



advanced
energy
management
alliance

PO Box 65491
Washington, DC 20035
p 202.580.8284
e info@aem-alliance.org
aem-alliance.org

June 14, 2021

Via Electronic Mail

Ms. Katherine Collier
Executive Secretary
Mississippi Public Service Commission
501 North West Street, Suite 201 A
Jackson, MS 39201

**RE: MISSISSIPPI POWER COMPANY'S NOTICE OF IRP CYCLE PURSUANT
TO COMMISSION RULE 29 (Docket No. 2019-UA-231)**

Dear Ms. Collier:

The Advanced Energy Management Alliance ("AEMA") hereby submits comments in the above-referenced docket in Mississippi Power Company's Integrated Resource Plan.

Please feel free to call me at 202-524-8832 or e-mail at katherine@aem-alliance.org should you have questions regarding our filing.

Thank you for your consideration.

Sincerely,

Katherine Hamilton
Executive Director
Advanced Energy Management Alliance

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BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

**MISSISSIPPI POWER COMPANY
EC-120-0097-00**

DOCKET NO. 2019-UA-231

**IN RE: MISSISSIPPI POWER COMPANY'S NOTICE OF IRP CYCLE
PURSUANT TO COMMISSION RULE 29**

COMMENTS BY ADVANCED ENERGY MANAGEMENT ALLIANCE

COMES NOW Advanced Energy Management Alliance ("AEMA"), pursuant to the Mississippi Public Service Commission's ("Commission") Public Utilities Rule 29 ("Rule"),¹ to file comments in Mississippi Power Company's ("MPC") Integrated Resource Plan ("IRP") proceeding.

Background and Summary.

AEMA is a trade association under Section 501(c)(6) of the Federal tax code whose members include national distributed energy resource companies and advanced energy management service and technology providers, including demand response ("DR") providers, as well as some of the nation's largest demand response and distributed energy resources ("DERs") and consumers. The comments herein represent the views of the organization as a whole rather than those of any individual member.

¹ Mississippi Public Service Commission. Rule 29 as adopted on November 22, 2019.
https://www.psc.state.ms.us/InSiteConnect/InSiteView.aspx?model=INSITE_CONNECT&queue=CTS_ARCHIVEQ&docid=645594

AEMA commends the Commission for its leadership in setting forward the rules for development of the IRP and on the ability for stakeholders to participate in this proceeding. While we appreciated the organization and completeness of the response to our data request to MPC, we are concerned that the IRP process set forward did not allow time for parties to adequately gain information through data requests and to then provide feedback to modeling and other inputs to the IRP. We noted in our post-Technical Conference comments several of the limitations in MPC's execution of the process and agree with comments and recommendations for the IRP process made by Southern Renewable Energy Association ("SREA").

AEMA believes that, regardless of the intent and letter of the Rule, the IRP presented by MPC does not fully account for deployment of distributed energy resources, including demand response. AEMA members and our customers want to grow our businesses in Mississippi and interpreted this planning process as a positive means to open up a market that would benefit the economy of Mississippi by creating jobs and lowering costs for all consumers. AEMA sees this IRP as a missed opportunity for the citizens of Mississippi and provides additional details herein.

Specific Comments.

I. The lack of fully including DERs inhibits economic and job growth in Mississippi.

AEMA members considered Rule 29 an incredible opportunity to grow their businesses in the state of Mississippi and bring consumer resources into the full mix of

supply and demand side planning. As we had noted in our original request to intervene, AEMA members are located in virtually every state, including Mississippi, with examples such as Nest² and Itron.³ One of our founding Board members is Walmart, of which 64 are located in the state of Mississippi. Other distributed energy resource providers who are members of AEMA provide products and services that are relevant to the interests of electric customers in Mississippi. These providers serve national accounts that have been eagerly awaiting the ability to grow in Mississippi, yet, given the lack of interest in DERs based on this IRP filing, it is difficult to imagine they will view the state as open for business. While many national companies can focus in areas where utilities are more open to DER growth, this prevents these economic benefits from being realized by the consumers in Mississippi.

A recent study by Christopher Clack and Local Solar for All (which was reviewed by Mississippi Public Service Commission Chairman Presley) found that fully leveraging and co-optimizing solar (both community and rooftop solar) plus storage could result in 1.4 million jobs in the U.S. by 2050, a figure that includes direct and indirect jobs but

² NEST distributors are located throughout Mississippi, for example:
<https://www.environmentmasters.com/hvac/air-conditioning/nest-smart-home>

³ Itron has contracts with both Entergy Mississippi (<https://www.marketwatch.com/press-release/itron-expands-contract-with-entergy-for-grid-management-2018-11-05>) and Mississippi Power (<https://www.power-technology.com/news/itron-support-mississippi-powers-grid-modernisation-plans/>).

does not include induced jobs caused by the ripple effect of direct economic impacts.^{4 5} Mississippi in particular stands to benefit from solar and storage job creation.⁶

In other examples of economic benefits, on the PJM grid in the mid-Atlantic, customers collectively saved \$11.8 billion in one year alone through demand response.⁷ In its Distributed Energy Resource Roadmap, the New York Independent System Operator stated it “believes that providing resources with the flexibility to meet wholesale and distribution system needs will deliver the maximum benefit to New York electricity consumers.”⁸ Baltimore Gas and Electric’s SmartEnergy Rewards program, in which Maryland customers lowered their energy usage in response to signals from the utility, is estimated to have avoided \$93 million in transmission capital expenditures and \$72 million in distribution capital expenditures—savings that are then passed along to the customers.⁹ These are but a few examples of how DERs have benefited customers, yet none of these benefits are considered by MPC.

⁴ Local Solar for All presentation, page 26.

<https://static1.squarespace.com/static/5f4637895cfc8d77860d0dbc/t/5fd39999439c7c5ec221499b/1607702942515/Local+Solar+Roadmap+White+Paper+as+PPT+FINAL.pdf>

⁵ Presentation, page 31.

<https://static1.squarespace.com/static/5f4637895cfc8d77860d0dbc/t/5fd39999439c7c5ec221499b/1607702942515/Local+Solar+Roadmap+White+Paper+as+PPT+FINAL.pdf>

⁶ Technical Report, page 102. https://vibrantcleanenergy.com/wp-content/uploads/2020/08/SERTO_WISdomP_VCE-EI.pdf

⁷ Link to PJM Market Monitor report can be found here: <https://aem-alliance.org/aema-reacts-strongly-market-monitor-report/>

⁸ “DER Energy Market Design: Dual Participation”. New York Independent System Operator, Feb 2018, 2019.

<https://www.nyiso.com/documents/20142/5256593/DER%20Energy%20Market%20Design%20Dual%20Participation%20022819.pdf/cfaf3647-4b77-a706-b86d-24129d460ecf>

⁹ Report on this program can be found here: <https://www.utilitydive.com/news/behavioral-demand-response-gives-baltimore-gas-and-electric-a-business-reas/546895/>

II. *DERs should be valued for their contributions to resilience and grid stability.*

In addition to cost savings to consumers, DERs are crucial to maintaining a resilient grid. Given generation issues in the winter freeze of 2021, a portfolio of diverse options should be considered to protect consumers in Mississippi. A survey of customers of all sizes and types released by AEMA found that consumer expectations of resilience are shifting; that distributed energy supply options are expanding and becoming increasingly economic; and that holistic customer solutions can bring essential support to the resilience of the electric grid.¹⁰ As far back as Hurricane Sandy, microgrids in New York and New Jersey enabled university campus facilities to continue operation in the face of massive power outages.¹¹ When hurricanes hit Texas, Florida and North Carolina, distributed solar and demand response were able to stabilize the grid and prevent surges when power was restored. During heat waves in California, hundreds of energy storage facilities at office buildings in San Francisco were called to operate collectively as a “virtual power plant,” reducing demand on an over-taxed grid. During the solar eclipse in 2017, over 750,000 programmable thermostats were lowered by their consumers to reduce demand by 700 MW as solar systems across the U.S. were displaced in the temporary darkness.¹² Those thermostats alone provided as much grid service as seven gas peaker plants, often the most inefficient and emitting resources.

¹⁰ AEMA paper on resilience: <https://aem-alliance.org/aema-releases-whitepaper-on-consumer-resilience/>

¹¹ Article on Princeton’s microgrid can be found here: <https://www.princeton.edu/news/2014/10/23/two-years-after-hurricane-sandy-recognition-princetons-microgrid-still-surges>

¹² See description of program here: <https://awards.ixda.org/entry/2019/nest-solar-eclipse-rush-hour/>

In addition to these examples, a recent Public Utilities Commission ruling in Hawaii that allows emergency DR to fill in for the closure of a coal plant, states that “achievement of lasting grid stability and reliability necessitates the development of new paradigms such that grid needs are met through the integration of efficiently and effectively deployed DER resources.”¹³ A 2020 study released by the American Council for an Energy Efficient Economy (“ACEEE”) shows an increase in reliability as a result of a combination of energy efficiency and electrification (which included heat pumps at a minimum, but in some cases heat pump water heaters, induction stoves, and electric vehicles).¹⁴

Finally, while MPC states in the IRP that it is a winter-peaking utility, the DER programs appear to be targeted to a summer peak. Duke conducted an assessment of DER potential in winter demand reduction in North Carolina and concluded that demand side programs would be crucial to managing a winter peak;¹⁵ MPC could perform a similar analysis for Mississippi that would address that stated winter peak.

III. *The DER pilot programs are not designed for scale nor do they include the full variety of DER technologies.*

AEMA was grateful for the MPC response to our data requests and the organization of those responses. We would note, however, that the programs used as

¹³ Order 37816 in Docket 2019-0323, pages 24-25.

<https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A21F08B30537B01373>

¹⁴ https://www.aceee.org/sites/default/files/pdfs/programs_to_electrify_space_heating_brief_final_6-23-20.pdf

¹⁵ Duke study, 2020, pages 23-24. <https://cleanenergy.org/wp-content/uploads/Duke-Winter-Peak-Demand-Reduction-Potential-Assessment-Final-Report.pdf>

examples for DER implementation that drive MPC's decisions on DER future analyses, are not sufficiently scaled to derive any real understanding of how DERs would be deployed in Mississippi. For example, the smart thermostat program is being conducted with only 100 residences, a small sampling given the penetration of smart thermostats in the U.S. has reached nearly a quarter of all households.¹⁶ The pilot projects include one residence with Tesla solar shingles; the Walnut Grove project demonstrated solar plus battery as non-wires alternatives; and the Lauderdale County demonstration will include 45 homes with net zero energy certification. All of these projects might gather useful data and anecdotal information, but they will not enable the range of DERs to be deployed at scale or co-optimized to fully benefit the system, in the manner the IRP Rule lays out.

As EPRI has stated in the summary of its DER integration toolkit, "distributed energy resources (DER), such as, energy storage, electric vehicles, demand response, and microgrids, are highly flexible assets that are growing in popularity. Energy storage systems, in particular, have the potential to be leveraged for multiple distribution, transmission, market, and customer services. The flexibility of DER potentially allows stacking multiple services to capture more value. However, stacked services require complex site-specific analysis to manage conflicting and competing requirements."¹⁷ While DER systems can be highly interactive and flexible, this sort of analysis was not conducted by MPC to truly evaluate their potential contribution to the system.

¹⁶ <https://www.valuepenguin.com/two-thirds-americans-own-smart-home-device>

¹⁷ EPRI DER Integration Toolkit: <https://www.epri.com/research/products/000000003002013623>

IV. *Energy efficiency should have a target established by the Commission.*

Given the lack of meaningful programmatic planning in the IRP, AEMA is aligned with the Southern Alliance for Clean Energy recommendation for the Commission to set targets for the utility to reach energy efficiency goals. These targets should be available to all customer classes to achieve the full range of energy efficiency benefits. The U.S. Environmental Protection Agency has developed best practices and a policy framework for states that could be a useful resource to the state of Mississippi.¹⁸ ACEEE has also developed resources, including a toolkit, for developing energy efficiency standards.¹⁹

V. *DER programs for low-income consumers reach very few of those who qualify for the programs.*

The MPC SELECT program which collaborates with community organizations to identify and serve low income customers has an impressive satisfaction rate of over 90% over the last five years. The number of customers assisted, however, is at best (in 2019) 1.83% of the qualifying customers—a total of 1,135 customers in 2019.²⁰ Given the interest by DER providers, the lower cost of energy efficiency and DER technologies, and the need of those living below the poverty line, AEMA recommends that MPC work to increase programs for low income consumers that enable DERs to reduce energy costs. In the *Rewiring America* handbook, authors Saul Griffith, Sam Calisch, and Laura

¹⁸ EPA energy efficiency plan: <https://www.epa.gov/energy/national-action-plan-energy-efficiency>

¹⁹ <https://www.aceee.org/toolkit/2019/09/energy-efficiency-resource-standard>

²⁰ Numbers are based on MPC responses to data request. COVID influenced the deployment in 2020, so only data from 2019 are noted.

Fraser make the case that electrifying everything will result in consumer savings, not increased cost.²¹ If DER deployment through electrification is done with a systems approach--using less expensive renewable energy resources on the generation side and allowing full customer participation on the demand side--consumer costs should decrease, enabling far more low and middle income customers to benefit.

Summary.

In summary, AEMA suggests the following:

- *Not fully including DERs inhibits economic and job growth in Mississippi: ensure DERs are included throughout the IRP as outlined in the Rule.*
- *DERs should be valued for their contributions to resilience and grid stability: include these values in planning scenarios.*
- *The pilot programs are not designed to scale or include the full variety of DER technologies: plan additional deployments that will use cost-effective DER technologies to deploy at scale.*
- *Energy efficiency should have targets established by the Commission: savings targets for all customer classes should ramp up in each of the next three years starting with annual efficiency savings at 0.4% of retail sales in 2022, 0.7% in 2023, and 1.0% in 2024.*
- *DER programs for low-income consumers reach very few of those qualified for the program: expand programs to ensure a wide range of*


²¹ <https://www.rewiringamerica.org/handbook>

cost-effective DER technologies are available to customers below the poverty line.

Conclusion.

In conclusion, AEMA believes that not fully including DERs and enabling customers of all types to benefit from those resources will lead to negative long-term implications for the economic growth in the state of Mississippi. We urge the Commission to direct MPC to improve upon an IRP that does not address DERs in any meaningful way.

WHEREFORE, AEMA respectfully submits these comments this 14th day of June 2021.

By: 

Katherine Hamilton
Executive Director
Advanced Energy Management
Alliance
1701 Rhode Island Ave., NW
Washington, DC 20036
Telephone: 202-524-8832
E-mail: [katherine@aem-
alliance.org](mailto:katherine@aem-alliance.org)

CERTIFICATE OF SERVICE

I, Katherine Hamilton, Executive Director of Advanced Energy Management Alliance, that in compliance with RP6.122(2) of the Commission's Public Utilities Rules of Practice and Procedure (the "Rules").

(1) An electronic copy of these comments has been filed with the Commission via e-mail to the following address: efile.psc@psc.state.ms.us;

(2) An electronic copy of the filing has been served via e-mail to the following addresses in accordance with Rule 6:

Crystal Utley Secoy	cutle@ago.state.ms.us
Forest Bradley-Wright	forest@cleanenergy.org
Frank F. Farmer	frank.farmer@psc.state.ms.us
Joshua Smith	joshua.smith@sierraclub.org
Katherine Collier	katherine.collier@psc.state.ms.us
Leo Manuel	lmanuel@balch.com
Madison Coburn Keyes	Madison.keyes@butlersnow.com
Robert P. Wise	rwise@sharpewise.com
Shawn S. Shurden	ssshurde@southernco.com
Simon Mahan	simon@southernwind.org
Tad Campbell	tad.campbell@mpus.ms.gov
Tianna H. Raby	traby@entergy.com
Virden Jones	virden.jones@psc.state.ms.us
Robert B. Wiygul	robert@wwglaw.com

This the 14th day of June 2021.



Katherine Hamilton
Executive Director
Advanced Energy Management
Alliance
1701 Rhode Island Ave., NW
Washington, DC 20036