**BEFORE THE**
**MISSISSIPPI PUBLIC SERVICE COMMISSSION**

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|---|---|
| **IN THE MATTER OF THE PETITION OF MISSISSIPPI POWER COMPANY FOR A CERTIFICATION OF PUBLIC CONVENIENCE AND NECESSITY FOR ENVIRONMENTLAL COMPLIANCE ACTIVITIES AUTHORIZING THE CLOSURE OF THE ASH POND, CONSTRUCTION OF LOW VOLUME WASTEWATER TREATMENT FACILITIES, AND CONVERSION OF BOTTOM ASH COLLECTION FACILITIES FOR THE PLANT VICTOR J. DANIEL ELECTRIC GENERATING FACILITY IN JACKSON COUNTY, MISSISSIPPI.** | **DOCKET NO. 2019-UA-116** |

# Direct Testimony of Rachel Wilson

## PUBLIC VERSION

## On Behalf of Sierra Club

## October 16, 2019

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**Exhibit RW-12: MPC Response to SC-MPC 1-22, Attachment A**

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**Exhibit RW-15: MPC response to MPUS 1-8 Supp**

## 1. INTRODUCTION AND QUALIFICATIONS

**Q Please state your name, business address, and position.**

A My name is Rachel Wilson. I am a Principal Associate at Synapse Energy Economics, Inc. ("Synapse"), located at 485 Massachusetts Avenue in Cambridge, Massachusetts.

**Q Please describe Synapse Energy Economics.**

A Synapse Energy Economics is a research and consulting firm specializing in electricity industry regulation, planning, and analysis. Synapse works for a variety of clients, with an emphasis on consumer advocates, regulatory commissions, and environmental advocates. In 2014, we conducted a comprehensive cost-benefit analysis of net metering and interconnection for the Mississippi Public Service Commission in Docket No. 2011-AD-2 and assisted in developing appropriate net metering policies in the state.

**Q Please summarize your work experience and educational background.**

A At Synapse, I conduct analysis and write testimony and publications that focus on a variety of issues relating to electric utilities, including integrated resource planning, resource adequacy, electric system dispatch, environmental regulations and compliance strategies, and power plant economics.

I also perform modeling analyses of electric power systems. I am proficient in the use of spreadsheet analysis tools, as well as optimization and electricity dispatch models to conduct analyses of utility service territories and regional energy markets. I have direct experience running the Strategist, PROMOD IV, PROSYM/Market Analytics, PLEXOS, EnCompass, and PCI Gentrader models, and I have reviewed input and output data for several other industry models.

Prior to joining Synapse in 2008, I worked for the Analysis Group, Inc., an economic and business consulting firm, where I provided litigation support in the form of research and quantitative analyses on a variety of issues relating to the electric industry.

I hold a Master of Environmental Management from Yale University and a Bachelor of Arts in Environment, Economics, and Politics from Claremont McKenna College in Claremont, California.

A copy of my current resume is attached as Exhibit RW-1.

**Q On whose behalf are you testifying in this case?**

A I am testifying on behalf of the Sierra Club.

**Q Have you testified previously in this docket?**

A No, I have not.

**Q What is the purpose of your testimony?**

A The purpose of my testimony is to address Mississippi Power Company's (MPC or the Company) petition for a Certificate of Public Convenience and Necessity (CPCN) to undertake Coal Combustion Residuals (CCR) projects totaling $125 million at the Victor J. Daniel Electric Generating Facility in Jackson County Mississippi (Plant Daniel). Those projects are (1) constructing a bottom ash handling facility, (2) closing the existing ash pond, and (3) converting the existing ash pond to a low volume wastewater facility.

**Q Please identify the documents and filings on which you base your opinions.**

A My findings rely primarily upon MPC's CPCN application and the testimony of Company witnesses. My opinions are also based on discovery responses and attachments provided by the Company. Lastly, I rely to an extent on external documents such as industry publications and publicly available data.

## 2. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

**Q Please summarize your primary conclusions.**

A My primary conclusions are summarized as follows:

1. Plant Daniel has been operating uneconomically for at least three years.
2. Continued operation of the plant is unnecessarily costly to ratepayers, and any additional capital spending at Plant Daniel is unjustified.
3. There are lower cost alternatives to MPC's CCR proposal.
4. MPC has failed to establish that the CCR project investment as proposed is necessary or justified. MPC has also failed to demonstrate that installation of the CCR project represents the most prudent approach to addressing these issues.

**Q Please summarize your recommendations.**

A Mississippi Power's application instructs the Commission that it has no choice other than to approve all three projects immediately. As explained in this testimony, this is not correct. Two out of the three projects would be entirely or partially unnecessary if MPC closes the uneconomic coal fired units at Plant Daniel. I recommend that the Commission reject MPC's plans to turn the existing ash pond into a Low Volume Wastewater (LVW) facility and to convert the bottom ash collecting facility at Plant Daniel. Additionally, I recommend that the Commission require that MPC present an updated net present value (NPV) analysis of the costs at Plant Daniel to comply with all CCR requirements, assuming a 2023 (or sooner) date for plant retirement and coal ash pond closure.

**Q MPC claims that if the Commission denies the Company's application for a permit or delays its decision, the Commission is effectively ordering MPC to retire Plant Daniel.[1] Do you agree with this claim?**

A No. MPC has not produced any analysis or evidence to show that a Commission decision coming later than November would preclude the Company from both complying with CCR rules and keeping Plant Daniel online. A reasonable and prudent approach to decision-making would include serious consideration of alternatives, as opposed to simply costing out and presenting one plan, as MPC has done here. If MPC has information that demonstrates that continuing to operate Plant Daniel is the least cost option for ratepayers, the Company should produce testimony and discovery materials over the next few months that support this assertion. These materials should include analysis of options and costs associated with an alternative start date of construction on the CCR projects.

**Q What sort of options might MPC present to the Commission associated with an alternative construction start date for the CCR projects?**

A One such option could include an accelerated construction schedule for the currently proposed CCR projects. Under the Company's own schedule, it will not complete the bottom ash conversion project before the CCR rule's 'cease receipt' date, which suggests that the first phase of the project could be delayed for a short period of time while the Company and the Commission fully evaluates the alternatives. In any event, the Company has not demonstrated that it is not possible to accelerate the timeline of the project. A second option should include alternative project plans for each of the three project components. The Company did not provide a timeline for any of the CCR project alternatives, so MPC has not demonstrated that, to comply with the CCR rule, its only

[1] Mississippi Power Proposed Order Approving Petition, Docket 19-UA-116, page 2.

option is to begin construction of these particular projects by November 2019. MPC should also examine any other available options.

Instead of presenting such analysis, MPC is making an unsubstantiated claim, and in effect telling the Commission that because the Company delayed in acting, the Commission no longer has any discretion to do the review necessary as a matter of good regulatory practice.

## 3. OVERVIEW OF THE MISSISSIPPI POWER COMPANY'S REQUEST FOR A CPCN

**Q Please summarize the Company's request.**

A On July 9, 2019, MPC submitted a petition to obtain a CPCN for environmental compliance activities relating to waste disposal under the CCR rule for Plant Daniel to the Mississippi Public Service Commission. As noted there are three components that make up the CCR projects: (1) constructing a bottom ash handling facility, (2) closing the existing ash pond, and (3) converting the existing ash pond to a low volume wastewater facility.[2] The total cost of the three separate projects is estimated at $125 million. MPC is requesting that the Mississippi Public Service Commission approve MPC's share of the project costs, which total $62.5 million.[3]

**Q Why is the Company proposing these CCR projects?**

A MPC asserts that it must complete all of these projects in order to comply with the U.S. Environmental Protection Agency's (EPA) CCR rules. The Company contends that it must stop placing all CCR and non-CCR waste streams from Plant Daniel in the current coal ash pond, convert to bottom ash handling, and construct a new LVW facility by

[2] Mississippi Power Company Petition in Docket 19-UA-116. July 9, 2019.

[3] Mississippi Power Company Petition in Docket 19-UA-116. July 9, 2019.

October 2020. In order to meet this deadline, the Company asserts that it must begin construction of the bottom ash handling part of the project by November 2019.[4]

**Q Could MPC retire Plant Daniel in order to comply with the CCR regulations?**

A Yes, and this would allow MPC to extend the time for closure of the coal ash pond beyond October 2020. However, MPC asserts that if it were to retire Plant Daniel, there would be transmission constraints on its system and that transmission improvements would need to be completed prior to retirement. The Company claims that it cannot construct a transmission alternative prior to the purported October 2020 CCR deadline,[5] and that Plant Daniel cannot be retired prior to that deadline.

**Q Does MPC make any other arguments against the retirement of Plant Daniel?**

A Yes. In its Proposed Order, MPC asserts that the continued operation of Plant Daniel represents "the only significant source of fuel diversity remaining in its fleet following the conversion of all their other coal units to natural gas."[6] Finally, the Company asserts that the two units at Plant Daniel contribute employment and tax benefits to Jackson County, Mississippi.

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[4] Mississippi Power Proposed Order Approving Petition, Docket 19-UA-116, page 3; Direct Testimony of Mark P. Loughman on behalf of Mississippi Power Company, Docket 2019-UA-116, page 3.

[5] Mississippi Power Proposed Order Approving Petition, Docket 19-UA-116, page 3; Direct Testimony of Mark P. Loughman on behalf of Mississippi Power Company, Docket 2019-UA-116, page 10-11.

[6] Mississippi Power Proposed Order Approving Petition, Docket 19-UA-116, page 2.

## 4. MPC'S APPLICATION CONTAINS INSUFFICIENT SUPPORT FOR THE PROPOSED CCR PROJECTS

**Q What is required of MPC to comply with the EPA CCR rule?**

A In order to comply with EPA's CCR rule, MPC must stop placing coal ash waste and wastewater in the current unlined coal ash pond by October 2020 (or later if the plant commits to retire by 2023), and move all existing CCR waste from the current unlined coal ash pond to a new lined facility.

**Q Did the Company consider multiple alternative compliance strategies to meeting the CCR regulations in its CPCN application?**

A No. MPC has provided no evaluation of possible alternative strategies in its CPCN application and Proposed Order. Responses provided in discovery indicate that the Company has, in fact, done such analysis but it has omitted this essential information around alternative compliance options (including the potential retirement of Plant Daniel) from documents submitted to the Commission. This is contrary to practices that would normally support an application for a CPCN, in which a utility shows that the option it has selected is the least-cost option to ratepayers from a range of potential alternatives.

**Q Is there an alternative strategy that would save ratepayers money while also ensuring compliance with CCR regulations?**

A Yes. If Plant Daniel ceases operation by October 17, 2023, for example, EPA regulations allow CCR waste to be placed in the relevant ash pond beyond the original October 2020 cease-receipt deadline.[7] Early plant retirement would make conversion of the bottom ash

[7] Ex. RW-2, MPC response to MPUS 1-9 Supp, MPSC Docket No. 2019-UA-116.

collection system unnecessary,[8] saving ratepayers $23.85 million.[9] There would also be less wastewater to treat and the scope of the LVW system would thus be different than currently proposed.[10] MPC has not conducted any engineering estimates for this alternative scope, but ratepayers would certainly save some portion of the original $15.65 million project cost.[11]

**Q Is MPC aware of this alternative?**

A Yes. Although MPC did not present an alternative scenario or retirement analysis in its CPCN application or in the Company's proposed order, MPC acknowledged in discovery responses[12] that the Company did in fact evaluate an alternative scenario that included the following:

1. Completion of the coal ash pond closure project by the October 2023 retirement-extension deadline for EPA CCR compliance.
2. Retirement of Plant Daniel no later than July 2022 (or whatever date MPC determines is necessary to complete closure of the coal ash pond by the October 2023 deadline).
3. Construction of transmission alternatives prior to the retirement of Plant Daniel (likely July 2022).
4. Construction of a temporary LVW facility, sized and scoped based on the early retirement of Plant Daniel.

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[8] Ex. RW-3, MPC response to MPUS 1-13 Supp, MPSC Docket No. 2019-UA-116.

[9] Application, Exhibit MPL-3.

[10] Ex. RW-4, MPC response to MPUS 1-13, MPSC Docket No. 2019-UA-116.

[11] Application, Exhibit MPL-3.

[12] Ex. RW-5, MPC response to MPC 1-19, Attachment E, MPSC Docket No. 2019-UA-116

**Q What are the estimated cost savings of the alternative scenario compared to the plan that MPC proposed in its CPCN?**

A The Company estimates that the net savings on environmental capital expenditures associated with a scenario in which Units 1 and 2 are retired on July 1, 2022 is $45.3 million. These savings are shown in Table 1.

**Table 1. MPC estimates of net savings from early retirement of Plant Daniel[13]**

| **Environmental Capital Expenditures ($millions)** | | | |
|---|---|---|---|
| **Description** | **Current Plan** | **Alternate Scenario** | **Cost (Savings)** |
| Dry Bottom Ash Conversion | $47.7 | $10.0 | ($37.7) |
| Permanent LVWT | $24.0 | $10.9 | ($13.1) |
| Temporary LVWT | $19.9 | $25.4 | $5.5 |
| **Total** | | | ($45.3) |

**Q You present the cost savings associated with the CCR projects if Plant Daniel were to retire. Wouldn't retirement of the Plant result in additional costs to MPC and to ratepayers?**

A No. In fact, MPC's own analysis done in September 2019 (Table 2) finds that the retirement of MPC's share of Plant Daniel in 2022 would save ratepayers $129 million[14] compared to continued operation.[15] This analysis incorporates "avoidable environmental

[13] Ex. RW-5, MPC response to MPC 1-19, Attachment E, MS Docket No, 2019-UA-116.

[14] MPC evaluated nine scenarios under three different gas price forecasts and three different CO2 price assumptions. The average ratepayer savings of these nine scenarios is $129 million.

[15] Ex. RW-6, MPC response to SC-MPC 1-19, Attachment C, page 4, MPSC Docket No. 2019-UA-116.

capital projects, updated budget forecasts, updated discount rates, and the results of recent transmission studies."[16]

**Table 2: MPC September 2019 Plant Daniel Analysis**

| Daniel 1 | | | |
|---|---|---|---|
| **September 2019 Update** | | | |
| **Analysis - Base Year 2022** | | | |
| **2019 NPV (M$)** | **$0 CO2** | **$10 CO2** | **$20 CO2** |
| High Gas | $250 | ($155) | ($25) |
| Mod Gas | ($85) | ($230) | ($220) |
| Low Gas | ($220) | ($240) | ($240) |
| **Average** | **($129)** | | |
| ***Average ($/kW)*** | **($258)** | | |

**Q How does MPC justify the decision to apply for a CPCN for the CCR projects given that its own analysis shows that continued operation of Plant Daniel will cost ratepayers $129 million?**

A MPC seems to be appealing to fuel diversity and the idea that the decision to retire the plant should be considered in another docket at some other time. The Company has not explicitly acknowledged the plant's economic status in either its application, proposed order, or its response to Sierra Club's motion to require supplementation of the petition and a revised scheduling order. MPC's analysis of the Plant Daniel retirement scenario was obtained only through the discovery process.[17]

[16] Ex. RW-6, MPC response to SC-MPC 1-19, Attachment C, MPSC Docket No. 2019-UA-116.

[17] Ex. RW-7, MPC response to SC-MPC 1-19, MS Docket No. 2019-UA-116.

**Q Has the co-owner of Plant Daniel, Gulf Power, expressed support for the proposed CCR project, or offered any justification for the costs?**

A No. As noted, Gulf Power, which owns a 50 percent share of Plant Daniel, has indicated that it plans to retire its share of the plant no later than 2024.[18] Moreover, Gulf Power recently filed with the Florida Public Service Commission a request to defer a decision on the recovery of CCR costs because Gulf Power "has become aware of new information about potential alternatives for CCR compliance projects at Plant Daniel that may result in a more cost-effective solution for Gulf's customers."[19] Gulf Power's representations to the Florida Public Service Commission confirm that Mississippi Power's proposed CCR projects are neither required nor the least cost option.

## 5. MPC DATA CONFIRMS THAT PLANT DANIEL WILL COST RATEPAYERS OVER $1 BILLION BY 2040

**Q Have you done any of your own analysis to verify the results of MPC's most recent economic analysis?**

A Yes. Synapse evaluated Plant Daniel using our own economic model with data provided by MPC and supplemented from public sources when Company information was not provided. Our analysis found that Plant Daniel has been operating uneconomically for the past three years, from 2016 to 2018. If it continues to operate, the Plant will continue to lose money and will cost ratepayers a total of more than $1 billion by 2040.

[18] Ex. RW-8, MPC response to MPUS-MPC 1-10 MS Docket No. 2019-UA-116.

[19] Ex. RW-10, Prehearing Statement of Gulf Power Company before the Florida Public Service Commission. Docket No. 20190007-EI, October 11, 2019.

**Q Please describe the historical economic analysis that Synapse performed for Plant Daniel.**

A Synapse evaluated the Plant's past economic performance by comparing energy values for Plant Daniel to total unit costs. We calculated energy values using the historical hourly system lambdas (which refers to the marginal cost of electricity in a system and, in an electricity market, is the locational marginal price of energy in a given hour) provided by MPC[20] and hourly generation obtained from the EPA's Air Markets Program.[21] Total unit costs include fuel costs,[22] unit-specific operations and maintenance (O&M) costs,[23] and ongoing capital expenditures.[24]

**Q Please summarize the results of Synapse's historical economic analysis.**

A Our retrospective analysis found that neither of the Plant Daniel units provided economic value to ratepayers over the last three years (2016–2018). Figure 1 shows Daniel Unit 1 and 2's energy value and cost streams, as well as each unit's net revenues between 2016 and 2018. During that three-year period, we estimate Units 1 and 2 each lost more than $35 million per year, with a total loss of nearly $245 million.

[20] Ex. RW-9, MPC response to SC-MPC 1-29, Attachment A, MS Docket No. 2019-UA-116.

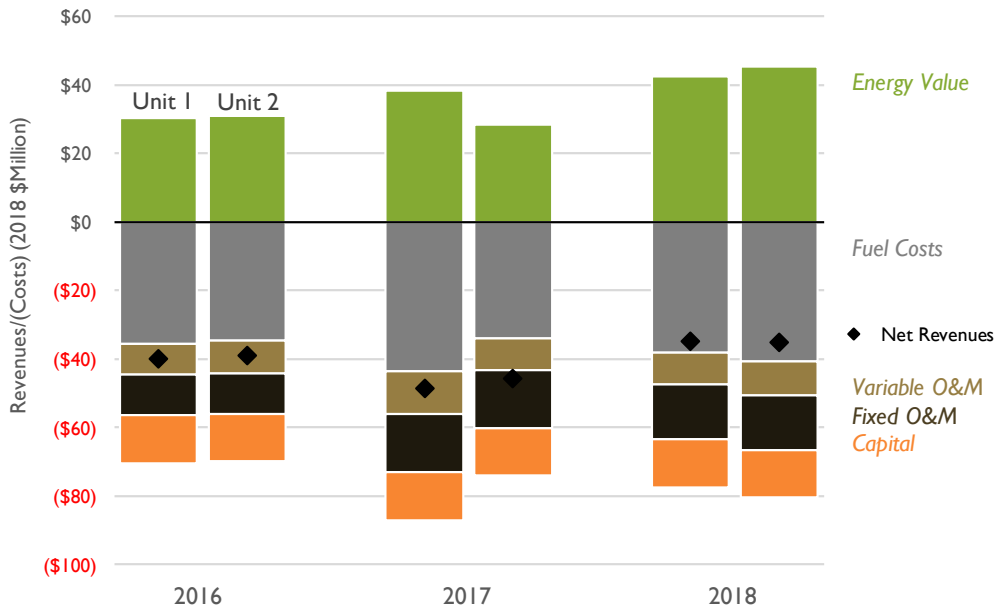
[21] U.S. EPA Air Markets Program Data is available at: https://ampd.epa.gov/ampd/.

[22] EIA 923 fuel receipts.

[23] S&P Global.

[24] EIA Annual Energy Outlook 2019: Electricity Market Module, p. 14 (capital expenditures), available at: https://www.eia.gov/outlooks/aeo/assumptions/pdf/electricity.pdf.

**Figure 1. Daniel Unit 1 historical energy value and costs, 2016-2018**




**Q Has Synapse also evaluated the forward-looking economic performance of Plant Daniel?**

**A** Yes. Synapse projected the future economic performance of Plant Daniel by comparing avoided cost estimates to total unit costs. MPC provided avoided cost estimates,[25] plant capacity factors,[26] fixed and variable O&M,[27] and fuel price projections [redacted]

[redacted]

[25] Ex. RW-11, MPC Response to [redacted] (Scenario MG0 for mid-gas prices and no carbon price), MS Docket No. 2019-UA-116.

[26] Ex. RW-12, MPC Response to SC-MPC 1-22, Attachment A, MS Docket No. 2019-UA-116.

[27] Ex. RW-11, MPC Response to [redacted] Docket No. 2019-UA-116.

[redacted].[28] We used U.S. Energy Information Administration (EIA) assumptions for ongoing capital expenditures.[29]

**Q Please summarize the results of Synapse's forward-looking economic analysis.**

A Synapse found that Plant Daniel is unlikely to return to profitability (Figure 2) under projected mid gas prices[30] and zero costs for carbon dioxide allowances (MPC's "MG0" scenario). Our analysis found that each of the Plant Daniel units will lose an average of more than $40 million annually through 2040 (Figure 3). After considering the NPV of the total costs and energy values, we conclude that each unit has an expected NPV of negative $500 million, resulting in a total loss at Plant Daniel of over $1 billion between now and 2040 (Figure 4).[31]

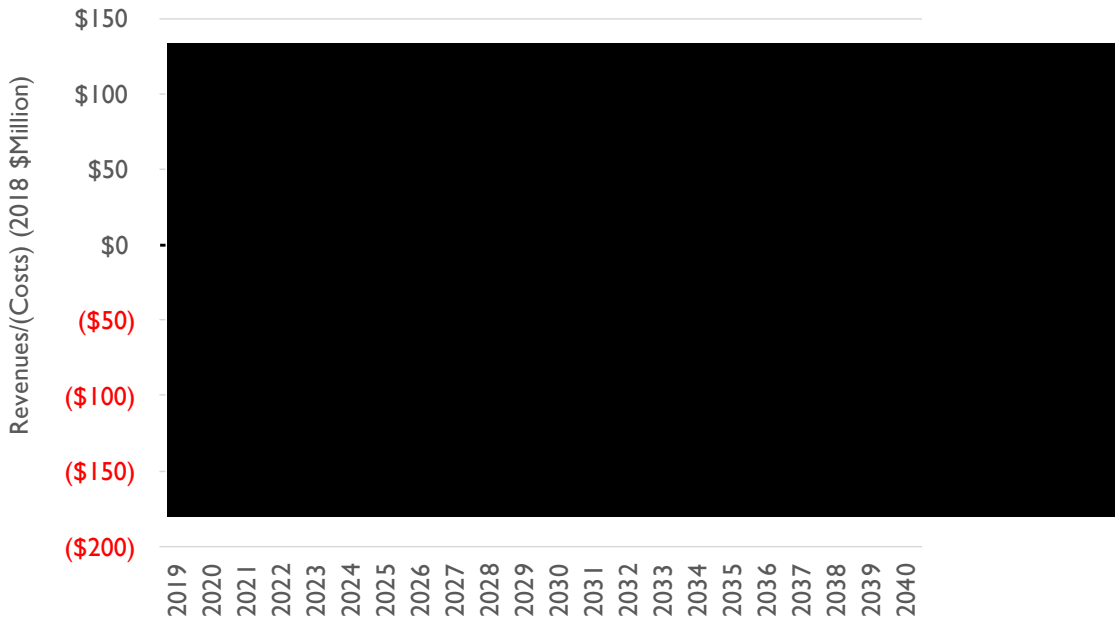
[28] Ex. RW-13, MPC Response to SC-MPC 1-3 CONFIDENTIAL Attachment A, MS Docket No. 2019-UA-116.

[29] EIA Assumptions to the Annual Energy Outlook 2019: Electricity Market Module, p. 14 (capital expenditures), available at: https://www.eia.gov/outlooks/aeo/assumptions/pdf/electricity.pdf.

[30] MPC's mid gas price forecast is higher than the futures market would indicate, as well as long-term outlooks like the Energy Information Administration's *2019 Annual Energy Outlook*.

[31] [redacted]

1

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3 **Figure 3. Cumulative net revenues for Daniel Units 1 and 2 under MPC scenario MG0, 2019-2040**

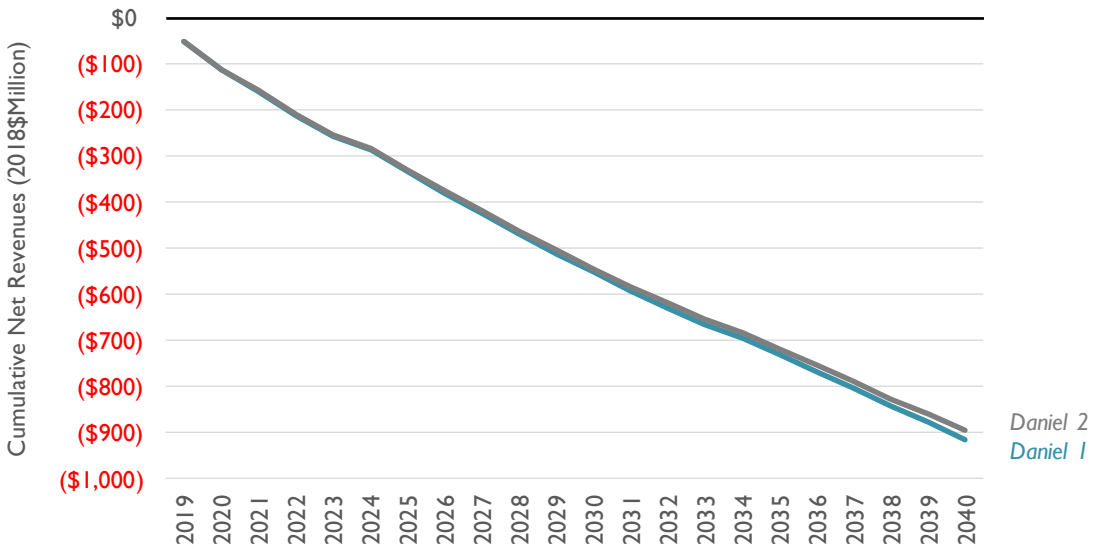


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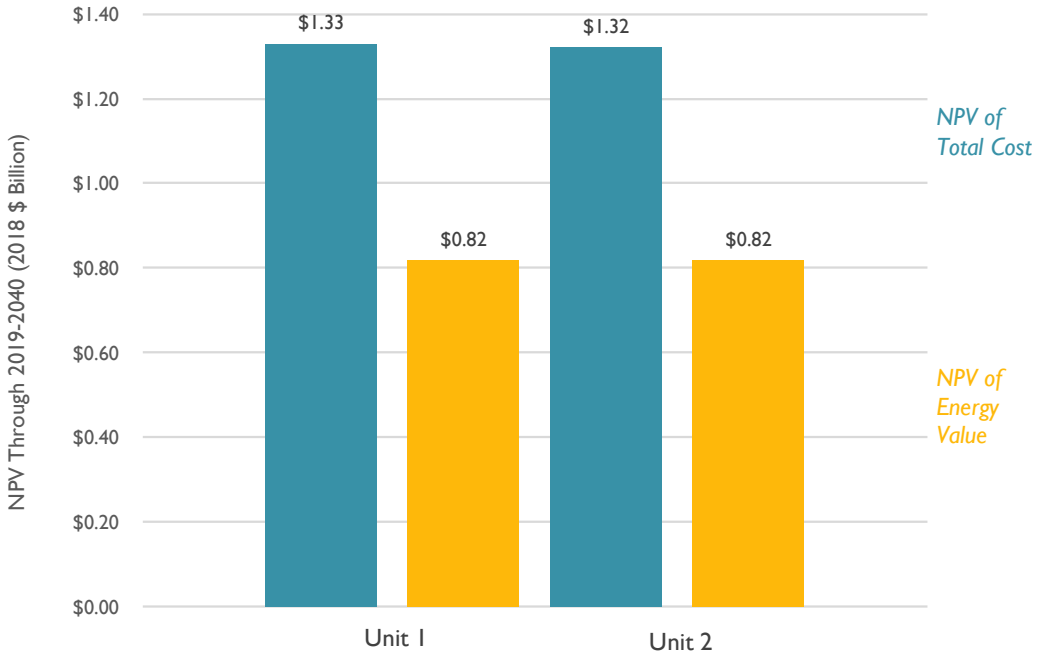
**Figure 4. Net present value of total costs and energy value for Units 1 and 2 from 2019-2040**




**Q Do you agree that MPC's claimed transmission constraints should prevent Plant Daniel from retiring early?**

A No. MPC states in Attachment C to SC-MPC 1-19 that the same amount of transmission improvements would be required if either one or both of the units at Plant Daniel were to retire.[32] Given that Gulf Power intends to retire its 50 percent interest in the Plant no later than 2024, any transmission upgrades would need to be undertaken regardless of whether or not MPC continues to operate its share. Thus, no transmission costs can be avoided by the continued operation of Daniel 1.

[32] RW-6, MPC response to SC-MPC 1-19, Attachment C.

**Q Can MPC remediate the transmission constraints that it claims it will face in time for Plant Daniel to retire by October 2023?**

A Yes. The Company acknowledged that it has developed a construction schedule under which it could complete the necessary transmission upgrade by July 1, 2022.[33] This would allow MPC to retire Plant Daniel, complete the required coal ash pond closure activities by the October 2023 CCR retirement extension deadline, and save customers substantial compliance and forward-going operational costs. MPC asserts that there are risks associated with this plan, including scheduling risks, but provides no further details.[34] Once again, there is no mention in MPC's CPCN application or the Company's Proposed Order that the Company has a transmission expansion plan that allows for the retirement of Plant Daniel.

**Q Has MPC provided sufficient evidence to support the need to keep Plant Daniel online until at least 2022 in order to complete the transmission upgrades?**

A No. The Company has produced only a single page document with the results of its transmission analysis.[35] It has not provided the actual transmission study or any other analysis to support the claim. Therefore, there is no basis to assess the accuracy of this statement or evaluate specific alternative timelines or resource options.

[33] Ex. RW-2, MPC response to MPUS 1-9 Supp, MPSC Docket No. 2019-UA-116.

[34] Ex. RW-2, MPC response to MPUS 1-9 Supp, MPSC Docket No. 2019-UA-116.

[35] Ex. RW-15, MPC response to MPUS 1-8 Supp, MPSC Docket No. 2019-UA-116.

**Q Are there any additional reasons besides transmission constraints that MPC does not want to retire Plant Daniel?**

A MPC asserts that Plant Daniel provides fuel diversity benefits, as the two units at the Plant are the only ones in MPC's fleet that continue to run on coal. MPC also states that Plant Daniel provides job and economic benefits to Jackson County, Mississippi.

**Q Does the fuel diversity claim by MPC justify continued operation of Plant Daniel?**

A No. Fuel diversity was historically a benefit touted by utilities to manage gas price risk in the years in which gas prices were both high and extremely volatile. However, since the fracking boom, gas prices have remained consistently low. Today, the rising costs associated with burning coal present a greater risk to MPC customers. While coal prices overall have fallen since 2012, they spiked in recent years and have increased by nearly a third since 2017.[36]

To truly manage risk associated with fuel cost volatility MPC should instead seek to add zero-variable cost technologies—in the form of renewable resources—to its generating portfolio, rather than operating coal-fired units.

**Q Do the job and tax revenue benefits provided by Plant Daniel justify the continued operation of the plant?**

A No. While Plant Daniel does provide both job and tax revenue benefits, if replacement capacity were to be built at the same site, some portion of these benefits would remain in Jackson County. The addition of replacement capacity would also result in new construction jobs in the region. Utilities, when making decisions to retire generating

[36] EIA 923 data on fuel receipts available at https://www.eia.gov/electricity/data/eia923/

units, often relocate employees to other generating stations, resulting in no net loss of jobs.

Additionally, operating a plant uneconomically (as MPC is with Plant Daniel) passes higher costs on to ratepayers without delivering additional value. This is detrimental to the overall economic development of the region.

## 6. RETIRING PLANT DANIEL HAS IMPLICATIONS FOR COST RECOVERING OF PREVIOUS CAPITAL EXPENDITURES

**Q Has MPC recently committed to any other large capital expenditures at Plant Daniel?**

A Yes. In 2012, the Mississippi Public Service Commission approved $300 million for flue gas desulphurization (FGD) at Plant Daniel[37] to comply with EPA's Mercury and Air Toxics rule based on MPC's claims that Plant Daniel was a necessary baseload unit.[38] By the time the FGD was installed in 2016, however, the plant was operating at less than 40 percent capacity factor, far below baseload levels.[39]

**Q Would continuing operations at Plant Daniel result in more money for MPC than closing the plant and taking advantage of the extended closure period?**

A Probably. In addition to the capital expenditures for the ash and wastewater handling systems, a portion of Plant Daniel remains undepreciated, as does most of the cost of the scrubbers. If Plant Daniel is retired then it would no longer be used in providing service

[37] Order in Mississippi Public Service Commission Docket No. 2010-UA-79. April 3, 2012.

[38] Order in Mississippi Public Service Commission Docket No. 2010-UA-79. April 3, 2012.

[39] Mississippi Power self-reported data available at EPA Air Markets Database, http://ampd.epa.gov/ampd/.

to customers and recovery of some or all of those costs in future rates could be disallowed.

**Q Do good utility planning principles allow past capital spending on the scrubbers to dictate continued capital spending?**

A Certainly not. Basing continued capital spending decisions on past investments in the plant would be a departure from good utility planning principles. It would be the equivalent of "doubling down" on a bad bet, hoping for a reversal of fortune. Such an approach would also be an abdication of the Company's "prudence" obligation. Regulated monopoly utilities, such as Mississippi Power, operate in an environment where they are protected from various types of competition. Their rates are set by regulators in a manner that generally allows the Company the opportunity to recover its prudently incurred costs for assets that are "used and useful" in providing service to customers, including a regulated return on equity.

**Q What do you mean by "prudence" in this context?**

A In this context, "prudence" relates to utility planning – whether the decision to commit to a particular power plant construction project was arrived at in a reasonable manner. Planning prudence includes consideration of a reasonable set of alternatives, the use of appropriate models and methodologies, and the collection and application of current forecasts and data. Costs that are found by regulators to have been incurred imprudently should generally be disallowed from rates. Customers should not be asked to bear the burden associated with unreasonable system planning decisions.

**Q What do you mean by "used and useful" in this context?**

A The "used" part of the "used and useful" standard is relatively straightforward. Specifically, regulators should determine whether a particular asset is physically used in providing service to customers. Examples of equipment not "used" in providing service can include power plants that have been retired from service, environmental retrofit

equipment that is not operated, transmission or distribution equipment that has been removed from the grid, and previously installed meters that are uninstalled as part of a meter replacement program.

The "useful" portion is more complex, as a particular item can be used in providing service but not be economically useful. For example, there may have been a power plant construction project that was planned in a prudent manner but may operate at costs significantly higher than the economic value of the output for reasons beyond the utility's control and ability to reasonably foresee. In such a circumstance a regulatory commission may find that the plant is prudent and used, but not economically useful in providing service to customers.

**Q Why are these ratemaking concepts important in this docket?**

A MPC is effectively requesting that the Commission determine that its proposed CCR projects represent a prudent investment at Plant Daniel. I understand that the Commission applies a presumption of prudence to utility expenditures in some circumstances. While this is not an official docket to determine whether the proposed spending is prudent, or Plant Daniel is "used and useful," it is important that the Commission consider the economics of the Plant when ruling on MPC's application. Plant Daniel does provide energy to ratepayers, and thus might be considered "used." However, because it is providing energy uneconomically, and increasing costs to MPC ratepayers, it should be considered that the plant is not currently "useful."

**Q How should the Commission consider these concepts when making a decision in this docket?**

A Utility decision-making should consider future costs only. Previous, now sunk, costs should not as a rule influence prudent decision-making. Planners are warned to not fall into the "sunk cost fallacy" in which costs incurred in the past, now unavoidable, influence forward going decision-making. If, for example, a utility has an aging power

plant with $1 billion in unrecovered investment in current rates—and that plant is economically obsolete due to changes in market conditions (e.g., wind and solar and storage have declined to the point where the old plant is uneconomic to continue to operate)—then that plant should be retired regardless of the status of the sunk costs. The utility should not continue to operate an uneconomic asset in an effort to recover sunk costs. Rather, the utility should retire the asset and make appropriate forward-going investment decisions. Regulators then should make rates according to state and federal law, precedent, and the facts of a particular situation.

**Q What actions could the Commission take with respect to a stranded asset like Plant Daniel, if it were retired prior to the end of its depreciable life?**

A Regulatory commissions have some flexibility with respect to stranded assets, particularly in developing options that would mitigate rate shock or harms to customers. A retired power plant can become a regulatory asset, which would be kept on MPC's books for the purpose of inclusion in consumers' rates. Depreciation schedules may be accelerated. Recovery of capital costs may be granted while a rate of return to a utility on a specific investment might be disallowed. Securitization with ratepayer backed bonds could also help lower consumer costs. This Commission has many options that could be explored in a regulatory docket dealing specifically with the retirement of Plant Daniel.

## 7. SUMMARY AND RECOMMENDATIONS

**Q Please summarize your position on MPC's petition for a CPCN.**

A The Synapse analysis showed that Plant Daniel has been and will continue to be uneconomic to operate. MPC confirmed this in its September 2019 study of the two units. If the CPCN for the $62.5 million in environmental investments is approved, MPC will knowingly be making an imprudent investment. Plant Daniel will continue losing money for ratepayers with every kilowatt-hour that it generates.

**Q Please summarize your recommendations.**

A I recommend that the Commission reject MPC's application for a CPCN in this docket. Additionally, I recommend that the Commission require that MPC present an updated net present value (NPV) analysis of the costs at Plant Daniel to comply with all CCR requirements, including analysis of a delayed schedule for the CCR project, and analysis assuming a 2023 (or sooner) date for plant retirement and coal ash pond closure.

Alternatively, if MPC has information that demonstrates that continuing to operate Plant Daniel is the least cost option for ratepayers, the Company should produce testimony and discovery materials over the next few months that support this assertion. These materials should include analysis of options and costs associated with a delayed start date of construction on the CCR projects. This would allow the Commission the ability to perform the review that is necessary as a matter of good regulatory practice.

**Q Does this conclude your testimony?**

A Yes.

## VERIFICATION

**BEFORE ME,** the undersigned Notary Public in and for the County of Middlesex, State of Massachusetts, personally came and appeared Rachel Wilson, who after being duly sworn did depose and declare that the foregoing is her direct testimony in this proceeding and that all of the information and assertions contained therein are true and correct to the best of her knowledge, information and belief.

Rachel Wilson

**SWORN TO AND SUBSCRIBED** before me, on this 16 day of October, 2019.

NOTARY PUBLIC

JENNIFER MARUSIAK
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
April 29, 2022

My Commission expires _____

## CERTIFICATE OF SERVICE

I, Robert B. Wiygul, counsel for Sierra Club do hereby certify that in compliance with RP6.122(2) of the Commission's Public Utilities Rules of Practice and Procedure (the "Rules").

(1) An original and twelve (12) true and correct copies of the filing have been filed with the Commission by United States Postal Service this date to:

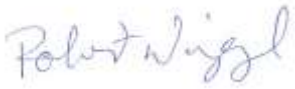
Katherine Collier, Executive Secretary
Mississippi Public Service Commission
501 N. West Street, Suite 201-A
Jackson, MS 39201

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

(3) An electronic copy of the filing has been served via e-mail to the following address:

See attached Exhibit A

This the 16th day of October, 2019.



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