

**BEFORE THE PUBLIC SERVICE COMMISSION
OF
THE STATE OF MISSISSIPPI**

COOPERATIVE ENERGY
EA123075000

DOCKET NO. 1973-UA-268 |

IN RE: PETITION TO AMEND CERTIFICATE OF PUBLIC CONVENIENCE AND
 NECESSITY FOR ELECTRIC POWER GENERATION FACILITY IN LAMAR
 COUNTY, MISSISSIPPI (MORROW REPOWER PROJECT)

ORDER

THIS CAUSE came on to be heard before the Mississippi Public Service Commission (“Commission”) upon the Petition (“Petition”) of Cooperative Energy, a Mississippi electric cooperative (hereinafter “Cooperative Energy” or “Petitioner”) formerly known as South Mississippi Electric Power Association, requesting to amend a Certificate of Public Convenience and Necessity heretofore granted to Petitioner by order entered herein on November 15, 1973. The Commission having heard and considered the Petition and the proof offered thereon, being fully advised in the premises and upon recommendation of the Public Utilities Staff, does hereby find and order as follows:

1. Cooperative Energy is an electric power association, duly chartered, organized, existing and operating under and pursuant to the Electric Power Association Law, § 77-5-201, *et seq.*, of the Mississippi Code of 1972, Annotated, and is a public utility under the terms and provisions of Chapter 372, Mississippi Code of 1956 (§ 77-3-1), *et seq.*, Volume 17, Mississippi Code of 1972, Annotated, hereinafter sometimes called the “Act”.

2. Cooperative Energy is a generation and transmission cooperative as defined in Mississippi Code Ann. § 77-5-256 and is engaged in the generation and transmission of electric energy to serve its eleven member electric power associations operating in 55 counties in

Mississippi, i.e., Southern Pine Electric Cooperative, Coast Electric Power Association, Southwest Mississippi Electric Power Association, Dixie Electric Power Association, Magnolia Electric Power, Pearl River Valley Electric Power Association, Singing River Electric Cooperative, Twin County Electric Power Association, Yazoo Valley Electric Power Association, Delta Electric Power Association, and Coahoma Electric Power Association.

3. On November 15, 1973, the Commission entered an Order that issued to Petitioner in this Docket Number a Certificate of Public Convenience and Necessity authorizing it to construct, own, operate and maintain a coal-fired steam-electric generating plant near Purvis, in Lamar County, with two turbine generating units each having a maximum expected net capability of approximately 180 megawatts. This generating station later became known as the R.D. Morrow, Sr. Generating Station (hereinafter "Plant Morrow"). Cooperative Energy constructed Plant Morrow and began operating the facility in 1978, where it continued operation until very recently, wherein the decision was made to retire the facility.

4. Cooperative Energy dispatches all owned generating units into the Mid-continent Independent System Operator ("MISO") market. In said market place, units are dispatched on a day-ahead basis and in real time as needed. Units are bid into the market and dispatched primarily based upon economics. The original coal-fired steam units at Plant Morrow were not competitive in the MISO market environment. The units required thirty-six hours to reach full load from a cold start, making day-ahead and real-time market decisions impossible. The rising cost of delivered coal and the low cost of competing natural gas-fired market resources, coupled with the inefficiency of the dated Plant Morrow technology made the units uneconomical to operate. Considering the dispatch cost and the need for large investments in component repairs and replacements on the coal related assets, the decision was made to retire the two coal-fired steam

units effective December 31, 2018, and convert the plant to a natural-gas-fired, combined cycle facility.

5. Cooperative Energy conducted an extensive Power Supply Options Study in 2016, which contemplated the most economical solution to maintain adequate generation resources over the long-term future. Considering the forecasted load growth among the eleven (11) member-owner distribution cooperatives and a number of other industry related forecasts, retiring Plant Morrow on coal and repowering the units with natural-gas-fired combustion turbine generators (“CTG”) and heat recovery steam generators (“HRSG”) was identified as being among the most beneficial options to the members and Cooperative Energy.

6. The scope of work to repower Plant Morrow (the “Morrow Repower Project”) consists of demolishing all coal handling, processing and burning equipment and systems, including the coal-train unloading trestle, coal and ash conveyors, coal stock pile, coal bunkers and feeder systems, and coal-fired steam generators. The flue gas treatment equipment and systems required for coal-fired operation will also be demolished, including electrostatic precipitators and wet flue gas desulfurization systems. Within the general footprint of the demolished assets, one new gas fired CTG will be installed. The CTG will be coupled with a new HRSG, which will utilize CTG exhaust heat to generate superheated steam to drive the existing unit 1 steam turbine generator (“STG”). The existing powerhouse where the existing STGs are currently located will be maintained to house the STG and other existing auxiliary systems, which will be utilized in the combined cycle configuration. The repowered combined cycle unit will produce approximately 550 MW of electric power at a much improved heat rate of approximately 6,500 Btu/KWh. The advanced class combustion turbine selected is the Siemens 9000HL, which is rated at approximately 400 MW. The HRSG will be manufactured and supplied by industry leader

Nooter/Eriksen. The existing steam turbine generator is expected to produce approximately 150 MW of electric power in the combined cycle configuration.

7. Converting Plant Morrow to a natural-gas-fired combined cycle unit via the Morrow Repower Project will allow for reuse of the existing steam turbine related assets, minimizing capital cost, increasing efficiency while drastically reducing air emissions rates at the site. Upon completion of the Morrow Repower Project, the modified unit will be more operationally flexible and competitive in the MISO market, providing valuable opportunities to serve the members of Cooperative Energy with reliable and affordable energy.

8. As stated above, the new generating facility will be situated on property that Cooperative Energy currently owns. However, as a result of the increase in power output at Plant Morrow from approximately 408 MW to 550 MW, some additional high voltage transmission lines and substation upgrades will be required. All upgrades described are subject to change due to the MISO Generator Interconnection Agreement (GIA) process results. Internal analyses indicate that the existing Morrow 161 kV substation will be demolished and rebuilt with increased capacity and additional bays to accommodate system improvements necessary to support the increased generation of the plant. Approximately 5.0 miles of new 161 kV transmission line will be constructed from Plant Morrow to the Purvis Bulk Substation in addition to 161 kV breaker upgrades at Purvis Bulk necessary to achieve additional capacity on existing transmission lines.

9. Total installed cost is estimated to be \$442,000,000.

10. Pursuant to RP 1.102, Cooperative Energy hereby moves for and requests a waiver of the requirement of Appendix "A", Schedule 3, Item 7, of the Procedural Rules to allow Cooperative Energy to not file with this Petition a complete set of engineering plans and specifications for the Morrow Repower Project, including all required auxiliary equipment,

systems and special purpose structures proposed herein. The Commission finds that good cause exists and has been shown for a waiver of plans and specifications, but orders Cooperative Energy to make such complete set of engineering plans and specification available for review, if requested by Staff, when such plans and specifications are completed. The Commission further orders Cooperative Energy to update the Staff and the Commission once approval has been granted for permits and certifications needed for the project, including but not limited to, MISO, MDEQ, and the Rural Utilities Service.

11. Cooperative Energy therefore avers that the Morrow Repower Project, including all required auxiliary equipment, systems and special purpose structures described above are needed and required in order for it to have the required supply of power to serve the present and immediately foreseeable requirements of its members. That in order for the Cooperative Energy to be able to adequately serve the electric requirements of its members, it is necessary and urgent that Cooperative Energy be granted a certificate of public convenience and necessity, authorizing them to acquire, install, own, operate and maintain the Morrow Repower Project, including all required auxiliary equipment, systems and special purpose structures, all as hereinabove more specifically described, all of the same being necessary in order that Cooperative Energy shall be able to provide efficient and reliable electric service to its members.

12. None of the facilities for the construction and operation described herein will duplicate any similar facilities of any other public utility. Nor will the operation thereof duplicate or interfere with the operation or services of any other public utility.

13. Pursuant to Section 77-3-14(5), Cooperative Energy is directed to submit quarterly progress reports to the Commission and Staff during construction of the project concerning any

deviations or variances in the project scope, cost estimate, and any other significant items that may affect the ability to complete the project on schedule.

14. Cooperative Energy is ready, willing and able to acquire, own, install, operate, and maintain the Morrow Repower Project, including all required auxiliary equipment, systems and special purpose structures that are the subject of this Petition.

15. The Commission determines and finds that public convenience and necessity require and will require the amending of the Certificate previously granted in this Docket Number and orders that the Certificate of Public Convenience and Necessity in this Docket Number be amended to allow Cooperative Energy to convert Plant Morrow to a natural-gas-fired, combined cycle facility, as described in the Petition.

This Order shall be deemed issued on the day it is served upon the parties herein by the Executive Secretary of this Commission who shall note the service date in the file of this Docket.

Chairman Brandon Presley voted aye; Vice Chairman Cecil Brown voted aye; and Commissioner Samuel F. Britton voted aye.

DATED this the 2nd day of July 2019.

MISSISSIPPI PUBLIC SERVICE COMMISSION

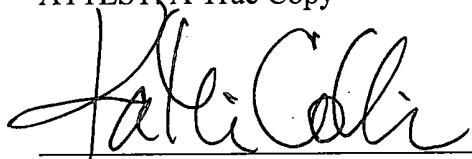



BRANDON PRESLEY, CHAIRMAN


CECIL BROWN, VICE CHAIRMAN


SAMUEL F. BRITTON, COMMISSIONER

ATTEST: A True Copy


Katherine Collier, Executive Secretary

Effective this the 2nd day of July 2019.