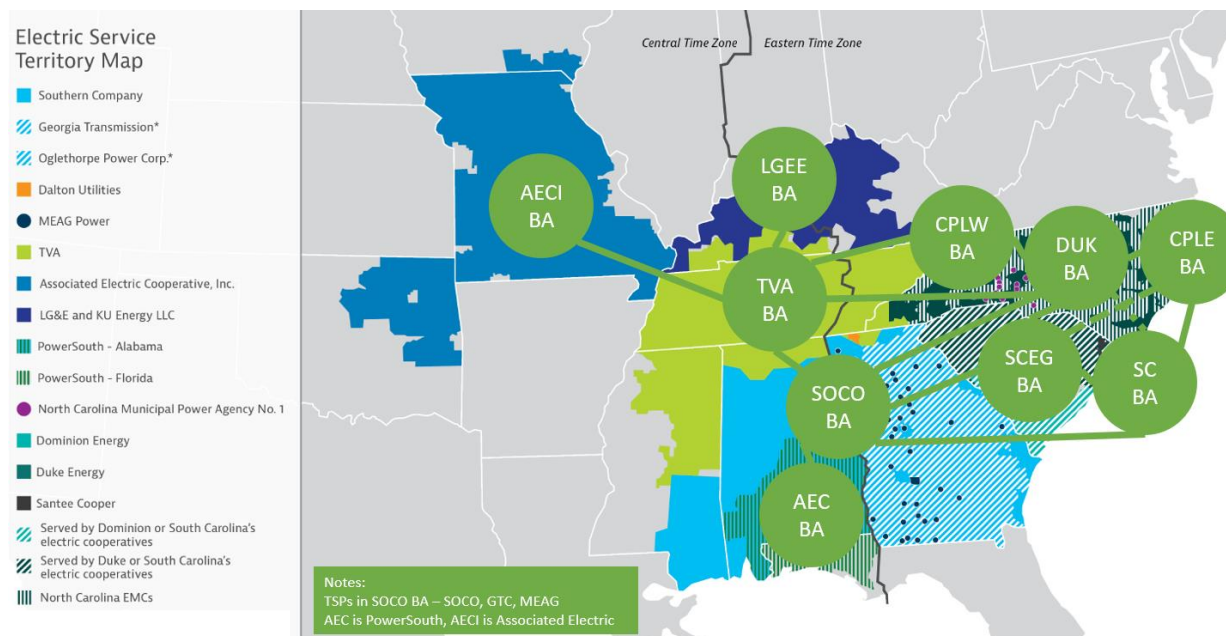
8. As of the date of this filing, the Members of the Southeast EEM who have come together in pursuit of that shared goal are:

- Associated Electric Cooperative, Inc. (“AECI”);
- Dalton Utilities;
- Dominion Energy South Carolina, Inc. (“Dominion Energy SC”);
- Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (together with DEC, “Duke”);
- LG&E/KU;
- North Carolina Municipal Power Agency Number 1 (“NCMPA Number 1”);
- PowerSouth Energy Cooperative (“PowerSouth”);
- Alabama Power Company;
- Georgia Power Company;
- Mississippi Power Company (together with Alabama Company and Georgia Power Company, “Southern Companies”);
- North Carolina Electric Membership Corporation (“NCEMC”); and
- TVA.

In addition, the following entities have participated in the creation of the Southeast EEM and are contemplating or in the process of seeking the necessary approvals for the execution of the Southeast EEM Agreement to become Members:

- Georgia System Operations Corporation (“GSOC”);
- Georgia Transmission Corporation (“GTC”);
- Municipal Electric Authority of Georgia (“MEAG Power”);
- Oglethorpe Power Corporation (An Electric Membership Corporation) (“Oglethorpe”); and
- South Carolina Public Service Authority (“Santee Cooper”).

These Southeast EEM Members (together with the proposed Members) collectively own approximately 160,000 MW of generating capacity, and serve about 640 TWh of energy for load and cover ten Balancing Authority (“BA”) areas across two time zones, as shown on the following map (the “Region”):



9. Each of the Members either has a load serving responsibility or serves an entity that has that responsibility. Thus, each Member has an obligation and responsibility to plan to serve its load through its own generation, or long-term power purchase arrangements, or both. Such entities can use bilateral power purchases and sales to reduce customers' cost of energy closer to real time, such as in the hourly market. Trades generally occur on an hourly basis as the shortest increment, and most often occur with only entities in the same or directly interconnected balancing authorities. To the best of our knowledge, very few 15-minute trades occur bilaterally. Generally,³ a short-term power purchase will be sought if more expensive generation can be backed down. An entity will typically engage in a short-term power sale when there is an opportunity to provide power bilaterally to a counterparty at a price greater than the seller's own cost to produce and deliver the power, after satisfying any obligations it may have to its own load. In other words, short-term purchases are generally made for economic purposes to displace more expensive generation. Therefore, these purchases typically reduce customer costs. When sales are made, a significant portion of the margin from the sale will be credited back to customers, which helps to achieve net cost savings. Most utilities use a mechanism such as a fuel adjustment clause to pass back credits to customers for purchases and sales. Other utilities, such as TVA, pass back the savings from sales by lowering base revenue requirements instead.

10. For example, LG&E/KU plan their systems on a combined basis by maintaining capacity within a target reserve margin range, which the companies develop to maintain reliability at the lowest reasonable cost. This range is updated as part of the companies' integrated

³ Our description here of how Southeastern markets work is driven by our knowledge of TVA and LG&E/KU and our experience, and the experiences of our companies, with others in the region. We have not, for example, conducted a survey of all Southeast EEM Members on these general background issues.

resource planning (“IRP”) process, which is ordered and reviewed by the Kentucky Public Service Commission (“KPSC”) triennially. In their resource planning, LG&E/KU do not rely on short-term power purchases as a means of serving load. Rather, LG&E/KU use hourly non-firm economic purchase opportunities to reduce customers’ cost of energy. Hourly non-firm off-system sales are executed when the price that can be negotiated with a willing buyer exceeds the companies’ cost of generation. Customers share in the off-system sales margin via a mechanism in retail rates approved by the KPSC.

11. TVA also uses an IRP process to plan its generation system in compliance with the TVA Act (16 U.S.C. § 831y-1), which requires that TVA operate a reliable, low-cost, and environmentally sustainable system that supports economic development in its service area. The process also involves significant input from stakeholders and the public. TVA is a federal, publicly-owned corporation governed by a Presidentially-appointed Board of Directors. The Board adopts and approves the planning direction in TVA’s IRP, along with identified near-term actions. The broad planning direction in the IRP informs more specific long-range plans that are updated annually based on evolving market conditions, environmental regulations, and technology advancements. TVA’s most recent IRP was finalized in 2019, with an update to be initiated no later than 2024.
12. TVA utilizes the short-term market to increase flexibility in its operations and to reduce costs for its ratepayers. TVA proactively manages its portfolio, including short-term market purchases and transmission, to reduce overall costs and to bolster reliability. In accordance with the TVA Act, TVA also executes off-system sales when excess power is available and bilaterally negotiated prices are greater than the cost of its own generation. The rates that the TVA Board sets include a monthly fuel cost adjustment, which operates to pass along 100% of the savings achieved by economic purchases to its customers. Decisions made in the IRP process can place demands on the operation of TVA’s power system (e.g., the addition of solar recommended in the IRP has the potential to increase short-term system volatility). Participation in markets that enable short-term trades, which would include the Southeast EEM, is one tool that TVA can utilize to manage such volatility.
13. As can be seen, electric service providers in the Southeast seek bilateral transactions that can either save costs directly (purchases) or earn a margin to offset costs (sales). While this works well for transactions with neighboring entities, if additional wheels are needed to reach a counterparty in a distant balancing authority, transaction economics can diminish because of added transmission costs. Additionally, today’s bilateral market relies on buyers and sellers being able to find each other, through phone calls or messaging, to negotiate a deal, to find and reserve transmission service, and to e-Tag scheduled energy flow on a timely basis. These factors result in some economic energy going unpurchased and some available transmission going unutilized. A central objective of the Members’ efforts to identify potential regional improvements, which has led to the development of the Southeast EEM, is finding ways to increase the use of available transmission and increase opportunities for economic energy purchases and sales.

14. In addition to the practical limitations on trading in the Southeast today, there are also other restrictions that must be observed. Perhaps chief among these is the “TVA fence” – a name sometimes used to describe statutory restrictions on transactions by TVA.
15. In 1959, Congress amended the TVA Act to permit TVA to issue bonds and self-finance system projects. Up until that time, TVA was funded primarily through Congressional appropriations. In exchange for the ability to self-finance, Congress limited TVA’s ability to sell power. As a general rule, TVA cannot make any contracts for the sale or delivery of power which would have the effect of making TVA, directly or indirectly, a source of power supply outside the area where TVA was the primary source of power supply on July 1, 1957. This restriction created a “fence” around the TVA service area and was codified in section 15d(a) of the TVA Act, 16 U.S.C. § 831n-4. There are, however, several exceptions to the general rule, one of which impacts TVA’s participation in the Southeast EEM. TVA can sell power outside the fence to those “other power-generating organizations” with whom TVA had exchange power arrangements in place on July 1, 1957. At that time, TVA had 14 exchange power partners. Over time, through acquisitions, mergers, and the development of other affiliations, the number has fluctuated and resulted in litigation. In 1997, TVA entered into a Consent Judgment in *Alabama Power Company, et al. v. Tennessee Valley Authority* (CV-97-C-0885-S) in the U.S. District Court for the Northern District of Alabama. As part of the Consent Judgment, TVA committed to sell excess power only to a defined list of “Authorized Exchange Power Companies,” which must be physically delivered to the Authorized Exchange Power Company and sink within that company’s service area.
16. As a result, of the current Southeast EEM participants, TVA can sell power to Duke Energy, LG&E/KU, and Southern Companies. Nothing precludes TVA from purchasing power, however, from any Southeast EEM participant. To effectuate TVA sales to Authorized Exchange Power Companies, transmission is secured on the applicable transmission system to ensure physical delivery. An e-Tag is created to document the actual flow of energy, including source/sink and start/stop times. Schedules are verified with the applicable adjacent Balancing Authority prior to implementation. Specified valid sinks for Authorized Exchange Power Companies are built into TVA’s applications and validations are conducted as transmission service reservations and e-Tags are processed.
17. Any redesigned or enhanced market involving TVA must observe the TVA fence. Moreover, given TVA’s central location in the Southeast, if TVA cannot participate in a redesigned market, then others (LG&E/KU and AECI) would not have a contiguous connection to the rest of the market. If they cannot connect through TVA, they must connect through one of the neighboring RTOs, thus adding another wheel, and the added transmission expense, to any transaction with a counterparty in the Southeast. From the outset, creating a market design that recognizes and gives effect to the TVA fence has been an important goal of the design effort, and it is an important component of the delicate balance struck by the final Southeast EEM design.
18. In addition, any market design in the Southeast must recognize Members’ obligations related to their market-based rate (“MBR”) authority. To accommodate these requirements, and as further explained in the Operations Affidavit, the automatic software

system that will be the foundation of the Southeast EEM – called the “Southeast EEM System” – will allow Participants to toggle geographic regions and counterparties “off,” meaning that matches will not be made with entities in the toggled off area or with a buyer or seller that has been toggled off. Maintaining the ability to represent physical transactions and contract paths via e-Tags and enabling Southeast EEM Participants to control the geographic regions and counterparties with which they will trade are important design elements of the Southeast EEM that will allow it to work in tandem and respect the TVA fence and MBR obligations.

19. In short, the Southeast EEM founding Members began their design process from a foundation of solid, successful individual entity planning processes, and sought to increase benefits by facilitating the trading that each entity does around the assets that result from those planning processes. At the same time, to be an inclusive regional market, the market design needed to honor the TVA fence, respect the non-jurisdictional status of entities across the region by avoiding market design elements that would cede control to an independent market operator or market monitor or potentially erode those entities’ non-jurisdictional status, and preserve and avoid conflicts with the existing IRP-driven structure and state-regulated resource planning requirements that work well for the Southeast region. With this in mind, the Members began the design process conceptually, by sifting, debating, refining, and ultimately agreeing to core principles for achieving additional benefits, as follows:
- Each electric service provider/state maintains control of generation and transmission investment decisions;
 - Each transmission provider remains independent with its own transmission tariff (or equivalent⁴);
 - Each Balancing Authority remains independent;
 - Bureaucracy is minimized while benefits to customers are maximized;
 - Participation is voluntary;
 - Market benefits exceed cost, collectively and for each market participant; and
 - Transparency in governance and operations is ensured while Member confidentiality is maintained.
20. In developing the Southeast EEM Agreement, the Southeast EEM Members have pursued these core principles. The process has involved hundreds of individuals and thousands of hours of work from the Member entities. The process also has involved extensive stakeholder outreach to governmental entities and non-governmental entities such as environmental groups, trade associations, and individual customers. In many cases, there

⁴ TVA has transmission service guidelines that are equivalent to a tariff.

were multiple discussions with the same entity. The resulting exchanges of ideas were robust and welcome. All told, we estimate there were hundreds of conversations of this nature. The result of all of this combined effort is the proposal submitted to the Commission today.

Market Overview

21. As described more fully in the Operations Affidavit, at its core, the Southeast EEM is a matching service. The Southeast EEM will use an algorithm to match willing buyers and sellers that are already able to transact with each other under existing power sales agreements and authorizations. The energy exchange transactions matched through the Southeast EEM will be accomplished in much the same way that energy transactions always have under preexisting bilateral contracts. The “match” of buyers and sellers made by the algorithm commits both buyer and seller to the transaction. The Southeast EEM System will submit an e-Tag for the transaction to the relevant Transmission Service Provider(s), BA(s), and Participant(s), and that e-Tag will indicate to the parties to the match how to adjust their dispatch. Transactions will still be settled bilaterally outside of the Southeast EEM as they are today. Failure to carry through on committed transactions will result in imbalance penalties, just as it does today.
22. The Southeast EEM has two simple design features that work together to create matches of buyers and sellers to produce customer savings.
23. First, if Southeast EEM Participating Transmission Providers’ transmission is not being used for other transactions, it will be made available on an intra-hour basis at no cost (other than financial losses and any applicable imbalance charges) for 15-minute Southeast EEM Energy Exchanges under the Participating Transmission Providers’ tariffs. This new service is called “Non-Firm Energy Exchange Transmission Service” or “NFEETS.” Since the Southeast EEM will only use transmission that is not otherwise being used, it will not result in underfunding of transmission, which will still be paid for through current rate constructs, *i.e.*, through revenues received from customers of Network Service and Point-to-Point Service, or their equivalent. It is possible that availability of the new free service will lead to some slight decrease in Point-to-Point revenues, which in turn would lessen revenue credits used to offset Network Service charges. However, today, Participating Transmission Providers’ revenues from short-term wheeling transactions of the type that could be replaced by Southeast EEM transactions are minimal. In general, we expect that any small increase in Network Service Charges will be more than offset by reductions in overall customers’ costs attained through the Southeast EEM.
24. Second, the Southeast EEM will use load bids and generation offers to match buyers and sellers for transactions on a split-the-savings basis that benefits both the buyer and the seller. In today’s short-term bilateral market, transactions between buyers and sellers are typically done on an hourly basis. The Southeast EEM will allow for shorter-term, intra-hour, transactions and greater flexibility through an automated matching system. The Southeast EEM will provide a platform that enhances efficiency by using the information input by buyers and sellers to expand the universe of potential trading matchups and to automatically find counterparties.

25. The decision to use split-the-savings pricing is a natural outgrowth of the goal of achieving customer benefits for everyone participating in the Southeast EEM. As we described earlier, electric providers in the Southeast use bilateral trades in conjunction with systems designed through integrated resource planning (or equivalent) procedures to enhance customer savings. They do this by using bilateral transactions to trade around the assets developed through their planning processes. Purchases of power produce savings when they allow a generator with higher marginal costs to be backed down, and sales of power produce savings by allowing crediting of margins from sales against customer costs. Split-the-savings, as the name rightfully suggests, divides the benefit among the buyer and the seller, and so enhances the benefits that Participants already obtain by trading around their planned resources.

26. As discussed in more detail below, savings for the region from the Southeast EEM conservatively are expected to be around \$40 million per year based on the Benefits Analysis, and all participants and their customers are expected to share in the savings. These savings can be achieved not only at a low cost but also quickly because this market enhancement can be implemented much faster than a more involved market redesign could be. This is a low risk, high reward venture, and one where the rewards (*i.e.*, savings to customers) can begin immediately upon implementation. In addition to monetary savings, the Southeast EEM will allow for better integration of diverse generation resources, including rapidly growing renewables, and is expected to reduce renewable curtailments. These were all key considerations of the Members in deciding to move forward with the Southeast EEM.

27. Along with these benefits, the Members will continue to provide highly reliable service to their customers, a hallmark of the Southeast region. Moreover, while Southeast EEM bilateral transactions can produce savings, they will not replace or even aid the need of each LSE to remain resource adequate. NFEETS is the lowest priority, as-available transmission service. That means that LSEs will need to remain able to supply their load if an Energy Exchange does not occur. Typically we would expect this to occur through an LSE maintaining sufficient ramping ability among its owned or contracted resources to make up any shortfalls from purchases or sales in the Southeast EEM market.

28. In sum, the changes proposed here are not intended to be a fundamental, ground-up reconstruction of the market design in the Southeast. This is not an RTO. The Members believe that the existing just and reasonable IRP-based structure produces significant benefits, and that the Southeast EEM will enhance those benefits. From our viewpoint, the right baseline for comparison is the existing Southeast bilateral market. The table below shows that comparison and is intended to focus on what is (and is not) changing.

	Existing Southeast Market	Addition of Southeast EEM
Nature of market	<ul style="list-style-type: none"> • Bilateral: long-term, seasonal, day-ahead, hourly (limited intra-hour) 	<ul style="list-style-type: none"> • Significantly enhances bilateral, intra-hour (15-minute increments)

	Existing Southeast Market	Addition of Southeast EEM
	<ul style="list-style-type: none"> • Products traded: Capacity, firm energy, non-firm energy, and other products 	<ul style="list-style-type: none"> • Products traded: Facilitates non-firm energy transactions only
Transmission Service	<ul style="list-style-type: none"> • Point-to-Point (“PTP”) Service or Network Integration Transmission Service (“NITS”) required for any transmission system used • Rate based on transmission tariff schedules plus Losses and ancillary services • e-Tags submitted by parties to transaction 	<ul style="list-style-type: none"> • Adds Non-firm Energy Exchange Transmission Service priced at \$0/MWh plus losses (which must be financial) • e-Tags submitted by Southeast EEM System (for both intra-BA and inter-BA Energy Exchange transactions)
Transactional Friction	<ul style="list-style-type: none"> • Buyers and sellers locate one another, negotiate with each other, obtain transmission service, and schedule delivery of energy with e-Tags (using phones, fax, and electronic communications) 	<ul style="list-style-type: none"> • Buyers and sellers self-identify to Southeast EEM System, which matches them according to an algorithm; Southeast EEM System submits transmission service reservations and e-Tags to schedule delivery of energy with applicable BA(s)/Transmission Service Provider(s)/Participants
Pricing and Settlements	<ul style="list-style-type: none"> • Market-based or cost-based, as appropriate • Negotiated between counterparties subject to any limitations imposed by market power mitigation or other restrictions, such as TVA fence or counterparty credit limits • Settlements occur bilaterally 	<ul style="list-style-type: none"> • Market-based, but subject to cost capping where applicable for MBR mitigation • Determined by matching algorithm on a split-the-savings basis, including transmission losses, with matching subject to identified constraints (<i>e.g.</i>, to respect TVA fence or counterparty credit limits) • Settlements occur bilaterally

	Existing Southeast Market	Addition of Southeast EEM
Transparency	<ul style="list-style-type: none"> EQRs, notices of change in status and triennial market power updates FERC audit rights e-Tags collected by FERC pursuant to Order No. 771 	<ul style="list-style-type: none"> EQRs, notices of change in status and triennial market power updates FERC audit rights Southeast EEM transaction e-Tags collected by FERC pursuant to Order No. 771 will be identifiable Additional, publicly posted aggregate information about Southeast EEM transactions and an Annual Meeting
Resource Adequacy	<ul style="list-style-type: none"> Per individual entity and/or state oversight 	<ul style="list-style-type: none"> No change
Reliability	<ul style="list-style-type: none"> BAs, Transmission Providers, generators and LSEs have roles assigned by NERC 	<ul style="list-style-type: none"> No change
State Issues	<ul style="list-style-type: none"> Any retail access or demand response issues are under state or non-jurisdictional authority 	<ul style="list-style-type: none"> No change

Southeast EEM Benefits

29. As discussed above, the goal of the Southeast EEM is to achieve customer benefits at a low incremental cost. Before moving forward, the Members needed to confirm that their goal could be achieved. Accordingly, as part of their initial analysis, the Members hired Guidehouse and Charles River Associates to conduct the Benefits Analysis to study the Southeast EEM’s proposed intra-hour market design that would supplement the existing day-ahead and hour-ahead bilateral market and would make use of unutilized transmission capability. That Benefits Analysis was completed in July of 2020, and is part of the filing package submitted today, sponsored by Andrew Rea of Guidehouse.

30. In addition to studying the aggregate regional benefits of the Southeast EEM’s proposed design, Guidehouse and Charles River had private discussions with each Member to confirm and discuss the expected individual internal costs for that entity. In combination with the high-level estimates of joint costs to develop the Southeast EEM System discussed below, this review of individual internal costs provided Members the data needed to evaluate the expected costs and benefits of the proposal. More recently, the Members retained economist Dr. Susan Pope of FTI Consulting, an expert with robust credentials in the area of market design, to confirm that the Southeast EEM could be expected to provide incremental benefits, which she verifies in her affidavit submitted today.

31. The Benefits Analysis conservatively estimates that implementation of the Southeast EEM will result in \$40 million of benefits per year, market wide. The benefits are driven by fuel cost savings, which as discussed above, are achieved through increased opportunities from economic energy purchases and sales enabled by the Southeast EEM. This base case benefit value is based on the Members' current IRPs. The Benefits Analysis also evaluates an alternative "carbon constrained" scenario that factors in high levels of renewable penetration. Under that scenario, benefits are estimated to steadily increase over time, with benefits of over \$100 million market-wide by 2037. The Benefits Analysis estimates that internal costs, on the other hand, would be low in comparison – estimated to be \$3.1 million per year. While this does not include the cost of developing and running the Southeast EEM System and performing the auditing function, it is expected that those costs will be of similar magnitude to internal costs. As explained by Mr. Sellers and Mr. McGeeney (at P 31), Members reached out to a number of vendors to ensure that there are available vendors that can achieve the goals of the Southeast EEM. Those vendors also provided initial estimates and received estimates ranging from \$1 million to \$5 million for initial development and implementation of the Southeast EEM System and less than \$1 million per year in ongoing costs to operate the Southeast EEM System.

32. Additionally, as noted above, the Southeast EEM is expected to support increased renewables integration in the Southeast. It is generally recognized that facilitating greater liquidity in sub-hourly transactions can help support greater integration of renewable resources.⁵ Transmission service providers are required under their OATTs to provide imbalance service to generators and to loads. Greater levels of renewable resource penetration can require transmission service providers to carry additional flexible capacity in reserve to be able to balance the variable output of renewable resources against their schedules. If there is little or no sub-hourly market liquidity, this generally means the transmission providers must be prepared to balance all variation in renewable output across the full hour. By creating greater liquidity in sub-hourly wholesale transactions, especially across a broad geographic area encompassing possibly different weather conditions and renewable policies, the Southeast EEM can provide additional opportunities for transmission service providers to either procure additional energy or to dispose of excess energy, rather than having to rely exclusively on increasing or decreasing the output from their own generation resources that provide imbalance service. Furthermore, renewable resources that elect to participate directly in the Southeast EEM will have an opportunity to avoid or reduce their imbalances by entering into sub-hourly sales when the output of their resources trends higher than the hourly quantities forecasted and scheduled farther in advance. Thus, the Members expect and believe that Southeast EEM benefits will significantly exceed the modest costs of developing and operating the Southeast EEM.

⁵ See, e.g., *Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231 at P 76 (2014) (discussing the general agreement that the CAISO Energy Imbalance Market would improve the integration of renewable resources).

Participation and Governance

33. Only Southeast EEM Members will pay for the Southeast EEM, and Membership is voluntary. Because the goal of the Southeast EEM is to bring benefits to customers through reduced costs gained from efficient transactions that would not otherwise occur, the eligibility criteria for membership is tied to load-serving responsibilities, ensuring that the entities with decision-making authority over the design, goals, and objectives of the Southeast EEM will share a common purpose of achieving benefits for customers.
34. Southeast EEM Members will participate in the Southeast EEM in exactly the same way as any user of the Southeast EEM – known as Southeast EEM Participants. Southeast EEM participation is open to anyone with a source or sink in the Southeast EEM Territory. Southeast EEM Members will have only two differences from other Southeast EEM Participants: they will pay for the Southeast EEM; and in return, they will have voting rights. Mr. McGeeney and Mr. Sellers describe the operation of the Southeast EEM governance structure in more detail in the Operations Affidavit. Participation in the Southeast EEM is completely voluntary. Participants can use the Southeast EEM System as much or as little as they wish and can discontinue their Participant status at any time without any cost responsibility.
35. Because Membership is voluntary, Members are free to withdraw at any time, with 30 or 90 days' notice, depending on whether the Member is a BA or Transmission Service Provider. Members will remain responsible for costs incurred up to the date of their notice of withdrawal. In addition, the Southeast EEM Agreement provides an immediate withdrawal right for non-jurisdictional entities in the event that continued Membership would impact their jurisdictional status. Again, those Members would remain responsible for costs previously allocated to them. Withdrawal does not require a filing with the Commission. However, if a jurisdictional Member withdraws, it would need to file with the Commission to amend its Tariff to remove NFEETS and would file to cancel its version of the Southeast EEM Agreement.⁶

Timing

36. The Members anticipate the Southeast EEM Commencement Date to occur in the first quarter of 2022. As noted above, being able to implement quickly is a key benefit of the Southeast EEM's simple approach/high reward design.
37. Commission acceptance of the Southeast EEM Agreement (and the jurisdictional participating transmission providers' tariff revisions being separately submitted) is a necessary pre-condition to forward progress. The Members who will be paying for development of this market are not able to commit significantly more capital towards

⁶ The exact nature of the filings to be made would depend on whether the party withdrawing made the filing for the Southeast EEM Agreement, or filed a concurrence. But for present purposes, the point is that there would be a filing.

market development until they have the regulatory certainty provided by a Commission order accepting the Southeast EEM Agreement without material modification.


Conclusion

38. The Southeast EEM Members take pride in what we have achieved. By working collaboratively with all concerned, our Members have designed a market enhancement that comprehensively blankets the region and unites both jurisdictional and non-jurisdictional participants in a large cohesive footprint with the goal of achieving consumer benefits through increased bilateral trading efficiencies. The Southeast EEM is positioned to succeed where prior Southeast market initiatives have failed. Recognizing that much of the Southeast is not subject to FERC jurisdiction, and does not wish to become subject to that jurisdiction, the Southeast EEM has been carefully crafted to produce significant benefits at a low cost while honoring each of the Members' unique needs and limitations.
39. This concludes our affidavit.

VERIFICATION OF AARON MELDA

Pursuant to 18 U.S.C. § 1746 (2020), I state under penalty of perjury that the foregoing testimony is true and correct to the best of my knowledge, information, and belief, with the exception of Paragraph 3.

Executed this 10th day of February, 2021.



Aaron Melda
Tennessee Valley Authority
Senior Vice President Transmission & Power Supply

VERIFICATION OF LONNIE BELLAR

Pursuant to 18 U.S.C. § 1746 (2020), I state under penalty of perjury that the foregoing testimony is true and correct to the best of my knowledge, information, and belief, with the exception of Paragraph 2.

Executed this 10th day of February, 2021.

A handwritten signature in cursive script, reading "Lonnie Bellar", written in black ink. The signature is positioned above a horizontal line.

Lonnie Bellar

Louisville Gas & Electric Company and Kentucky Utilities Company
Chief Operating Officer