

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

**MISSISSIPPI POWER COMPANY**

**DOCKET NO. 2009-UA-14**

**IN RE: PETITION OF MISSISSIPPI POWER COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING THE ACQUISITION, CONSTRUCTION, AND OPERATION OF AN ELECTRIC GENERATING PLANT, ASSOCIATED TRANSMISSION FACILITIES, ASSOCIATED GAS PIPELINE FACILITIES, ASSOCIATED RIGHTS-OF-WAY, AND RELATED FACILITIES IN KEMPER, LAUDERDALE, CLARKE, AND JASPER COUNTIES, MISSISSIPPI**

**ORDER**

THIS DAY, there came on for consideration by the Mississippi Public Service Commission ("Commission") the Petition of Mississippi Power Company ("MPC" or "the Company"), as amended and supplemented in this Docket,<sup>1</sup> requesting (i) a Facilities Certificate ("Certificate") that the present and future public convenience and necessity require or will require MPC's acquisition, construction, extension, operation and maintenance of a new integrated gasification combined cycle base load electric generating facility, related environmental control equipment and facilities, related lignite mining facilities, related new electric transmission facilities, related new pipeline facilities, related rights-of-way and other related facilities in Kemper, Lauderdale, Clarke and Jasper Counties, Mississippi, for use in connection with MPC's service to its customers in the twenty-three (23) counties of southeastern Mississippi; (ii) application of the Commission's authority pursuant to Miss. Code Ann. §77-3-101 et seq. ("Base Load Act"); (iii) approval of MPC's proposed rate or cost recovery

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<sup>1</sup> MPC amended and supplemented its Certificate filing by submitting the following in this Docket: (i) Supplemental Filing for Phase One-Need filed July 8, 2009; (ii) Rebuttal Filing for Phase One -Need filed July 28, 2009; (iii) Second Supplemental Filing for Phase One-Need, filed August 28, 2009 (responding to Commission's Order of August 4, 2009, to update its IRP by providing an updated Exhibit KDF-1 reflecting 2010 data concerning forecasts of load and fuel prices); (iv) Third Supplemental Filing, filed December 7, 2009; (v) Phase Two Rebuttal Filing, filed January 5, 2010; and (vi) Phase Two Supplemental Filing, filed January 25, 2010.

mechanism;<sup>2</sup> (iv) approval of CWIP financing costs using a current recovery methodology; (v) approval of a Lignite Service Agreement; and (vi) approval of MPC's pre-construction costs incurred in connection with its screening and evaluation of generating alternatives and the various pre-construction activities undertaken by MPC in connection with the project ("Kemper IGCC Project"); and (vii) such other relief as the Commission deems appropriate.

The Commission, having considered all pre-filed testimony, the pleadings, all briefs, all responses to Commission's questions and issue designations, letters, exhibits, data request responses, oral testimony provided at the hearings in this Docket, all post-hearing filings, briefs, proposals and all comments filed thereto, and all documentation contained in the record of this Docket, and pursuant to all applicable law, finds as follows:

### **Overview**

MPC has proposed a combination of physical project and economic impact. This Order finds that this combination does not satisfy the statutory requirement of "public convenience and necessity." While the physical project itself, in concept, could benefit MPC's ratepayers, the proposal's many uncertainties and risks, concerning technology, cost and performance, given MPC's insistence that these uncertainties and risks fall largely on ratepayers, are too high compared to the project's asserted benefits.

After summarizing the Petition and addressing various preliminary matters, this Order describes Kemper and its potential benefits. It then describes the project's uncertainties and risks, concluding that those uncertainties and risks, relative to the potential benefits, are too high in number and magnitude to warrant a finding of "public convenience and necessity." At this point, the Order could simply stop, leaving the Company with a denial of its Petition. The Commission has no statutory obligation to help a petitioner convert a rejected project into an approved one.

The Commission has chosen, however, to give some guidance on how a different balance of benefit and risk would be consistent with the public convenience and necessity, as required by Miss. Code Ann. §§77-3-11, 77-3-13 and 77-3-14. While the record contains substantial evidence to support the Commission's conclusion that the project, as proposed, does not satisfy

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<sup>2</sup> MPC's proposed cost recovery mechanism has four (4) main components: 1) an annual filing for determination of rates, under a proposed new rate schedule, Certified New Plant, Rate Schedule "CNP" (as revised in this Docket); 2) a monthly reporting process; 3) a quarterly prudence review process; and 4) a true-up process.

the statute, the record also contains substantial evidence to support a finding that if the Company proposed this different balance, that proposal would satisfy the statute.

In the hearings, MPC asserted that it would not undertake the project unless the Commission required the ratepayers to bear the risks described herein. The Commission has not ignored these assertions. The Commission, rather, is stating what the public convenience and necessity requires or will require. We hope the Company responds positively by accepting the conditions. If the Company chooses not to, the Commission expects the Company to inform the Commission, no later than thirty (30) days following this Order through an appropriate filing, about what investigation it will undertake to prepare an alternative solution to the need established by the Commission in Phase One of this proceeding.

### **I. THE PETITION, AS SUPPLEMENTED/DESCRIPTION OF PROJECT**

On January 16, 2009, MPC filed a Petition,<sup>1</sup> including prefiled testimony and supporting documentation, to construct, acquire, operate and maintain an electric generating facility in Kemper County, Mississippi, consisting of (i) a lignite-fueled two-on-one (2-on-1) integrated gasification combined-cycle (IGCC) base load electric generating facility having a net summer output capacity of 582 megawatts ("MW"); (ii) environmental equipment for the reduction of various emissions from the facility, including without limitation, equipment and facilities for the capture of sixty-five percent (65%) of the carbon dioxide (CO<sub>2</sub>) emissions from the facility; (iii) sixty (60) miles of transmission lines; (iv) three (3) transmission substations; (v) five (5) miles of natural gas transportation facilities to accommodate natural gas deliveries to the facility; (vi) thirty (30) miles of water transportation facilities to accommodate the delivery of the City of Meridian's treated wastewater to the facility's site for its cooling and process water needs; (vii) mineral leases, mining facilities and equipment and all related facilities needed to mine lignite; (viii) the option to own fifty-five (55) miles of CO<sub>2</sub> pipeline needed to transport CO<sub>2</sub> from the facility site to suitable oil fields for Enhanced Oil Recovery ("EOR"); and (ix) associated facilities, rights-of-way and other rights needed for the efficient and effective construction, acquisition, operation, repair and maintenance of the Kemper Project (collectively referred to as "the Kemper IGCC Project, the Project, the Kemper Plant or Kemper").

The Kemper IGCC Project would consist of two major system classifications: a gasification island and a combined cycle generating unit. The Kemper Plant would incorporate

the air-blown Transport Integrated Gasification ("TRIG") technology jointly developed by Southern Company, Kellogg Brown & Root, LLC and the U.S. Department of Energy. The Kemper IGCC Plant would be fueled primarily by lignite mined in Kemper County, Mississippi. The lignite would be converted to synthesis gas ("syngas") by the TRIG gasifier for use in a 2-on-1 combined cycle generating unit.

TOA-1, Appendix B, filed confidentially on December 7, 2009, which is incorporated herein by reference, reflected an updated detailed construction cost estimate for the Kemper IGCC Project before considering incentives of \$296 million. The cost net of incentives is estimated at \$2.4 billion. MPC's estimates also included four (4) measures to reflect uncertainties: (a) funds for contingency to cover unexpected and uncontrollable events, (b) funds for escalation to cover cost increases of materials and labor during the construction period, (c) additional capital funding to make improvements to the Plant during start-up and initial operation and (d) availability ramp to recognize it may take time to reach optimal performance levels comparable to MPC's existing fleet. (pp. 6-7 of Anderson Phase Two Rebuttal Testimony).

MPC stated that the Kemper Plant would be designed to capture sixty-five percent (65%) of its CO<sub>2</sub> output. MPC expects to sell the captured CO<sub>2</sub> to one or more entities that operate enhanced oil recovery ("EOR") projects in Mississippi and the surrounding region. MPC seeks inclusion in its requested Certificate the right for it to own the CO<sub>2</sub> pipeline that would transport the CO<sub>2</sub> from the Plant site to the EOR projects.

The Kemper IGCC Project would also require extensions to and upgrades of MPC's existing transmission lines and substation facilities.

The Kemper IGCC Project would utilize the City of Meridian's treated municipal wastewater ("gray water") for the Plant's cooling and process water requirements.

Five (5) miles of natural gas transportation facilities and associated rights-of-way to accommodate natural gas deliveries to the Plant would be needed.

MPC assumed a May 2014 commercial operation date in its most updated economic analysis and financial projections. This date is intended to maximize the federal, state and local benefits available to reduce the cost of the Kemper IGCC Project.

In its Third Supplemental Filing, MPC stated that it had determined that a management fee contract structure would provide the lowest overall price of lignite for the Kemper IGCC

Project. Under this structure, MPC would own the mine, all associated mineral leases, and all the equipment and facilities related thereto. MPC would also pay costs associated with all mining activities and pay NAC (lignite miner) a management fee based on the amount of lignite actually delivered. (p. 20 of Anderson Phase Two Direct Testimony).

MPC requests, under the Base Load Act, full recovery of the Kemper IGCC Project's construction period financing cost ("CWIP Financing Costs"), asserting that such treatment is necessary to maintain its strong A rating during project construction and to ensure access to capital. (p. 17 of Turnage Phase Two Direct Testimony). MPC also assumed approval of sixty-five percent (65%) guaranteed debt. (Id. at p. 7).

MPC based its conclusion that the Kemper Project was the best resource option on the following evidence that it presented through its witnesses:

- 1) Front End Engineering Design ("FEED") Study, which gathered relevant cost and other data needed for the proper evaluation of the Kemper IGCC Project. This FEED study represented a comprehensive effort by MPC, utilizing expertise in numerous specialty areas such as chemical, mechanical, electrical and civil engineering as well as construction layout and process design. MPC testified that the FEED study produced a quality estimate of cost and performance for the Kemper IGCC Project. The cost estimate was developed through the FEED study and through the experience of MPC and Southern Company Services ("SCS");
- 2) IRP Modeling Results, along with the economic evaluation of the sixteen (16) scenarios used in this Docket, which illustrated that the Kemper IGCC Project was the most economic resource alternative currently available to meet MPC's identified need in a majority of the sixteen (16) scenarios which were analyzed in this Docket;
- 3) Enhancement of MPC's fuel diversity and asset mix of its generating fleet, thereby mitigating the supply and price volatility risks associated with the predominant use of any one fuel;
- 4) Long-term lignite supply agreement associated with the Kemper IGCC Project which would offer a lower and more stable fuel price over the life of the Plant;
- 5) Use of a less volatile fuel stock, as compared to natural gas and higher-ranked coals;
- 6) Mitigation of the future risk associated with the passage of climate change legislation or EPA regulations since Kemper would capture and sequester sixty-five percent (65%) of Kemper's CO<sub>2</sub> emissions;
- 7) Various federal, state and local incentives which lower the overall cost of the Kemper IGCC Project. MPC testified that in total, these programs have the potential to reduce the Kemper IGCC Project's construction costs by \$296 million (Total Company) and

its operating expenditures over the life of the Kemper IGCC Project by \$1.37 billion in nominal dollars (Total Company). MPC testified further that the cost savings associated with these incentives over the life of the Kemper IGCC Project would total approximately \$1.7 billion (Total Company); [TOA-1 shows \$296 million in potential construction cost reduction; FT-11 shows the figure to be \$332 million]

- 8) Economic development impacts at both the state and local levels;
- 9) Promotion of Mississippi lignite for economic development as Mississippi has four (4) billion tons of unmined lignite;
- 10) Furtherance of the nation's and Mississippi's stated goal of increased energy independence. On October 1, 2009, the DOE submitted an informational filing in this Docket supporting the Kemper Project and indicating its important role in developing clean coal technology for the nation;
- 11) The development of EOR projects in Mississippi would be fostered due to the carbon capture capability of the Kemper IGCC Project. These EOR projects are expected to translate into an increase of domestic oil production of several million barrels a year;
- 12) Use of a mine-mouth mining arrangement would eliminate fuel transportation costs and insulate MPC from fuel supply and transportation market fluctuations; and
- 13) The self-build feature would promote roughly 1,000 jobs at the peak construction phase (500 jobs on average), and between 260 to 280 permanent, quality jobs would be created in the power and mine facilities.

MPC testified that its existing generation fleet was of advanced age. There was much testimony that carbon legislation or regulation is likely in the near future, which would lead to carbon compliance on existing plants. As these costs escalate, MPC argued, coal unit retirements increase MPC's "reliability" need for new base load capacity. MPC also pointed to developments in the federal regulation of mercury, NO<sub>x</sub>, SO<sub>2</sub> and particulates that could require MPC to install control equipment for continued operations of pulverized coal plants, possibly by November 2014. MPC claimed that the availability of Kemper's base load energy would allow it to defer the control decision on Plant Watson units 4 and 5 at a \$1 billion price tag for a few years until more information was known regarding carbon compliance requirements. MPC asserted that as a result of these factors, the long-term economic benefit of its existing coal fleet's long-term viability may very well be put at risk due to environmental regulations.

Also, there was much discussion at the hearings of the volatility of natural gas prices as a reason to diversify the Company's fuel mix. Testimony was provided that from 2000 to 2008,



seventeen percent (17%) of MPC's generation from natural gas had increased to thirty-three percent (33%). (Phase One Tr. at p. 14). Since 2003, MPC's customers have seen an escalation in rates of fifty-four percent (54%), over eighty percent (80%) of which was due to fuel costs. (Phase One Late Filed Exhibit 8, Slide #18). Further, MPC claimed that the TRIG<sup>TM</sup> IGCC technology would allow it to use a third fuel source, lignite, a lower rank (i.e., lower heating value) fuel whose cost is both lower and less volatile than the cost of natural gas and higher-ranked coals.

These statements must be weighed by the Commission when determining whether the Company's proposal satisfies the statutory test.

### **INCENTIVE HIGHLIGHTS**

MPC expects DOE to release \$270 million to it under the Clean Coal Power Initiative. MPC has been awarded \$133 million in Federal Investment Tax Credits. In November 2009, MPC applied for additional such credits which would total approximately \$279 million. Also, MPC is seeking to obtain DOE loan guarantees. MPC is awaiting a Record of Decision ("ROD") to be issued by the U.S. Environmental Protection Agency under the National Environmental Policy Act (NEPA). If this ROD is favorable, MPC expects DOE to release the CCPI2 funding to MPC, including the loan guarantees. (p. 13 of Anderson Phase Two Direct Testimony). Kemper's lignite gasification equipment would be eligible for ad valorem tax exemption, if the Kemper County Board of Supervisors approves such. This event, according to MPC, would lower the overall cost of the Kemper IGCC Project but still allow the County to lower millage rates to other customers and increase its total ad valorem tax revenues. (p. 8 of Turnage Phase Two Direct Testimony).

## **II. HISTORY OF THE CASE**

### **NOTICE OF PETITION**

Notice, as required by applicable law, was provided by mailing such notice to each public utility which may be affected and, by publication in *The Clarion Ledger*, a newspaper of general circulation in Jackson, Mississippi, on January 26, 2009. Notice was further given by publication in the following newspapers of general circulation where the facilities are to be located:

- a. *The Meridian Star*, in Lauderdale County on January 28, 2009;
  - b. *The Jasper County News*, in Jasper County on January 28, 2009;
  - c. *The Kemper County Messenger*, in Kemper County on January 29, 2009;
- and

- d. *The Clarke County Tribune*, in Clarke County on January 30, 2009.

## **PARTICIPATION OF PARTIES AND THE PUBLIC UTILITIES STAFF**

Certain members of the Public Utilities Staff ("Staff"), led by the Staff's General Counsel, participated in this Docket as a party through its Litigation Division. Certain other members of the Staff assisted the Executive Director of the Staff ("Executive Director") as members of the Advisory Division to the Commission. The Executive Director implemented safeguard measures to segregate the functions of the Litigation Division from the functions of the Advisory Division.

Additionally, the following parties' Petitions to Intervene were granted:

1. South Mississippi Electric Power Association ("SMEPA");
2. Entergy Mississippi, Inc. ("EMI");
3. Mississippi Chapter of the Sierra Club ("Sierra Club");
4. Entegra Power Group, LLC ("Entegra"), an Independent Power Producer ("IPP");
5. Ergon, Inc. ("Ergon") (an "IPP");
6. Jim Hood, Attorney General of the State of Mississippi ("AGO");
7. Magnolia Energy, L.P. ("Magnolia") (an "IPP");
8. Queshaun Sudbury ("Sudbury");
9. Steve McKenna ("McKenna");
10. International Energy Solutions, Inc. ("IES");
11. KGen Power Management, Inc. ("KGen") (an "IPP"); and
12. Calpine Corporation ("Calpine") (an "IPP").

## **EXPERT CONSULTANTS**

The Staff retained various expert consultants to provide an independent evaluation of MPC's Petition presented in this Docket and to participate in portions of the hearings. The Staff also retained Larkin and Associates, PLLC, ("Larkin") and its accountant, Ralph C. Smith, to audit and review the prudence of pre-construction costs incurred by MPC through March 31, 2009.

The Commission retained the National Regulatory Research Institute ("NRRI"), a nonprofit corporation, through its Executive Director, Scott Hempling, Esq., as an advisory consultant. The Commission also retained Boston Pacific, Inc., ("Boston Pacific") through its principal, Dr. Craig Roach, as an independent party consultant in this Docket. Dr. Roach's role was enlarged in Phase Two to include serving as an Independent Evaluator ("IE") to review and evaluate MPC's proposed Kemper IGCC Project and the various other submitted resource



proposals. Dr. Roach presented written and oral testimony at the hearings held in Phase One and Phase Two of this Docket.

### **ESTABLISHMENT OF PHASE ONE AND PHASE TWO**

A two-phase procedural schedule was established by the Commission on June 5, 2009. The purpose of Phase One was to evaluate MPC's asserted need for a new generation resource by examining MPC's Integrated Resource Plan ("IRP") to ascertain if there existed a gap between forecasted load and resources, and if so, when that gap would likely appear. The purpose of Phase Two was designed to examine available resources to meet the need, as identified in Phase One, to identify the likely costs of those resources and to examine MPC's pre-construction costs.

### **CONSOLIDATION OF DOCKET 06-UN-581**

On April 6, 2009, this Commission consolidated Docket 06-UN-581 with the Docket at hand. MPC began to select, screen and evaluate the various available alternatives to meet its projected need per approval by this Commission in Docket No. 2006-UN-0581 in its December 21, 2006 Order. In Docket 06-UN-0581, MPC was directed and did file quarterly reports with the Staff to facilitate the Staff's and Commission's review of those costs and to facilitate future prudence determinations with respect to such costs.

### **DISCOVERY PERIOD/TESTIMONY**

Since MPC filed its Petition, and in accordance with established scheduling orders, extensive discovery was conducted by the parties to examine all issues in this Docket, including the various resource options proposed by certain parties in this Docket. Over 1,000 data request responses, with subparts, were filed in the record of this Docket. A number of intervenors, including the AGO, SMEPA, the Sierra Club and various IPPs also filed in the record herein pre-filed testimony with supporting documentation; briefs on specific requested issues; responses to various Appendices to certain Commission Orders and other documents.

The Commission and the Staff, utilizing each of its respective consultants, have conducted a thorough evaluation of MPC's Petition. This Commission has considered and evaluated all resource proposals presented herein by the various IPPs, along with all prefiled testimony filed in the record by every party, live testimony, evidence, briefs, post-hearing submissions and all other documents filed in the record hereto. The Commission has also considered the public comments filed in this record. The record contains many confidential

documents which will remain in the record under seal to protect the confidential information of the various participating parties.

The Commission finds that a robust discovery process occurred and the record of this Docket contains substantial evidence to support each of the Commission's findings discussed herein.

### **SCHEDULING ORDERS, PRE-HEARING CONFERENCES, HEARINGS FOR PHASE ONE AND PHASE TWO**

For each Phase of this Docket, a pre-hearing conference was held. In Phase One a pre-hearing conference was held on September 22, 2009, and in Phase Two a pre-hearing conference was held on January 21, 2010. Hearings were conducted on Phase One issues on October 5-9, 2009. Hearings were conducted on Phase Two Issues on February 1-5, 2010. Only limited portions of the hearings were closed to the public and to parties not having an executed confidentiality agreement, which confidential sessions only discussed confidential, proprietary and trade secret information. In addition to hearing from all parties during these hearings, the Commission allowed members of the public to address the issues and to also submit written comments by March 12, 2010.

### **ISSUE PANELS**

In order to fully vet the issues and receive a greater degree of dialogue on the myriad of issues in this Docket, the Commission fully developed the records of Phase One and Phase Two through the utilization of "issue panels". The "issue panels" allowed the Commission to examine all issues in real time dialogue among the various parties, allowing MPC and all parties the opportunity to fully present each of their positions and cases, to fully cross-examine opposing witnesses and to otherwise fully develop the records of this Docket in both phases. The Commission finds that all parties were given a fair and complete opportunity to present their cases and to fully develop the issues in each of the phases discussed herein.

### **PHASE ONE ORDER**

On November 9, 2009, we issued our Phase One Order finding that MPC had shown that the public convenience and necessity requires or will require additional generating capacity and energy to serve its customers. The Commission found that a need for additional capacity and potentially energy of approximately 304 MW to 1,276 MW, was demonstrated by MPC's analysis under the sixteen (16) scenarios and confirmed by the expert consultants for the

Commission and the Staff. However, the Commission had remaining questions (per Appendix A to MPSC's November 9, 2009, Order) regarding when the gap between forecasted load and resources and the need for economic resources would appear in view of the various uncertainties in the projection of load, fuel prices, retirements, grants for new resources, purchased power availability, wholesale sales and environmental regulations.

Based upon the evidence presented in Phase One, we found an indication that MPC has a capacity need beginning in 2014 under all sixteen (16) scenarios. We found this need to be largely driven by the retirements of Watson Units 1-3 and Eaton Units 1-3. We concluded that MPC's need was both reasonable and supported by substantial evidence. The Commission also found there was no credible evidence presented in Phase One to support a finding that MPC had no need or that the Commission should not continue to Phase Two of this Docket. The Commission also found that the record made in Phase One identified specific issues that MPC needed to address in Phase Two, which were delineated in Appendix A to the Commission's November 9, 2009 Order.

The Commission finds that no evidence was presented in Phase Two that justifies any change in the findings of fact or conclusions of law rendered by this Commission in our Phase One Order. Therefore, we hereby adopt in its entirety our Phase One Order as if fully restated herein.

#### **MOTIONS FOR RECONSIDERATION**

On December 15, 2009, this Commission addressed MPC's and Staff's Motions to Remove Item Three (3) of Appendix "A" to our Phase One Order. MPC also moved that Item Four (4) be removed. Entegra opposed such Motions. We amended our Phase One Order to delete the requested Item Three (3) from Appendix "A" and we substituted in lieu thereof a requirement that MPC run additional sensitivity based on a natural gas price projection twenty percent (20%) lower than the lowest natural gas price projection used in the sixteen (16) scenario matrix filed by MPC, with all other variables staying the same.

We removed Item Four (4) from Appendix "A" after concluding that MPC's range of carbon prices adequately covered the requested information and that such requested information would not materially contribute to the issues herein.

## PHASE TWO PURPOSE/RESOURCE OPTIONS

On November 9, 2009, the Commission issued an Order providing guidance for the submission of resource options to the Commission and MPC. Such guidance included the initiation of a formal bidding process calling for bids from third parties interested in supplying power to MPC (hereinafter referred to as independent power producers ("IPP")). The Commission designated Dr. Roach to act as the IE in relation to the bids.

On November 9, 2009, the Commission supplemented the procedures for the administration of Phase Two of this Docket. An opportunity for intervention in this Docket was reopened in Phase Two and allowed interested entities and persons an opportunity to submit competing resource proposals for the Commission and our independent expert, Dr. Roach, to compare and evaluate against MPC's proposal and to report to the Commission. A list of minimum bid requirements applicable to all bidders in Phase Two was established by the Commission on December 1, 2009.

The various procedural schedules created by orders of the Commission established, *inter alia*: i) deadlines for filing direct and rebuttal testimony on Phase Two issues; ii) deadlines for filing resource evaluation reports and analyses; iii) a pre-hearing conference; iv) hearing dates for Phase Two; v) a panel procedure for use during the hearing; vi) a briefing schedule for post-hearing issues; and vii) a decision date by this Commission.

The Commission finds that the procedural schedule provided adequate time for all parties of record to conduct discovery and to conduct such investigation and examination of the various resource options proposed by the parties.

With respect to Phase Two, the Commission's Procedural Order provided:

Phase Two will address what resources are available to meet the need determined in Phase One, and what are the likely costs of those resources. Resources include, but are not limited to, utility-built resources, purchased power (including power purchased through competitive bidding), and demand-side resources. Parties may propose alternatives to meet the need established in Phase One. Any party wishing the Commission to take seriously its position on resource options for the territory served by MPC should submit testimony on the technology, timing, and cost of those options. Simply stating "no" or "not now" to another party's proposed resource does not assist the Commission in meeting its responsibilities.

The IE filed his report (confidential version on January 25, 2010, and redacted version on January 27, 2010) with the Commission. The IE reported that three (3) independent bidders responded to our invitation for credible, detailed resource proposals as alternatives to the Kemper IGCC Project. All of the bids utilized natural gas to produce electricity in a conventional combined cycle power plant. Two (2) of the three (3) bidders brought indicative offers for fixed-price natural gas supply for ten (10) years. We had previously stated an interest in fixed-price natural gas supply to protect Mississippi ratepayers from price volatility.

The purpose of the IE was to perform an independent analysis of the cost and performance of the Kemper IGCC Project as compared to the cost and performance offered in the proposals by the three (3) bidders.

We ordered the IE to compare Kemper and the Independent Bids under twenty (20) scenarios for the future.<sup>3</sup> The twenty (20) scenarios were created by combining five (5) different natural gas price forecasts with four (4) different views on the likely price for carbon dioxide emissions. The IE's report reflects his cost and performance comparisons for the twenty (20) scenarios.

#### **POST-HEARING PHASE TWO BRIEFING REQUEST FOCUSED ON RISK PROTECTION MEASURES**

Subsequent to the hearing of Phase Two, the Commission issued an Order on February 11, 2010, which requested the parties to address certain questions contained therein for Phase Two by March 12, 2010. Certain parties in this Docket filed post-hearing submissions responding to our inquiry. MPC, through its brief, presented a new proposal to this Commission which contained what it described as customer protection measures, including, but not limited to, a provision if cancellation of the Kemper IGCC Project occurred, cost cap(s), performance penalty measures related to the TRIG gasifier and an operational and cost performance-based plan. The performance plan contained indicators that would measure MPC's allowed return based upon actual performance as compared to estimates. MPC submitted on March 26, 2010, a Revised Rate Schedule "CNP" for the Commission's consideration. This Revised CNP reflected five (5) different cost and performance variables: Project Availability, Project Capacity, Project Heat Rate, Lignite Revenue Requirement and Project Revenue Requirement.

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<sup>3</sup> MPSC Order of November 9, 2009, and MPSC Order of December 15, 2009.

## **POST-HEARING MOTIONS**

On April 6, 2010, Entegra and Calpine filed a Motion seeking leave to comment upon MPC's proposed rate cap and related customer protection proposals and MPC's new proposed Rate Schedule CNP filed on March 26, 2010, submitted as a part of MPC's post-hearing brief filed on March 12, 2010.

MPC filed its response to Entegra and Calpine's Motion, *supra*, on April 9, 2010. On April 20, 2010, during an open meeting, the Commission ruled that Entegra's and Calpine's Motion was granted and that their comments, along with MPC's response thereto, would be included in the record of Docket 09-UA-14.

## **POST-HEARING CONFIDENTIAL SUPPLEMENT TO POST-HEARING SUBMISSION**

On April 6, 2010, Entegra filed a Supplement to its post-hearing submission, specifically Exhibit Three (3), which supplemented its proposal submitted in response to our Question 3 of Appendix A to the Commission's Order for post-hearing information issued on February 11, 2010.

## **III. JURISDICTION**

MPC is a public utility as defined in Miss. Code Ann. Section 77-3-3 (d)(i) and holds a Certificate to render electric service issued by the Commission in Docket No. U-99, as supplemented, authorizing its operations in certain areas of the twenty-three (23) counties of southeastern Mississippi. MPC serves about 186,000 retail customers in 123 municipalities and unincorporated communities in southeastern Mississippi. MPC also provides full-requirements electric service at wholesale to SMEPA at certain wholesale delivery points on behalf of numerous Electric Power Associations. MPC also provides full-requirements electric service at wholesale to East Mississippi Electric Power Association at certain wholesale delivery points and to the City of Collins, Mississippi. Through these wholesale electric service contracts, MPC indirectly provides full requirements for capacity and energy to about 175,000 additional customers in Mississippi.

MPC is a member of a pooling arrangement within the Southern Electric System ("SES"). The members (MPC, Alabama Power Company, Georgia Power Company, Gulf Power Company and Southern Power Company ("the Southern Operating Companies")) operate as one integrated system by their adherence to an agreement approved by the FERC. MPC is



responsible under the agreement to meet the capacity and energy needs of its own customers and is unable to rely on the power pool to meet that need.

The Commission finds that it has jurisdiction over the parties and subject matter herein. The Commission also finds that MPC has adequately complied with applicable law and the Commission's applicable rules regarding a filing for a Facilities Certificate and has provided information relevant to and necessary for this Commission to evaluate its Petition, as described herein.

#### **IV. APPLICABLE LAW**

A. Miss. Code Ann. §77-3-5 states that:

Subject to the limitations imposed in this article and in accordance with the provisions hereof, the public service commission shall have exclusive original jurisdiction over the intrastate business and property of public utilities.

B. MPC's Petition before us asks this Commission to issue to MPC a Facilities Certificate pursuant to the terms of Miss. Code Ann. §§77-3-11, 77-3-13 and 77-3-14. The pertinent provisions of these collective statutes are set forth below:

Miss. Code Ann. §77-3-11 provides in pertinent part, as follows:

(2) No person shall construct, acquire, extend or operate equipment for manufacture, generating, transmitting or distributing electricity for any intrastate or interstate sale to or for the public for compensation without first having obtained from the commission a certificate that the present and future public convenience and necessity require or will require the operation of such equipment or facility.

Miss. Code Ann. §77-3-13 provides in pertinent part, as follows:

(3) In all other cases, the commission shall set the matter for hearing, and shall give reasonable notice of the hearing thereon to all interested persons, as in its judgment may be necessary under its rules and regulations, involving the financial ability and good faith of the applicant, the necessity for additional services and such other matters as the commission deems relevant. The commission may issue a certificate of public convenience and necessity, or refuse to issue the same or issue it for the establishment or construction of a portion only of the contemplated plant, route, line or system, or extension thereof, or for the partial exercise only of such right or privilege, and may attach to the exercise of the rights granted by the certificate such reasonable terms and conditions as to time or otherwise as, in its judgment, the public convenience, necessity and protection may require, and may forfeit such

certificate after issuance for noncompliance with its terms, or provide therein for an ipso facto forfeiture of the same for failure to exercise the rights granted within the time fixed by the certificate.

(4) The commission shall, prior to issuing a certificate of public convenience and necessity to a public utility for any new construction, extension or addition to its property, ascertain that all labor, materials, property or services to be rendered for any proposed project will be supplied at reasonable prices. The commission shall, after issuance of a certificate for facilities estimated to cost Five Million Dollars (\$5,000,000.00) or more or estimated to cost an amount equal to one percent (1%) of the rate base allowed by the commission in the utility's last rate case, whichever is greater, assign the public utilities staff to monitor such projects, to inspect periodically construction in progress, and to report to the commission any variances or deviations as found, if any, and to file progress reports thereon with the commission. Such public utility shall file a similar report with the commission at such times and in such form as the commission shall require, including any substantial changes in plans and specifications, cost allocations, construction schedule and funds available to complete the project.

Miss. Code Ann. §77-3-14 provides in pertinent part, as follows:

(1) Notwithstanding the provisions of Section 77-3-11, Mississippi Code of 1972, and Section 77-3-13, Mississippi Code of 1972, no public utility or other person shall begin the construction of any facility for the generation and transmission of electricity to be directly or indirectly used for the furnishing of public utility service in this state, even though the facility be for furnishing the service already being rendered, without first obtaining from the commission a certificate that the public convenience and necessity requires, or will require, such construction.

(3) In acting upon any petition for the construction of any facility for the generation of electricity, the commission shall take into account the utility's arrangements with other electric utilities for interchange of power, pooling of plant, purchase of power and other methods for providing reliable, efficient and economical electric service.

(4) As a condition for receiving such certificate, the utility shall file an estimate of construction costs in such detail as the commission may require. The commission shall hold a public hearing on each application, and no certificate shall be granted unless the commission has approved the estimated construction costs.

(5) The commission shall maintain an ongoing review of such construction as it proceeds, and the applicant shall submit at such times

as the commission shall require during construction a progress report and any revisions in the cost estimates for the construction.

According to applicable case law, any terms or conditions placed upon the issuance of the Certificate by the Commission must be specified at the time the Commission issues the Certificate.

C. Miss. Code Ann. §§77-3-33 and 77-3-43 address the “used or useful” requirement. Miss. Code Ann. §77-3-33 provides in pertinent part, as follows:

(1) No rate made, deposit or service charge demanded or received by any public utility shall exceed that which is just and reasonable. Such public utility, the rates of which are subject to regulation under the provisions of this article, may demand, collect and receive fair, just and reasonable rates for the services rendered or to be rendered by it to any person. Rates prescribed by the commission shall be such as to yield a fair rate of return to the utility furnishing service, upon the reasonable value of the property of the utility used or useful in furnishing service.

Miss. Code Ann. §77-3-43 provides in pertinent part, as follows:

(1) In regulating the rates of any public utility subject to the provisions of this chapter, the commission shall, on hearing after reasonable notice, ascertain and fix the rate base of the property of the public utility in such manner as to be fair both to the public utility and to the consumer when the same is relevant or material to the exercise of the jurisdiction of the commission. The commission shall make readjustments from time to time, and ascertain the cost of all new construction, extensions and additions to the property of every public utility. In arriving at such rate base, the commission shall give due consideration to: (a) the reasonable original costs of the property used and useful, or to be used and useful within a reasonable time after the test period; (b) the portion of the cost which has been consumed by previous use recovered by depreciation expense; (c) the allowance for funds used during construction, not to exceed on borrowed funds the true net interest cost of such funds, computed according to the actuarial method, and, on the equity component thereof, a rate of return granted on common equity in the last rate proceedings before the commission, or if such rate has not been established within the preceding three (3) years, then the average rate of return actually earned on equity during the preceding three (3) years; (d) any other elements deemed by the commission to be material in determining the rate base for rate-making purposes.

D. The Base Load Act (the "Act") offers the Commission an alternate method of cost recovery on certain described base load generation. Miss. Code Ann. §77-3-101 describes the policy of the State of Mississippi:

The Legislature finds, determines and declares the following to be in the public interest and the policy of the State of Mississippi:

- (a) To promote and foster the prudent, timely expansion and construction of, and long-term availability of, adequate and appropriate levels of electric generation by electric public utilities, as described in Section 77-3-3(d)(i), with diversity as to the means of such generation and as to the sources of fuel for such generation, including nuclear fuel, coal and other reliable fuel sources;
- (b) That such availability is essential to the orderly and effective operation of a reliable electric system in this state and will be vital to economic stability and growth within the State of Mississippi and to the public interest, and that the generation and related operations of electric public utilities are affected with the public interest;
- (c) That new base load electric generating technologies are and will continue to be important in the planning and development of public utility electric generation, and that the State should take advantage of advances in nuclear, coal and other technologies, including technologies that reduce or minimize, or that facilitate the future reduction or minimization of, regulated air emissions;
- (d) To take advantage of financial and other incentives afforded and provided by the federal Energy Policy Act of 2005 for the construction of certain electric generating facilities and any federal or state legislative or other incentives that may from time to time become available and to require that all such incentives be utilized for the benefit of such generating facilities;
- (e) To promote and foster economic development; and
- (f) To promote and foster the State of Mississippi's energy independence by encouraging the development and utilization of fuel sources derived from the State of Mississippi's natural resources.

E. The Commission is also mindful of applicable legislative policy set out in Miss. Code Ann. §77-3-2, as follows:

- (1) The Legislature finds and determines that the rates, services and operations of public utilities as defined in this title are affected with the public interest and that the availability of an adequate and reliable service by such public utilities to the people, economy and government of the State of Mississippi is a matter of public policy. The Legislature hereby declares to be the policy of the State of Mississippi:
  - (a) To provide fair regulation of public utilities in the interest of the public;

- (c) To promote adequate, reliable and economical service to all citizens and residents of the state;
- (f) To foster the continued service of public utilities on a well-planned and coordinated basis that is consistent with the level of service needed for the protection of public health and safety for the promotion of the general welfare.

## **V. SCENARIOS, FACTORS AND ASSUMPTIONS**

MPC expressed concerns to this Commission with the potential for increased dependence on, and exposure to the price volatility of, natural gas to meet its generation needs. Also, MPC testified that it recognized the potentially significant long-term implications for load, coal unit retirement and natural gas prices inherent in the adoption of carbon legislation and reasonable energy standards.

MPC's 2009 IRP used a basic sensitivity matrix to capture what it considered to be a reasonable range of potential outcomes to account for these impacts, meaning that only fuel prices and carbon compliance costs were varied in each planning case and were not interdependent. However, in its 2010 IRP, MPC utilized what it described as a more robust approach in its planning analysis to evaluate these strategic considerations. MPC transitioned to the use of fully integrated scenario planning to assess the impacts of carbon legislation on the national economy.

A base set of scenarios was developed by MPC for the 2010 IRP. Four (4) fuel scenarios were constructed using a reasonable range of gas prices. Four (4) climate-change legislative scenarios were modeled for each of the four (4) fuel scenarios. This resulted in sixteen (16) individual, internally-consistent outlooks of correlated fuel prices and carbon compliance costs, electricity demand and prices, and capacity and energy mixes.

Future events related to domestic and global supply and demand, such as the volume of domestic conventional and unconventional gas available as well as LNG imports and Alaska gas, create a potential for ranges of fuel supply. Therefore, natural gas resource assumptions were developed by MPC in its 2010 IRP which described three (3) scenarios that resulted in Low, Moderate and High natural gas price forecasts. In addition, supply/demand relationships among coal, oil, and natural gas were correlated within each scenario such that a change in one of these markets impacted the others within the scenario.

These three (3) fuel price scenarios assumed long-term supply and demand market equilibrium. However, to account for normal supply and demand imbalances that actually occur regularly in the natural gas market, a fourth (4th) forecast, Moderate with Volatility, was developed by MPC that reflected recent historic market imbalances and applied the price impacts of these imbalances to the Moderate fuel price forecast.

Carbon compliance scenarios were chosen by MPC to span the likely range of CO<sub>2</sub> legislation when considering multiple factors, including economic impact and other likely cost-containment provisions. The CO<sub>2</sub> scenarios were named according to the CO<sub>2</sub> compliance cost estimates beginning in 2015 (stated in 2008 dollars), which increase annually at five percent (5%) above inflation through the modeling horizon. The non-zero CO<sub>2</sub> scenarios analyzed in MPC's 2009 IRP started at ten dollars (\$10) and twenty dollars (\$20)/ton of CO<sub>2</sub>. An additional case was added to MPC's modeling process for 2010 assuming thirty dollars (\$30)/ton of CO<sub>2</sub> compliance costs. This thirty dollar (\$30)/ton case addressed a specific request of Boston Pacific to perform such an analysis, given that CO<sub>2</sub> prices in the European market recently reached almost sixty dollars (\$60)/ton. Also, there was discussion at the hearing that legislation resulting in a higher CO<sub>2</sub> price path could occur.

MPC employed sophisticated multi-sector macro-economic modeling tools to simulate the scenarios. CO<sub>2</sub> legislation and fuel prices can impact many sectors of the economy (e.g. electricity, transportation, manufacturing, industrial, commercial, and residential); therefore, these and other sectors had to be considered. CO<sub>2</sub> legislation places a cost on CO<sub>2</sub> and other greenhouse gas (GHG) emissions. CO<sub>2</sub> legislation and higher fuel costs impact the economy by increasing energy prices and by changing the energy decisions of consumers and businesses. They will also shift generation investment choices through retirements of existing capacity (primarily base load coal), installation of new GHG control technologies, and the construction of new replacement capacity. Higher CO<sub>2</sub> and fuel costs generally increase electricity prices and lower economic activity, therefore decreasing growth in electricity sales. All of these interrelated factors, including reductions to load growth, were considered in MPC's scenario modeling process.

MPC's factors upon which it justifies the Kemper Project and under which the sixteen (16) scenarios used in MPC's 2010 IRP were analyzed, are as follows:



## **Factors**

- Total Cost of Kemper w/o subsidies of \$2,695.7 million (Exhibit TOA-1, p. 6, Table 2 of Anderson Phase Two Direct Testimony).
- Total pre-commercial subsidies of \$296.0 million (Exhibit TOA-1, p. 6, Table 2 and Exhibit TOA-1, Appendix B, confidential of Anderson Phase Two Direct Testimony).
- Post operation capital costs of \$47 million (p. 9 of Anderson's Phase Two Rebuttal Testimony).
- Post-commercial subsidies of \$1,372 million in nominal dollars (Exhibit FT-11 of Turnage Phase Two Direct Testimony).
- Average heat rate of 11, 708 Btu/kWh (Exhibit TOA-1, p. 6, Table 1 of Anderson Phase Two Direct Testimony).
- Availability factor starting at (59.05%) and increasing to (89.3%) by 2021 (Exhibit TOA-1, Appendix M of Anderson Phase Two Direct Testimony).
- Heat content of lignite 5,290 Btu/lb (Response to MPSC 4-1a).
- Lignite value (Exhibit TOA-1, Appendix S, confidential of Anderson Phase Two Direct Testimony).
- Carbon capture of sixty-five percent (65%). (Exhibit TOA-1, p. 18 of Anderson Phase Two Direct Testimony).
- By-product revenues in the range of \$786.543M and \$850.984 (Response to MPSC 4-1a).
- Increased contingency (p. 16 of Anderson's Phase Two Direct Testimony).

On December 15, 2009, we amended our Phase One Order and required MPC to run additional sensitivity based on a natural gas price projection twenty percent (20%) lower than the lowest natural gas price projection used in the sixteen (16) scenario matrix filed by MPC, with all other variables staying the same. MPC testified that this "random" low natural gas price projection was lower than projections by the Energy Information Administration.

This led to a comparison of the Kemper IGCC Project and the independent bids by the IE and by MPC using twenty (20) different scenarios which were created by combining five (5) different natural gas price forecasts with four (4) different views on the likely price for carbon dioxide emissions.

## **VI. CONSIDERATION OF ALTERNATIVES TO KEMPER IGCC PROJECT**

An electric utility typically meets its capacity and energy needs from one (1) or a combination of resource options that fit into three (3) categories: i) Demand Side Management ("DSMs") and energy efficiency ("EE") programs; ii) wholesale capacity and energy purchases; and iii) self-build generation.

The evidence presented by MPC in the record shows that MPC's current DSM and EE programs are inadequate to fully meet its needs. (The Commission is not here making a finding that those current programs are themselves adequate programs, or that MPC could not achieve

more DSM and EE, cost effectively, with additional programs or modified management of current programs. Those issues will be addressed in Docket No. 2010-AD-2. The Commission is rather taking the current programs for what they are, and finding that by themselves they are not sufficient to meet the company's needs,) MPC showed that it evaluated the other two (2) alternative options in the following manner:

First, MPC selected, screened and evaluated the various self-build alternatives available to see which, if any, would meet the identified need in a prudent and cost-effective manner. This process was approved by orders of this Commission in Docket No. 2006-UN-0581. To determine the best alternative, among those presented, for meeting the generation needs identified, MPC, with the assistance of Southern Company Services (SCS), began by identifying the types of generation technology that were reasonably available in the relevant time frame. A multitude of qualitative and quantitative factors were utilized to determine whether a new resource or a market solution best fits MPC's need. Comparisons among the various alternatives considered issues such as technology availability, reserve levels, generation mix, fuel diversity, capital spending, on-going O&M costs, environmental issues, risk management, construction lead times, and the availability of financial incentives.

Second, a detailed economic analysis was conducted by MPC to compare the cost of the self-build alternatives identified in the screening process to determine the overall least-cost option based upon the net present value of revenue requirements over the life of each alternative. All alternatives were scaled to the same net summer peak capacity so that each alternative could be compared on a dollar per kW basis. The forty (40) year revenue requirements were then discounted at MPC's after-tax weighted average cost of capital to calculate a cumulative net present value for each alternative. MPC's economic evaluation and analysis indicated that the Kemper IGCC Project is the best self-build generation resource alternative available to meet MPC's identified need in 2014, and is in the overall best interest of customers (except when gas prices are low), assuming all of MPC's cost estimates and performance estimates are achieved, and assuming the use of a forty (40) year time horizon.

Third, throughout the screening and evaluation process, MPC issued two separate Invitations for Indicative Proposals of Solid Fuel-Fired Generating Capacity in 2007 and 2008, to test the wholesale market for viable generation alternatives that could adequately meet MPC's need and that might compare favorably to the Kemper IGCC self-build alternative. The

conforming proposals from both invitations were compared to MPC's Kemper County IGCC Project and an economic analysis similar to that used to compare its other self-build alternatives was performed. MPC concluded that the IGCC self-build alternative was the most cost-effective solid-fuel option available, and that no wholesale market offerings provided better value. Evidence presented by intervenors and by Dr. Roach at the hearings in Phase One suggested that MPC's Invitations for Indicative Proposals were too limiting and that they indicated a bias for solid-fuel base load capacity to the exclusion of natural gas options available in the wholesale market. Based upon all of the evidence presented regarding the requests for indicative proposals, the Commission determined that it was prudent and in the public interest to allow market participants to submit resource options in Phase Two pursuant to a Commission-sanctioned and monitored process that included the use of an IE. While MPC questioned its usefulness, no party formally objected to the implementation of this additional market analysis.

Based upon the Commission's findings in Phase One, MPC was directed to update its evaluation of self-build alternatives and its Kemper IGCC proposal. Intervening parties were invited to propose resource options to compare to MPC's self-build option. Importantly, this Commission, in its order establishing the minimum bid requirements for resource proposals, required that parties submitting a natural gas resource option must indicate if the party was willing to provide protection measures against price volatility associated with natural gas fired generation. Any party wishing to provide price stability or to fix the price of natural gas during the duration of the contract period could do so in any manner it deemed necessary. All of these resource options were to be evaluated across MPC's sixteen (16) scenarios of gas price and carbon compliance forecasts that were found acceptable by the Commission in the Phase One Order. In addition, this Commission directed MPC to conduct the evaluation of proposals on behalf of the Commission and directed the IE, Boston Pacific to monitor and evaluate the evaluation process undertaken by MPC. In addition, Boston Pacific performed its own evaluation utilizing its own methodology. Finally, in the order, the Commission required that the evaluations include a sensitivity for fuel prices set twenty percent (20%) lower than those contained in MPC's low natural gas forecast.

On December 7, 2009, MPC submitted its updated cost estimate for the Kemper IGCC Proposal, and the results of its updated 2010 IRP and its self-build alternative economic

evaluation. Also, on December 7, 2009, Entegra, KGen, and Calpine<sup>4</sup> submitted multiple purchase power proposals (PPAs) with terms ranging from ten (10) years to twenty-five (25) years in duration and offering different fuel arrangements. All of the PPA bids received were from natural gas combined cycle facilities. In addition, some of the IPPs offered one (1) or more of the generating assets in their portfolios to MPC for purchase. In response to the Commission's request, two (2) IPPs included offers to MPC that purported to provide fuel price protection for MPC's customers for ten (10) years commencing in 2014. The specific terms of all of the proposals are confidential and will not be restated in this Order.

Each individual proposal, including the Kemper IGCC Project, was evaluated by MPC at this Commission's direction and by the Commission's IE, Boston Pacific. During the evaluation period, MPC and Boston Pacific, shared information and collaborated to ensure consistency in input data and identify differences in methodology and results. At the conclusion of the evaluation period, on January 25, 2010, MPC and Boston Pacific each submitted separate and independent evaluation reports into the record prior to the Phase Two hearings. No party objected to the process established for the solicitation of resource options, and no party objected to the use of Dr. Roach and Boston Pacific, as the IE of the bids or to the role of MPC in the bid evaluation process. The Commission finds that the market solicitation process utilized by the Commission in this proceeding afforded any interested party ample opportunity to participate in this proceeding and to submit a competitive offer for an asset sale or PPA. Moreover, this Commission finds that the use of the IE to review MPC's evaluation methodology and to conduct its own independent evaluation created a robust and transparent process that served the public interest in this proceeding. The Commission's use of this solicitation and evaluation process was implemented in an attempt to ensure overall benefits to customers.

MPC's economic evaluation used the Fill In Method to compare the IPP bids to both the project and MPC's natural gas combined cycle self-build alternative. MPC's Evaluation Report results indicated that the Kemper IGCC Project was more economic than the PPA offers in all but one (1) of the sixteen (16) scenarios analyzed. The asset purchase offers compared slightly better than the PPAs, but the Kemper IGCC Project was still more economic in twelve (12) of the sixteen (16) scenarios analyzed. MPC excluded the IPP fixed gas bids from its detailed evaluation because after further inquiry, it determined that the fixed gas bids were not credible.

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<sup>4</sup> Although a party to the proceeding, Magnolia did not submit a resource proposal for consideration in Phase Two.

Boston Pacific's Bid Evaluation used two (2) different evaluation methods to provide the Commission with what it referred to as long-term and short-term strategic preferences. Other strategic preferences presented in Boston Pacific's Evaluation Report include excluding the fixed gas bids, including only bids with terms of twenty (20) years or more, including only asset purchase offers, and including only plants that are located in Mississippi. Additional sensitivities assuming a ten percent (10%) and twenty percent (20%) Kemper cost overrun were also included. Boston Pacific's Evaluation Report concluded that the "winner" depended upon the Commission's strategic preference for long-term or short-term alternatives and its judgment of the credibility of the cost parameters of the various proposals.

In this proceeding, it was necessary to compare the forty (40) year Kemper Project with IPP bids of lives varying from ten (10) to twenty-five (25) years. MPC's Fill-In Method used a self-build alternative at the expiration of each bid to "fill in" the remaining years of the evaluation period. According to MPC witnesses, this method ensured that each resource alternative is treated consistently over the entire forty (40) year evaluation period. Boston Pacific's Extension Method assumed that the submitted bids continue to be selected by escalating the bid costs where appropriate to "extend" the term of the bid to fill in the remaining years of the evaluation period. Both methods compared all of the bids over a forty (40) year period, and both produced results that concluded that Kemper was the best economic option for customers in the overwhelming majority of scenarios and across the many strategic preferences.

At the hearings, a number of issues were raised by MPC witnesses concerning the BP Extension Method. It was first claimed that a weakness of the BP Extension Method was that it assumed that the bid was available all forty (40) years at the same terms and conditions as originally proposed. MPC claimed this assumption ignored the possibility that a bidder may often be willing to provide a lower bid in the short-term that the bidder may be unwilling to continue throughout the entire evaluation period, and, therefore, has the potential effect of unfairly favoring lower bids. MPC further claimed that the Extension Method also ignored the possibility that lower cost options were available at the expiration of the bid. Instead, the terms and cost of each bid are extended for forty (40) years.

Boston Pacific also provided results from a second evaluation using the Modified Annuity Method. This method differed from the Fill In Method and Extension Method in that it did not require that all of the resources be evaluated over forty (40) years. The results of this

evaluation greatly depended upon whether the fixed gas proposals were included in the analysis. The results of the BP Modified Annuity Method indicated that the project was less economic than the “fixed gas” proposals in the majority of scenarios, but still remained competitive with the other PPA and asset purchase bids when the fixed gas proposals were excluded. Therefore, Dr. Roach testified that a decision for a short-term solution very much depended upon the Commission’s judgment of the credibility of the fixed gas proposals.

MPC objected to the use of Boston Pacific’s Modified Annuity Method in the evaluation. Boston Pacific justified the use of its Modified Annuity Method as a tool to analyze the best short-term option available for those instances where the Commission wishes to “lock in the early-year savings and worry later about what comes next.” MPC claimed the Modified Annuity Method was fundamentally flawed because it ignored and failed to address what happens after the shorter-term option expires. MPC’s witnesses also claimed that the BP Modified Annuity Method only accounted for the first ten (10) years of energy savings provided by Kemper and completely ignored the savings to customers provided throughout the remaining life of the Plant. MPC claimed that such a short-term approach was not an accepted industry practice and could never justify the construction of a base load facility, because long-term benefits that these facilities provide are heavily discounted or ignored in the analysis. Only the costs were considered.

MPC also claimed that Boston Pacific’s entire evaluation erroneously excluded a number of costs associated with the bids, thereby understating the true cost of the bids. These included the exclusion of certain transmission improvement costs necessary to deliver firm service to MPC, certain equity costs necessary to maintain MPC’s capital structure and credit quality if an IPP option was selected, and certain pre-construction costs that were prudently incurred to evaluate all options available to meet the need. The Commission takes notice that many of these cost issues have been the subject of controversy across the country in similar proceedings for years, but have never been specifically addressed in Mississippi.

The Commission finds that given the similarity in results between MPC’s Fill In Method and Boston Pacific’s Extension Method,<sup>5</sup> the primary issue in the evaluation is the relative credibility of the fixed gas proposals and the Kemper cost and performance estimates.

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<sup>5</sup> This Commission recognizes that Boston Pacific’s Extension Method and Modified Annuity Method are variations of more well-established modeling techniques. By its findings in this Order, the Commission is not adopting Boston Pacific’s methodologies for use in future proceedings.



Considerable testimony and evidence was presented both in favor of and against the inclusion of the fixed gas bids. The IPPs claimed that such an arrangement could be accomplished through a financial institution although all of the parties agreed that a ten (10) year fixed gas contract had not been done in the past and was entering “new territory.” MPC testified that despite its best efforts to date, a fixed gas contract for the term proposed was impossible to execute because there were no willing counterparties and the credit risks were too high. MPC also testified that the potential cost, if available, to secure a ten (10) year fixed gas deal could be over \$1 billion for only ten (10) years of fuel price protection.

Dr. Roach and other witnesses also raised credibility questions concerning the Kemper IGCC Project. Testimony was heard regarding the reasonableness of MPC’s construction and operation cost estimates and the potential for cost overruns based upon cost overruns experienced with other utilities in other jurisdictions. Dr. Roach testified that a way for MPC to increase the credibility of the Kemper proposal was to offer cost caps and guarantees to protect customers from the risk of significant cost overruns and underperformance.

## **VII. RISKS OF KEMPER IGCC PROJECT**

The Kemper IGCC Project represents one of the largest electric generation projects ever proposed in our State and if built, would become one of the first IGCC plants in commercial operation in the world with carbon capture and using lignite for the generation of electricity. Several parties emphasized, and this Commission is concerned about, potential risks to customers, and to MPC, posed by the Kemper IGCC Project, including capital cost risk, performance risk, first of a kind technology risk, project cancellation risk and the potential loss of federal incentives. These risks were explored at the hearings of Phase Two. Several parties, including the Sierra Club’s witness, testified that because the TRIG technology had never been used at the scale proposed, the risk of failure was largely unknown and, under MPC’s proposal, this risk would be borne by customers.

### **A. Construction Cost Uncertainties**

#### **1. Summary of MPC’s Estimates**

As of the hearing, MPC estimated Kemper’s capital costs at \$2.695 billion, not counting the cost reduction in capital costs MPC anticipates from \$296 million in hoped-for government subsidies. (Anderson Direct Testimony, Exh. TOA-1 at p. 6). The capital cost estimate is based

upon MPC's request of recovery of the financing costs on CWIP. Additional estimated capital costs include:

- lignite mine acquisition and ownership costs (\$XX-\$XX million); IPP Brief (Tr. at p. 1162) (Tr. at p. 1352) (Confidential<sup>6</sup> session.);
- post-construction expenditures for plant performance (\$47 million);
- ratepayer-funded finance costs (\$354 million)<sup>7</sup>;
- possible pipeline to transport CO<sub>2</sub>. (Cost is undetermined. Tr. at p. 1239, p. 1352) (Confidential session) (Tr. at pp. 1235-1239; MPC Response to Entegra Data Request 4-6; Tr. at pp. 1241-1242);
- possible need to develop a 500 acre tract of land near the Plant for additional ash and salt storage. (Tr. at pp. 1260-1266; MPC Response to Entegra Data Request 1-23); and
- rights-of-way for the five (5) miles of natural gas pipeline and for the thirty (30) miles of gray water pipeline. (Tr. at pp. 1273).

These cost estimates are subject to multiple uncertainties. MPC's original Petition insisted that the ratepayers bear the risks associated with these uncertainties. The Commission next details these unknowns. Because of these uncertainties, the Commission finds that MPC has not carried its burden of proving that its proposal is in the public interest.

In the area of construction cost, there are two (2) general sources of uncertainty and ten (10) specific uncertainties.

#### **2.a. Two (2) General Uncertainties**

**(i) Only ten percent (10%) of the construction costs are "known"; even these "known" costs are uncertain:** MPC's witness stated that as of the hearing, only ten percent (10%) of the estimated construction cost was "known." The term "known" is an MPC label that does not equate to "confirmed" or "fixed." A cost achieves this designation if there is a contract, memorandum of understanding or a letter of intent; or if MPC has received bids in response to a request for proposals. Ninety percent (90%) of the current cost estimates, therefore, are internal MPC estimates lacking this type of backup. (Tr. at p.1138). For example, MPC does not have

<sup>6</sup> The capital costs of owning a lignite mine is included in the projected-fuel adjustment charges. (Tr. at p. 1352).

<sup>7</sup> MPC stated that construction is possible only if ratepayers pay for the cost of capital employed during the construction phase. According to MPC, the cost of capital, if applied to 100% of the investment dollars, is \$354 million. This \$354 million is not part of the \$2.4 billion construction cost figure. (See Tr. at pp. 1238-39; MPC Responses to Entegra Data Request 4-6.

fixed-price contracts in place for the construction of the Kemper unit, for the five (5) miles of natural gas pipeline or the thirty (30) miles of gray water pipeline for the water system.

**(ii) Since MPC filed its petition, construction cost estimates have risen by nine percent (9%):** Between April 2009 and December 2009, MPC has increased its estimate of Kemper construction cost by over nine percent (9%), from \$2.465 billion to \$2.695 billion (these numbers would be reduced by the government-provided incentives). In pre-filed testimony and at hearing, MPC's witness described the reason for each element of this increase. (pp. 15-16 from Anderson Phase Two Direct Testimony). The reasons included changes in plant design, as well as increases in cost estimates for equipment, labor, and materials. There was also an increase in the contingency. None of those descriptions persuade the Commission that these increases were unique to that April-to-December period, and therefore unlikely to recur. Other than MPC's assertions of conservatism (which assertions also accompanied the original \$2.465 estimate which preceded the nine percent (9%) increase there is no record support, for the claim that the numbers will not increase. The Commission therefore finds there is a risk of construction cost increases.

MPC defended the cost increases as necessary to produce economic benefits. This argument does not change the Commission's concern; the question is not whether the cost increases are justified but whether the Commission can rely on MPC's cost estimates as evidence of the final Kemper costs. With the cost estimates already increasing this much this quickly, and with most of the costs still to be negotiated and firmed, and most of the detail design still to occur, the risk of additional cost is too large to visit entirely on ratepayers.

The uncertainty affects not only construction cost, but construction timing. Construction delays beyond the 2014 in-service date would add to the ultimate ratepayer cost, in light of MPC's insistence on recovering, during the construction period, the carrying costs on (i.e., return on) 100% of its construction work in progress (CWIP). The longer the construction period, the longer ratepayers must pay for this return (without receiving value in the form of Kemper's electrical output).

## **2.b. Nine (9) Specific Uncertainties**

**(i) Plant design:** Construction cost depends on design, but Kemper's design is not complete. Concerning the gasification island, MPC's witness stated ". . . we do not have hardly any of the detailed design done." Only after this detailed design is done would MPC seek bids

from contractors. (Tr. at pp. 1268-70). Until those bids come in, MPC's estimates are only estimates.

**(ii) Ash landfill storage costs:** The combustion of lignite produces ash, which requires storage. That storage must comply with environment rules. MPC bases its costs on a sixty-five (65) acre storage unit, which would store the ash as well as salt produced during water purification. The cost estimate applies to the first five (5) years of Kemper operation only. An alternative storage concept posed by MPC is the development of 500 acres, an activity which is not covered by its cost estimate. The cost of the additional acreage could range from twenty (20) to \$100 million, a range made necessary by the uncertainty concerning EPA regulations affecting ash storage. (Tr. at pp. 1260-66; MPC Response to Entegra Data Request 1-23).

**(iii) Pipelines and related rights of way:** There are no arrangements in place to acquire rights of way for three (3) pipelines critical to Kemper's operation: five (5) miles for natural gas pipeline (to carry an amount of gas capable of fueling the plant's full capacity), thirty (30) miles for the gray water pipeline from Meridian to the plant, and additional land for pipeline to carry by-products which MPC hopes to sell, the revenues from which sales are part of MPC's cost estimates. MPC has not acquired the necessary rights of way for any of these assets. (Tr. at pp. 1272-73). The costs of these acquisitions and the related pipeline construction are also unknown.

**(iv) Lignite leases and mine acquisition:** MPC's arguments for Kemper depend on the plant having a lignite supply for forty (40) years; otherwise the plant would have run on natural gas, a fuel that MPC criticized as too costly. MPC has acquired lignite leases for only about half of the necessary supply, reflecting about 5,000 acres. MPC will also need 20,000 more acres for activities necessary to access the lignite, such as roads. MPC testified it had secured 50-80% of that latter category of acreage. (Tr. at pp. 1248-49). Thus, both the cost and the feasibility of lease acquisition remain unclear. MPC's original proposal assumed it would purchase lignite for forty (40) years at a fixed price. MPC now expects to own the mine, paying a contractor to mine the lignite for a fee, but this arrangement is not the same as a fixed-price contract. MPC provided a confidential estimate of the capital cost of owning the mine. (Tr. at p.1352 (confidential)). The uncertainty of this cost is increased by the fact that neither MPC nor its parent has ever owned a lignite mine. (Tr. at p.1299).

**(v) Transmission upgrades:** To transmit Kemper's output to the MPC's electric grid reliably, MPC asserts it needs to construct sixty (60) miles of transmission system upgrades and

three (3) new substations. It has not acquired the rights of way for these facilities; nor has it completed detailed design work. These factors render its cost estimates uncertain. (Tr. at pp. 1273-74).

**(vi) Revenues from by-products:** Kemper's operation would produce by-products: CO<sub>2</sub>, ammonia and sulfuric acid. MPC hopes to sell these by-products, with the revenues offsetting Kemper's cost to ratepayers. MPC offered estimates of these revenues, but those estimates were not supported by any contracts. MPC's witnesses at hearing sought to describe a large national market for these products, but their assertions did not sufficiently take into account transportation associated with selling to that large geographic area; nor did they reflect any study of the number and viability of competing sellers of the by-products. The revenue stream from by-product sales is uncertain.

**(vii) Liquidated damages protection:** MPC testified that some of its contracts for project components have, or would likely have, liquidated damage provisions for underperformance. An example of underperformance would be a heat rate higher than expected. Since MPC proposes that ratepayers bear the full risk of project underperformance (assuming MPC is prudent), liquidated damage clauses would reduce that risk. The absence of any specific evidence on the value or likelihood of these liquidated damage provisions creates uncertainty as to the ratepayer risk.

**(viii) Environmental permits:** Kemper's construction requires environmental studies, permits and other approvals. MPC does not have a final Environmental Impact Statement under the federal NEPA, nor does it yet have a permit revision from the Mississippi Department of Environmental Quality, to reflect the turbine characteristics. (Tr. at p.1299). Delays in project completion due to delays in permit acquisition would add to Kemper's cost.

**(ix) Project subsidies or incentives:** MPC's estimates, and its assertions of Kemper's cost-effectiveness, assume a variety of government-funded benefits, including grants, tax incentives and loan guarantees. The values include a \$296 million reduction in upfront capital costs and a reduction of over \$1 billion in operating costs. (Anderson Phase Two Direct Testimony, Exh. TOA-1; Turnage Phase Two Direct Testimony, Exh. FT-11).

These benefits vary in their certainty. The record indicates, for example, that MPC has secured DOE approvals for the grants (DOE funding is contingent upon NEPA ROD) and Phase

I of the tax credits, but the record does not establish the likelihood of the Phase II tax credits and the loan guarantee. This is another source of uncertainty for ratepayers.

### **3. Financial implications of the multiple uncertainties**

Kemper's capital cost of \$2.4 billion (after government subsidies) is almost twice the value of MPC's current net utility plant of \$1.308 billion. (Turnage Direct Testimony, Exh. FT-9). This large investment places MPC and its ratepayers in a situation of risk. The risk exists because of the possibility of disallowances, should the project either (a) incur costs that are imprudent or are in excess of estimates, or (b) experience performance that is inferior relative to those estimates (discussed in Condition #1.B below). In that situation, the Commission could face two unpalatable alternatives: (a) disallow the costs from rates, resulting in a weakening of MPC's ability to raise capital on reasonable terms, especially to a point where the quality of service diminishes; or (b) allow the costs in rates to prevent the financial slippage. A very large investment relative to MPC's size creates the possibility of these unfortunate alternatives. This risk supports the Commission's finding that MPC's proposal, in its current form, does not satisfy the statutory "public convenience and necessity" test. One purpose, then, of the conditions which the Commission invites MPC to accept, is to make clear that the Commission will not allow ratepayers to become the guarantors of the Company's financial well-being if the project experiences imprudent costs or if the costs exceed the estimates, or if performance falls below estimates. The Company should proceed with the project, therefore, only if it is confident it can complete and operate the project consistent with those estimates. Indeed, as discussed below, it is the Company's repeated statements of confidence that provide substantial evidence to support the Commission's conditions.

### **4. Conclusion on construction cost uncertainties**

MPC's arguments for Kemper depend in part on a comparison of Kemper's cost to the cost of a MPC-owned combined cycle natural gas facility, running on gas for the same forty (40) year period in which Kemper would run. MPC ran sixteen (16) scenarios; these scenarios combined four (4) variations in gas price projections (low, moderate, moderate-volatile, high) with four (4) variations of starting prices for carbon (zero dollars (\$0)/ton, ten dollars (\$10)/ton, twenty dollars (\$20)/ton and thirty dollars (\$30)/ton), creating a 4x4 matrix. This matrix is found in Exhibit Aug-Supp-1 and is incorporated herein by reference.



MPC submitted calculations showing how an increase in Kemper's construction cost would affect its standing relative to these sixteen (16) scenarios. (p. 11 of Anderson Phase Two Rebuttal Testimony, Figure 1). The table revealed the following:

- a. Kemper at its projected cost was already inferior to the natural gas combined cycle alternative in the low gas price cases.
- b. A thirteen percent (13%) increase in construction cost would make Kemper inferior in all the moderate gas price cases.
- c. A twenty percent (20%) increase in construction cost would make Kemper more costly in all but the high price gas cases.

Based on the nine percent (9%) increase that has occurred even before detailed design has been complete and even before ninety percent (90%) of the construction costs have become "known" (in MPC's terminology), and given that a plant with this technology and this size has never been completed, the Commission finds it plausible that the final construction cost could exceed a level that would make Kemper uneconomic relative to a majority of these scenarios. This plausibility, by itself, causes the Commission to find that MPC has not met its burden of showing that its proposal is consistent with the public interest.

In a long-term construction project, it is not unusual for various cost items to be uncertain at the time a utility files a Petition for a certificate. The statute does not require every cost component to have detailed evidentiary support, and every permit to be in place. But in this case, the cumulative effect of the possibility of construction cost increases and delays, the cost of delays (given MPC's insistence on receiving a return on construction work in progress), and feasibility questions relating not only to the technology but also to the acquisition of basic ingredients like leases, land and permits, combine to create too much uncertainty for the full risk to be borne by ratepayers.

The foregoing uncertainties apply to construction cost alone. Further uncertainties arise from Kemper's operations. We address that subject next.

#### **B. Operating and Performance Uncertainties**

MPC's original Petition proposed that should Kemper's performance vary from the Petition's estimates, the consequences -- positive and negative -- be borne by ratepayers. (The exception is imprudence, which MPC acknowledges is its own risk). If, for example the plant

was to operate for fewer hours annually than the projected availability factor<sup>8</sup>, perform less efficiently (higher heat rate<sup>9</sup>), use more costly coal, use coal with a lower heat content<sup>10</sup>, capture less carbon or earn fewer by-product revenues, ratepayers would pay more through the fuel adjustment charge. The converse is also true: gains made by MPC relative to estimates would benefit the ratepayers.

MPC's cost estimates assume that Kemper would operate at fifty-nine percent (59%) availability initially; this figure would grow to eighty-nine percent (89%) availability by 2021, then remain at that level (Anderson Phase Two Direct Testimony, Exhibit TOA-1, Appendix M). Kemper's lack of precedent in terms of technology and size makes these numbers, and MPC's other performance estimates, too uncertain for the Commission to make ratepayers responsible for any shortfall. Kemper's performance uncertainties are summarized by the post-hearing brief of Entegra, et al at p.18:

"As confirmed by MPC testimony at the hearing, there are five IGCC plants in the world running on coal today, of which two are located in the United States, and none exceed 300 MW in overall plant size. None of the existing IGCC plants use lignite as a fuel source. None of the existing IGCC plants use TRIG as a gasification technology. TRIG is not in commercial scale operation today for the generation of electricity. Neither MPC nor Southern Company have ever before built or operated a commercial scale IGCC electric generating plant. Neither MPC nor Southern Company have ever before built or operated a commercial scale gasification plant using TRIG technology to manufacture synthesis gas."

Further evidence of Kemper's uncertainty is the small scale at which the TRIG technology is being assessed. As Entegra et al.'s brief states (at pp.18, 19):

"The Wilsonville experimental gasification plant upon which the TRIG technology that will be used for the Kemper plant was developed, is sized as a "demonstration" facility. Wilsonville has only run a total of 1,795 hours using Mississippi lignite, based on three separate trials of 543 hours, 742 hours and 510 hours. The 1,795 hours equates to roughly 75 days of run time."

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<sup>8</sup> Availability factor is determined by taking the quotient of the amount of kWh that a plant is expected or does have available to produce over a period, divided by the number of hours in the period, and multiplying it by the capacity of the plant.

<sup>9</sup> Heat rate is the number of British thermal units (Btu) needed to produce one kilowatt-hour.

<sup>10</sup> Heat content of coal is the measurement of the number of Btus per pound.

"MPC has confirmed that the coal flow per hour for the Wilsonville demonstrations using Mississippi lignite has been at 5,610 lbs. per hour, whereas Kemper would be expected to run at 401,145 lbs. per hour. So, the Wilsonville coal flow has been basically less than 2% of the coal flow rate for Kemper. MPC has also confirmed that the synthesis gas flow for the Wilsonville demonstrations using Mississippi lignite has been at 28,914 lbs. per hour, whereas the Kemper facility would have a synthesis gas flow of 1,311,100 lbs. per hour. Thus, the synthesis gas flow from the Wilsonville facility has been at roughly 2% of the flow rate that would be expected of Kemper."

### **VIII. MPC's Proposed Amendments to its Petition**

In response to the Commission's Order of February 11, 2010, MPC filed with its post-hearing brief dated March 12, 2010, proposed conditions. Entegra responded on April 6, 2010. The Commission will allow Entegra et al., response, and the MPC's answer thereto. All of those documents as well as all Phase Two post-hearing briefs filed by March 12, 2010, are hereby incorporated into the record of this Docket.

The Commission appreciates MPC's efforts to craft these amendments, but finds that they do not remove the concerns set forth in this Order, concerns that preclude the Commission from finding that the Petition is consistent with the "public convenience and necessity" test. For construction costs, MPC proposed a "hard cap" of thirty-three percent (33%) above the estimates in its Petition, approximately \$3.2 billion. "Hard cap," as defined by MPC, does not mean that it would not seek cost recovery above that number; only that it would not insist that prudent costs, if exceeding that number, would as a matter of law require recovery. The ratepayers therefore would definitely be at risk of an additional \$1 billion of prudent costs, possibly more. MPC argues that this thirty-three percent (33%) increase, in conjunction with other features of its proposal, are below the cost of plausible alternatives. But according to Mr. Anderson's Rebuttal Testimony at page 11, Figure 1, Kemper at this hard cap is more expensive than a natural gas combined cycle self-build alternative in fourteen (14) of the sixteen (16) cases presented. There is no persuasive basis in the record for the Commission to impose this additional \$1 billion risk on ratepayers; no evidence supporting a higher cost estimate. (In particular there is no evidence to indicate that the construction will be thirty-three percent (33%) higher than the figure of which the Company's expert witnesses said they were "confident.") MPC's own experts expressed confidence in their ability to bring the plant on line for \$2.4 billion, assuming receipt of all

government benefits. That number has enough uncertainty because by subjecting ratepayers to a \$2.4 billion risk, the Commission already imposes on them the risk that some better alternative might emerge during the next few years of uncertainty. To impose even more risk on ratepayers is not consistent with the public interest.

The Company's proposal for risk sharing also considers items such as non-fuel revenue requirement, heat rate, availability factor, lignite revenue requirements and capacity. The proposal combines these metrics to produce an adjustment to MPC's authorized return on equity of plus/minus 200 basis points. The Commission finds that the proposal comes with too little explanation for the Commission to understand its derivation and effects. For example, with respect to MPC's proposed gasifier performance penalty, the untested nature of the gasifier and its technology would make it difficult for any disinterested entity to establish objective performance standards.

MPC's proposal also would require quarterly prudence reviews. For the reasons discussed hereinafter in Part IX, the Commission finds that a commitment to prudence reviews at this pre-set frequency would provide insufficient flexibility for the Commission to develop a perspective on cost trends and performance results.

#### **IX. Conditions on Approving the Certificate**

For all the reasons set forth in Part VII above, the Commission finds that MPC's request for a facilities certificate, in its original form and as supplemented, does not satisfy the "public convenience and necessity" requirement. Having weighed all the potential benefits and costs, the Commission finds that the proposal contains too many uncertainties to justify the ratepayers bearing the risk of these uncertainties in full.

The Commission has no statutory obligation to assist a utility in obtaining a certificate. Given the possible benefits of Kemper and the Company's efforts to date, however, the Commission has decided to give guidance in the form of conditions. The Commission has designed these conditions so that they (a) have an evidentiary basis in the record and (b) are no more stringent than necessary to align the Company's proposal with the "public convenience and necessity" requirement. If the Company chooses to accept these conditions, it must file in this Docket a Motion in the form set forth in Part XIII of this Order.

### **Condition #1: Risk mitigation for construction and operating costs**

This condition is necessary to mitigate the risk that the final Kemper cost to ratepayers, including both construction cost and operating cost, exceeds a reasonable level, defined as the level at which the Company's expert witnesses expressed confidence in their ability to perform. Specifically, MPC agrees to limit its revenue requirement associated with Kemper to the level associated with its "confident" estimates, subject to the following specifications and adjustments:

#### **A. Construction cost cap**

The initial capital cost consists of the construction cost (\$2.4 billion) plus the record cost estimates of the following items, to the extent not already included in the \$2.4 billion number, each of which the Company shall specify (along with record citations) in its Motion accepting these conditions: land for ash storage, lignite mine cost, and gas pipeline cost. The total construction cost recoverable from ratepayers must not exceed this \$2.4 billion total, (which figure does not include amounts for government incentives or the cost of the three (3) items listed above in this paragraph) subject to the cap increases described below and the incentive mechanisms noted below.

#### **B. Increases in the construction cost cap**

The Commission will approve MPC's advance request for an increase in the recoverable amount for any or all of the following three (3) reasons:

- 1) The Company demonstrates that the purpose and effect of the construction cost increase is to produce efficiencies that will result in a neutral or favorable effect on the ratepayers, relative to the original proposal.
- 2) MPC accompanies its proposed cost increase with an equal-or-greater revenue requirement decrease associated with one (1) or more of the other estimates (e.g., operational performance, sales of byproducts,) in its original proposal.
- 3) To the extent the Commission does not allow 100% CWIP (which the Company assumed when making its \$2.4 billion estimate), it will allow an increase in that figure to reflect the AFUDC cost that CWIP would have obviated.

This cap is supported by substantial evidence in the record. To support its assertions that the construction cost would not exceed \$2.4 billion (based upon MPC's request for recovery of

financing cost on CWIP), MPC presented witnesses who described MPC's expertise and experience. These witnesses stated they were "confident" in MPC's ability to complete the construction consistent with those estimates, which they described as "conservative." (p. 6-7, p. 14 of Phase Two Rebuttal Testimony of Anderson; Tr. at p. 15, Topazi, CEO of MPC). They also pointed to the expertise and experience of MPC, Southern Company and of Southern's construction affiliate. (p. 5 of Phase Two Rebuttal Testimony of Anderson; p. 42-43, p. 52-53 of Flowers Direct Testimony; p. 7-8; p. 19 of Anderson Phase Two Direct Testimony). They based their estimates, their confidence and the assertion of conservatism not only on their expertise and experience, but on their research specific to this project. MPC studied various gasification technologies (p. 38 of Flowers Direct Testimony). This expert testimony constitutes substantial evidence of what Kemper's maximum cost should be. The record contains no alternative evidence to support a higher number. Consistent with the Company's and the Commission's obligation to protect customers from unnecessary costs, the Commission therefore adopts MPC's testimonial assertions as evidence of the maximum cost that ratepayers should bear. A Petition for a certificate must demonstrate "public convenience and necessity" for the construction. Costs exceeding the level for which MPC's experts have expressed confidence do not satisfy the "public convenience and necessity" test. If a cost estimate is conservative, and if MPC's experts are confident in those estimates, exceeding them is not a "necessity."

MPC's chief financial officer, Frances Turnage, argued against a cap. Her argument was not related to MPC's confidence in the estimates, and therefore does not detract from the substantially of this evidence. She testified instead that a construction cost cap would cause the financial community to view MPC differently from how it has viewed MPC in the past – as a company that bore substantial business risks rather than a company able to shift those business risks to ratepayers. The Commission finds this argument too imprecise to credit, in that it involved no quantification of ratepayer cost that overrides the ratepayer protection resulting from capping the ratepayer cost at the level in which MPC's experts expressed confidence. Further, MPC gave no reason why the financial community should not have the same confidence in its cost estimates that MPC expects the Commission to have. This lack of a reason renders Ms. Turnage's statements less substantial than the statements of MPC's construction experts.

In granting MPC flexibility to exceed its original estimates for three (3) distinct reasons, the Commission is following the principle that a utility's obligation to act prudently always



includes making investments that reduce total lifetime cost to the ratepayers. The Commission does not intend the \$2.4 billion cap to conflict with that principle. Thus, MPC may request permission to recover dollars exceeding the cap, provided such request includes evidence that (a) the dollars spent now will reduce the project's lifetime cost to the ratepayers, or (b) MPC is committing to modify the operational performance parameters in a manner that makes the net result at least neutral in terms of lifetime cost to ratepayers. The Commission also notes that because the \$2.4 billion estimate assumed 100% recovery of CWIP, the cap will need to rise to reflect AFUDC costs, to the extent the Commission allows less than 100% recovery of CWIP.

**C. Operations cost and operations revenues**

For the same reasons as the construction cost cap, namely, to mitigate the risk of costs exceeding reasonable levels (defined as the cost level in which the Company's expert witnesses expressed confidence), the cost to ratepayers from operating the Kemper IGCC Project must not exceed the costs associated with the operational assumptions in MPC's original filing (specifically, the assumptions concerning availability factor, heat rate, lignite heat content, and by-product revenues), subject to the incentive mechanism described in Condition #1.D below. By "availability factor," we mean the availability to burn lignite, not natural gas, because the Company's ratepayer cost estimates for Kemper assume the low and stable cost of lignite rather than the volatile cost of gas, a contrast the Company emphasized.

**D. Incentive mechanism**

If MPC's performance on either the construction cost or the operational parameters beats the level that the Commission determines is a prudent level (based on the advice of its construction expert and other consultants), that is, its costs are lower or its operational performance is better than a prudent utility, MPC may keep fifty percent (50%) of the difference.

**E. Used and useful is a separate upper limit on cost recovery**

The Commission has determined that the risks associated with the Kemper project make it inconsistent with the "public convenience and necessity" unless MPC agrees to comply with the cost caps and other conditions described in this Order, in which event the proposal will satisfy that standard. This determination does not diminish the Commission's authority, under §§77-3-33 and 77-3-43, to ensure that ratepayers do not pay for investments that are not "used or useful."

#### **F. CWIP Financing Costs**

MPC testified that maintaining a strong "A" credit rating will sustain its current low cost of financing, and that a credit rating downgrade would increase MPC's cost of capital, not just for this Project, but for MPC's entire business, while making access to capital markets more difficult. The Company's witnesses further asserted that MPC will not be able to proceed with Kemper unless the Commission allows recovery of 100% of the financing costs on Construction Work In Progress (CWIP), provides a periodic and expedited prudence review process, and establishes a special rate mechanism for cost recovery. (pp. 17-18; pp. 21-22 of Turnage Phase Two Direct Testimony). MPC projects that such timely collections of the financing costs of the Project during construction will save retail customers at least \$500 million over the life of the generation facility. (Tr. at pp. 1620-1621).

MPC's requested treatment diverges from the customary ratemaking practice in this state, in which ratepayers pay for plant-related costs only when the plant enters commercial operation and thus provides benefits; at that time the amount that enters rate base (on which the company earns a return) includes not only the direct cost but AFUDC - allowance for funds used during construction. Miss. Code Ann. §77-3-105(1)(a), added by the Base Load Act, does allow for a different treatment, however. This provision authorizes the Commission to include "construction work in progress" in MPC's rate base, if the facility at issue is a "generating facility" as defined by §77-3-103(a). The Commission hereby finds that Kemper satisfies this definition.

While §77-3-105(1)(a) itself does not state a standard, the Commission assumes its authority to allow CWIP is bounded by the requirement of §77-3-33, that rates be "fair, just and reasonable." The Company therefore should receive CWIP to the extent, and only to the extent, necessary to ensure that electric rates meet this standard.

Applying this principle to the record evidence, the Commission finds that although the Company's arguments for a CWIP return have merit conceptually, its request for a return on 100% of its investment is too general to support a Commission finding. Further, even if present conditions supported 100% CWIP, there is no reason to assume those conditions will persist, without change, for the entire construction period. The necessity and desirability of CWIP will vary as financial conditions vary. The strength of the national economy; the availability of capital and its cost generally; the financial community's perceptions of the utility industry, of

Southern Company generally, and of MPC's operations other than Kemper; -- all these factors will affect the necessity and desirability of CWIP. Committing ratepayer dollars to CWIP, without regard for these changing factors, would lack a basis in substantial evidence and would not be just and reasonable.

The Commission understands that there can be positive benefits associated with CWIP. The Commission therefore invites the Company to submit evidence supporting its request for CWIP that (a) is specific to current conditions, (b) specifically supports the percentage it requests, (c) demonstrates the specific savings associated with the A rating in relation to the cost to ratepayers of sustaining that A rating, (d) contains specific evidence on the relationship between the A rating and access to capital giving current market conditions, and (e) proposes a specific period during which the CWIP would apply. The Commission then will make a finding that is specific to current conditions, and that will apply for a specified period. The Company then can make subsequent requests for CWIP prior to the end of that period.

To implement the requirements in the preceding paragraph, MPC shall file with the Commission a rate mechanism designed to provide timely recovery of these construction financing costs during the construction period. The Commission will determine the percentage of construction costs if any, to which the return on CWIP will apply, and the rate of return to ensure that the amount recovered is the amount necessary to minimize the project's total cost and to maintain MPC's access to capital at reasonable costs. Because the statute limits CWIP recovery to a return on actual prudent costs, rather than estimated costs, the following true-up procedure is necessary. After the close of each period during which CWIP has been earned, the Company will report its actual expenditures. The Commission then will determine the portion of actual expenditures that were prudent expenditures. The Commission then will adjust rates for the next period to correct any discrepancy in the prior period. The mechanism thus will result in the ratepayers paying no more than MPC's actual financing costs associated with prudent actual capital expenditures through the period.

The Commission will not allow CWIP beyond May 1, 2014, the estimated commercial operation date, because to do so would cause the total construction to ratepayers to exceed the Company's \$2.4 billion cost estimate, unless the Company has demonstrated that such extra CWIP recovery is consistent with the conditions set forth in this Order. In no case shall the

Commission allow the recovery of CWIP on amounts exceeding the Commission's approved cap or prudent construction costs, whichever is less.

The Company must submit information necessary to support continuation of any pre-existing CWIP award no later than two (2) months before the end of the period to which that award applies. The Commission reserves its authority to redetermine the CWIP percentage and return at any other time, after considering information provided by the Company on order of the Commission.

**G. Periodic prudence determinations**

As authorized by Miss. Code Ann. §77-3-105(2)(a), added to our statutes by the Base Load Act, the Commission will conduct periodic prudence determinations, on a schedule to be determined by the Commission. The Company has requested that these determinations occur quarterly. The Commission will not establish a determinations schedule in this Order. To commit in this Order to a specific schedule would be contrary to the public interest. To determine prudence, the Commission must have sufficient perspective concerning the reasons for particular costs, the effectiveness of cost decisions, and the alternative ways to incur costs. That perspective does not always come into focus at pre-set time intervals; it depends on surrounding facts. The Commission recognizes the benefits associated with giving MPC certainty about cost recovery, and will take those benefits into account in determining the schedule for prudence determinations. Prior to establishing a schedule, it will seek MPC's and others' views on the appropriateness of prudence determination intervals.

Regardless of the schedule for prudence determinations, the Commission will establish a procedure for independent monitoring of cost accounting so that the Commission has full and current information of what dollars are spent and for what purpose. The Commission therefore will establish filing requirements including, in part, variance reports and ongoing analysis of resource options. Pursuant to Miss. Code Ann. §77-3-105(2)(b), added to our statutes by the Base Load Act, the reasonable costs of a Commission-hired monitor will be borne by MPC and recovered from ratepayers.

Any determination of prudence under this Condition #1.G would not diminish the Commission's authority under Miss. Code Ann. §77-3-105(1)(e), providing that in the context of an abandonment or cancellation without Commission approval, the Commission shall

“determine whether the public interest will be served to allow (i) the recovery of all or part of the prudently incurred pre-construction, construction and related costs in connection with the generating facility and related facility, (ii) the recovery of a return on the unrecovered balance of the utility’s prudently-incurred costs at a just and reasonable rate of return to be determined by the commission, or (iii) the implementation of credits, refunds or rebates to ratepayers to defray costs incurred for the generating facility.”

#### **H. Commission-retained experts**

This Order has explained how Kemper's unprecedented scope, cost and uncertainties pose unprecedented risks to MPC's ratepayers. Mitigating these risks requires special measures. The Commission therefore will retain Independent Monitors to assist the Commission in its statutory duties by monitoring project progress, reviewing costs and plans, and advising the Commission on questions of prudence and on the wisdom of continuing the project. The Independent Monitors may also have responsibilities concerning review of operations once construction is completed. To ensure the effective hiring and use of these Independent Monitors, the Commission orders as follows:

1. To assist the Commission in identifying and evaluating potential experts, the Commission directs MPC, and invites anyone else, whether or not parties to this case, to identify qualified companies and individuals with expertise in the subject areas relevant to Kemper, including but not limited to, TRIG gasification technology; carbon capture and sequestration expertise; and construction management, engineering and accounting generally. Such entities shall be independent of MPC and its affiliates. Anyone also may submit suggestions to the Commission on effective procedures for identifying additional candidates and for vetting those who indicate interest in performing this work. Submissions in response to this Order should be made no later than forty-five (45) days after the Company has submitted the Motion, described in Part XIII below, that accepts these conditions.

2. The Commission will retain these experts by contract, the Company will pay these experts' fees as approved by the Commission, and the Commission will expeditiously allow recovery from ratepayers of the Company's payments. MPC shall file a Rider Schedule that will ensure timely recovery of these incurred costs.

3. The Commission will develop procedures for how these Independent Monitors will submit reports to the Commission, and how the Company and others will comment on such reports, at a later time.

4. The Public Utilities Staff, pursuant to Miss. Code Ann. §77-3-13(4), will monitor the progress of project construction. As part of its monitoring duties, the Staff will submit written progress reports to the Commission concerning any deviations or variances in the project scope, cost schedule, and any other significant item found by the Staff that may affect MPC's ability to complete the project on schedule and consistent with this Order's conditions. The Staff will make its reports public on a schedule set by the Commission. The Commission expects its consultants and the Staff to coordinate their actions and share the information.

5. If the U.S. DOE provides loan guarantees for the project, it may require similar oversight and review of project costs. To minimize cost to customers, it is our intent to coordinate with DOE to the extent practical to avoid duplication and unnecessary work. To facilitate that coordination, the Commission orders MPC to report to the Commission on DOE oversight activities as they become known.

6. The Commission will require all independent consultants and monitors to execute any confidentiality and nondisclosure agreements the Commission deems necessary to protect information legitimately asserted to be proprietary or trade secret information related to the project.

7. MPC shall provide and maintain, at its offices and at project construction site, office space and facilities sufficient to accommodate the Commission and Staff monitoring functions discussed here.

8. MPC shall allow the Commission's experts access to any information or observations about the plant and its operations, and to any personnel employed or retained by MPC, to the extent deemed necessary by the Commission or its experts. MPC shall ensure that any contractors it retains agree to grant comparable access to the Commission's experts.

#### **I. Implementation of caps on construction and operations caps**

Within twelve (12) months prior to commencement of Kemper's commercial operation, and from time to time thereafter as MPC or the Commission deems necessary, MPC shall file with the Commission proposed rate schedules and tariff change(s) to implement this Order's



purpose of limiting Kemper-related cost recovery to the amounts set forth in MPC's original Petition, as discussed above.

MPC's initial submission shall include a proposal for how frequently the Commission should revisit these rate schedules and tariff changes to ensure that their effects are consistent with the purposes of these conditions.

**J. The Mississippi economy**

In light of the contribution that Mississippi ratepayers will make to the construction of this plant, and in light of the risks that this project involves to our ratepayers, it is important that benefits accrue to the state. The Commission therefore encourages MPC to utilize Mississippi labor, resources and services during the design, procurement, construction and operation of this project, to the extent consistent with its legal obligations.

**Condition #2: Government incentives**

MPC's Petition, including its confidence in a total construction cost of \$2.4 billion, assumes the availability of various government incentives, such as loan guarantees, grants and tax credits. MPC has stated that based on its research of these matters and its communications with relevant government authorities, it is confident of these amounts. There is risk, however, that these amounts will not be available, thereby raising Kemper's cost to customers. Should any portion of these amounts become unavailable, the Commission will allow recovery of the resulting increase in Kemper cost, if MPC demonstrates: (a) it has made best efforts to procure the incentive before it became unavailable, and (b) the resulting increase in ratepayer cost is consistent with the public interest.

If MPC is successful in obtaining additional federal funding for the Kemper project, it shall file a Petition with this Commission notifying the Commission of the amounts and details of such funding.

**Condition #3: Environmental permits**

The construction of Kemper requires environmental studies, permits and other approvals. MPC shall exercise diligence in obtaining the necessary permits and approvals and report to the Commission the receipt of the approvals and permits prior to the commencement of construction of the project.

**Condition #4: MPC has a continuing obligation to ensure that Kemper is in the public interest.**

Pursuant to Miss. Code Ann. §77-3-33 and applicable case law, MPC has an obligation to take all actions necessary to serve its retail ratepayers at a just and reasonable cost. That obligation includes using its expertise to ensure that the path that it has urged continues to be the best path. The Commission's granting of a certificate does not diminish this obligation. The experimental nature of this project, its unprecedented size and cost, and the uncertainty concerning the cost of alternatives to Kemper, call for special measures to ensure that the certificate issued is consistent with the public convenience and necessity. The Commission therefore makes explicit what is implicit: MPC has a continuing obligation to ensure that Kemper remains consistent with the public convenience and necessity, in light of feasible alternatives. MPC shall therefore file with the Commission (a) annually, starting with May 1, 2011, (b) with each request for a prudence determination, and (c) at any other time that the facts require, a report that supports MPC's continuing conclusion that Kemper remains consistent with the public convenience and necessity.

**X. APPROVAL OF PRUDENTLY INCURRED PRE-CONSTRUCTION COSTS**

In Docket 2006-UN-581, the Commission authorized MPC to charge costs associated with its generation planning, screening, and evaluating of its next generation option to a regulatory asset. These costs were to remain in the regulatory asset account until the earlier of June 30, 2008, or upon certification of the next generation resource. The Commission subsequently amended the order to defer the beginning of the amortization period to January 1, 2009. On April 6, 2009, the Commission issued an order consolidating Docket 2006-UN-581 with the docket at hand. In the April 6 Order, the Commission ordered that all of MPC's pre-construction costs were to be charged to and remain in the regulatory asset until the Commission made findings as to the recovery of MPC's prudent expenditures in this Docket. The Commission requested the Staff to continue its on-going investigation of the prudence of MPC's pre-construction expenditures. During the Phase Two Hearing, the Commission heard evidence on this issue. The Commission finds that it was prudent for MPC to perform the pre-construction activities at issue to meet its duty to provide adequate, reliable electric service to its customers.

The Commission finds that Larkin, was engaged by the Staff to perform a detailed review and verification of charges for preconstruction costs that were recorded into the regulatory deferral account to evaluate the usefulness for inclusion in customer rates.

The record reflects that Larkin found that MPC, at the end of March 2009, had recorded \$50,470,935 of pre-construction costs. Larkin further found that \$4,470,098 of the costs they reviewed were inadequately documented, questionable or inappropriate and recommended that the Commission remove these costs from MPC's March 31, 2009 pre-construction cost balance.

At the hearings, MPC's Comptroller, Ms. Cynthia Shaw, offered testimony attempting to justify the value provided by MPC's service company affiliate in terms of the relative costs of hiring third parties and the reasonableness of the rates paid to SCS for its engineering and related services, including the fact that those services are invoiced "at cost" in accordance with FERC rules. Ms. Shaw testified that the use of SCS for engineering work on the Kemper Project was beneficial to customers and therefore, SCS cost, including variable pay and overheads, should be allowed for recovery. SCS, like independent third-party contractors, includes variable pay and overhead costs in its billings. Ms. Shaw testified that unlike other contractors, SCS does not charge a profit. MPC asserted that the exclusion of SCS variable pay and overheads from recovery would be unreasonable and without merit and would motivate MPC to hire more expensive engineering firms.

The Commission finds the testimony of Mr. Smith to be persuasive and adopts his recommendation. Pursuant to our authority to allow recovery of prudently incurred costs, added to our statutes by the Base Load Act, we will allow recovery of these costs. However, we reserve the authority to revisit the issue of the recovery of SCS variable pay and overheads in a future proceeding. Specifically, the Commission finds that \$46,000,837 out of the total \$50,470,935 in pre-construction costs are reasonable and prudent and we adopt Mr. Ralph Smith's testimony to that effect. Those prudently incurred pre-construction costs, to the extent allowed under FERC and Commission accounting rules and under generally accepted accounting principles, should be capitalized to the applicable capital work order for the project. To the extent such costs cannot be capitalized under the applicable accounting rules, we find that such costs should be amortized through an appropriate rate schedule to be determined in a subsequent proceeding. We note Ms. Shaw's testimony regarding SCS variable pay and overheads and

reserve our authority to revisit and address such costs in a future proceeding regarding review of pre-construction costs incurred from April 2009 through the month of this Commission's Order.

#### **XI. RULING ON ENTEGRA'S SUPPLEMENT TO RESOURCE PROPOSAL**

On April 6, 2010, Entegra filed a supplement to Exhibit Three (3) of its post-hearing brief which was previously filed on March 12, 2010. While Entegra's efforts are commendable, the Commission finds that since MPC and other parties cannot conduct cross-examination of Entegra's supplement, the Commission cannot place the necessary weight upon the assertions made just as it cannot place the necessary weight upon MPC's new proposal submitted in its post-hearing submissions. Therefore, the Commission finds that it is not proper to consider Entegra's Supplement to its resource proposal during our deliberations on the issues at hand.

#### **XII. FINDINGS**

We find that the conditions expressed in this Order are necessary, but no more than necessary, to ensure that the certificate, if granted, is consistent with the statute's "public convenience and necessity" test. We further find that MPC's request to include in a possible Facilities Certificate the right for it to own the CO<sub>2</sub> pipeline that would transport the CO<sub>2</sub> from the Plant site to the EOR projects will be approved if MPC commits to the various conditions expressed in this Order. We also find that MPC's request for approval of a Lignite Service Agreement will be approved if MPC commits to the various conditions expressed in this Order.

Miss. Code Ann. §77-3-14 provides that no certificate shall be granted unless the Commission has approved the estimated construction costs. Subject to the conditions in this order, the Commission hereby grants that approval. This approval is not a finding of prudence; nor is it a guarantee of any cost recovery. Pursuant to Miss. Code Ann. §77-3-13, the Commission must also examine the financial ability and good faith of the Petitioner, the need for additional services and such other matters as the Commission deems relevant. Also, the Commission must ascertain that all labor, materials, property or services to be rendered for the project at issue will be supplied at reasonable prices. As provided above, MPC's project estimates were based upon reasonable assumptions that are typical for projects of similar scope and size. MPC provided testimony that the engineering, procurement and construction portion of the project would be conducted and managed by SCS, an affiliate of MPC, who provides cost-based services to all of the Southern Company operating companies. Mr. Anderson and Ms. Shaw specifically testified that the rates and charges for SCS were reasonable and below

prevailing industry rates for similar services. No party challenged these specific assumptions made by MPC regarding its estimates for labor, materials, property or services. Therefore, this Commission finds that MPC's estimates contained reasonable assumptions for labor, materials, property or services. This finding is based on the information available from the present record; it does not constitute a finding of prudence of any costs and does not preclude the Commission from finding, upon review of expert testimony to which the Company has had a chance to respond, that a prudent utility could carry out the relevant activities at a lower cost.

### **XIII. PETITIONER'S COMMITMENT TO CONDITIONS**

We further find this Order explains how MPC can obtain Commission approval of its Petition. That approval will issue if MPC files a motion within twenty (20) days from the date of this Order in this form:

**"MPC moves that the commission issue an order accepting MPC's Petition. In support of this motion, MPC commits to abide by the conditions set forth in the Commission Order date of April 29, 2010."**

The Commission then will issue an order granting this motion which signifies the issuance of a Facilities Certificate to MPC as being in the present and future public convenience and necessity and in the public interest. If MPC does not file such Motion, its Petition to construct the Kemper Project will be denied by operation of the terms of the Order.

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 NO; Vice Chairman Lynn Posey voted Agree; and Commissioner Leonard Bentz voted Agree.

DATED by the Commission on this the 29<sup>th</sup> day of April 2010.

MISSISSIPPI PUBLIC SERVICE COMMISSION



\_\_\_\_\_  
Brandon Presley, Chairman

\_\_\_\_\_  
Lynn Posey, Vice Chairman

\_\_\_\_\_  
Leonard Bentz, Commissioner

ATTEST: A True Copy

\_\_\_\_\_  
Brian U. Ray, Executive Secretary

Effective this the 29<sup>th</sup> day of April 2010.



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

**MISSISSIPPI POWER COMPANY**

**DOCKET NO. 2009-UA-14**

**IN RE: PETITION OF MISSISSIPPI POWER COMPANY FOR A CERTIFICATE  
OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING THE  
ACQUISITION, CONSTRUCTION, AND OPERATION OF AN ELECTRIC  
GENERATING PLANT, ASSOCIATED TRANSMISSION FACILITIES,  
ASSOCIATED GAS PIPELINE FACILITIES, ASSOCIATED RIGHTS-OF-  
WAY, AND RELATED FACILITIES IN KEMPER, LAUDERDALE,  
CLARKE, AND JASPER COUNTIES, MISSISSIPPI**

**CHAIRMAN BRANDON PRESLEY  
CONCURRING IN PART AND DISSENTING IN PART**

**CONCURRING OPINION**

I concur with the majority in its conclusion and findings, as expressed and enumerated in its order, that the Company has not carried its burden of proving that its proposal is consistent with the public interest because of uncertainties related to construction costs, plant design, ash landfill storage costs, pipelines and related rights of way, lignite leases and mine acquisition, transmission upgrades, revenues from by-products, liquidated damages protection, environmental permits, project subsidies or incentives. I also concur with the majority in its conclusion that the Company has not satisfied the statutory requirement of “public convenience and necessity.”

I concur with the majority in its conclusion and findings related to the financial implications of the multiple uncertainties, its conclusion on construction cost uncertainties, operation and performance uncertainties along with the conclusions and findings related to the Company’s proposed amendments to its petition.

## **DISSENTING OPINION**

I dissent from the majority's order in this case because it does not sufficiently protect the ratepayers of Mississippi Power Company ("MPC" or "the Company") from the great risks associated with the construction of this project and therefore leaves a potential for financial harm to both the Company and its ratepayers should the Company decide to agree with the conditions imposed in the majority's order and proceed with construction of the project. I feel that the Commission, the Company, its ratepayers and the public interest would best be served if the Commission would wait until many of the uncertainties in this case are better known and therefore have a clearer picture of what resource, including the possibility of approving this project with conditions, would best serve the public interest. The conditions placed upon the certificate by the majority are insufficient and short-sighted for the protection of MPC ratepayers, the Company's financial status, and the public interest and to some extent serve as mere "window dressing." The majority may well be opening a door that this Commission or future Commissions may not be able to shut to protect MPC ratepayers. It is my sincere hope that if the Company goes forward with the project this will not prove to be the case.

The majority's order, rightfully, identifies the plethora of risks associated with the approval of this project. For these reasons alone, the Commission should not approve this project until more can be known about uncertainties related to each of these categories, including, but not limited to carbon regulation and/or pricing, natural gas prices, technological advances in demand-side management ("DSM") and energy efficiency. My opinion in this case is not to preclude the project forever but to simply wait until more is known in the areas of uncertainty and at that time, be in a better position to make the correct decision. Other options exist for the Company in the interim that involve less risk to MPC customers than those posed by this project, at this time. If the Commission were to wait a period of five years

or so, many of these uncertainties would become more certain and therefore give the Commission a truer picture of what would best serve the public interest. Although concern for these risks are obvious sufficient reasons to deny the certificate of public convenience and necessity for this project, at this time, I have further objections to the majority's order because it has the effect of beginning a process that could jeopardize the Company and its ratepayers.

At some point there may be no turning back. If this project is a good project now as the Company contends, that fact will be only the more evident in the future and may make for a more compelling case for approval.

The following topics represent my disagreement with giving the Company the option to construct this project, at this time, and outlines my objections to certain conditions and findings in the majority's order along with an explanation of possible outcomes for MPC ratepayers as a result of said conditions:

#### **THE PROPOSED COST CAP; MPC'S COST ESTIMATE**

In its order, the majority accepts the Company's cost estimate of \$2.4 billion and offers the company a chance to gain approval for the project if it will agree to a cap in that amount with three exceptions to the cost cap that involve either (a) savings or neutral effect to MPC ratepayers or (b) things out of the Company's control related to federal incentives and/or grants (c) to the extent that the Company's request for one hundred percent (100%) of construction work in progress funding is not allowed by the Commission in a later proceeding

Although I feel this approach of giving exceptions to the cost caps is very well reasoned and fair to the Company, it is the cost cap amount and how it will or will not work that is the most troubling to me. The majority has no evidence that \$2.4 billion is the correct cost estimate for the project. It should also be noted that the majority's order correctly cites that only ten percent (10%) of the \$2.4 billion cost as estimated by the Company is "known"

according to Company witness Mr. Tommy Anderson. That leaves ninety percent (90%) of the cost of this project unknown and therefore subject to cost escalation that would possibly make it an inferior resource as compared to other short term options. The term "known" was Mr. Anderson's chosen term. He made clear in his testimony that he did not mean "known" in the dictionary sense, i.e., "guaranteed." He did not promise the "known" numbers would not escalate. What distinguished "known" from "unknown" is that he had received bids or investigated with potential suppliers or had some contracts. Also, he did not indicate which of these "known" numbers were actually contracted-for, meaning guaranteed, numbers

Another troubling issue with the Company's cost estimate, on which the cost cap is based, is the fact that the Commission nor any other party outside of the Company and its holding company, Southern Company ("Southern") has any expertise on the technology to be used in this plant and there is no independent opinion, in the records, on what it would cost to build this type of plant. There is no benchmark, no independent experience or expertise anywhere, outside of the Company's confidence; therefore there is no way to judge whether the \$2.4 billion figure is correct. Because of those circumstances, the Commission is entirely reliant on the Company's statements. This creates a situation that should be uncomfortable to regulators: being solely dependent on the company he is regulating.

The Company asserted in the case that because of their experience and that of Southern in managing, designing and constructing large power generation capital projects and therefore that alleviated MPC ratepayers from some risk. The facts presented showed that all the projects cited were under budget or within one percent (1%) and met all of their schedules service date.

This is all true; and if I had to choose a company to build a plant I'd want to choose a company with a good track record. But the question is whether this past success is a good predictor. The Commission didn't have the facts on these prior projects – and Southern did

not produce those facts for us. But those projects could have been cookie cutter projects where most of the technology and costs are familiar. That does not promise success in a very different kind of project. Just because a dentist has great success filling cavities does not mean I can rely on her to do a root canal. In other words, this argument is a good argument, but it is not really evidence of success.

Respectfully, the fact that the Company's estimate is the only one in the record is not grounds for accepting it. It is the only estimate in the record because no other party had expertise to contest it. That says nothing about its credibility; it says something about the evenhandedness of the proceeding. A regulator should not rely on the regulated company's arguments just because the regulated company is the best-financed, best-prepared entity in the room. That is one of the weaknesses in regulation. One corrects that weakness not by assuming the entity the loudest voice speaks the most truth; but by holding the company to its burden of proof.

The company has not done the detailed design work that is the foundation for a cost estimate the Commission should be comfortable with based upon the record. Therefore there exists a possibility that the \$2.4 billion cost estimate is extremely low for this project.

On the contrary, the possibility exists that the cost of this project could be much lower than \$2.4 billion, therefore making the cost cap too high and subjecting MPC ratepayers to unnecessary costs as demonstrated in the next topic.

### **THE INCENTIVE MECHANISM**

I disagree with the majority's decision to give the Company fifty percent (50%) of any savings below the prudent cost as determined by a Commission-hired independent monitor and approved by the Commission, entitled an "Incentive Mechanism" in the order. The represents the chance for a "gift" to the Company for meeting its obligation to MPC ratepayers, which it should be doing regardless of any condition imposed by the Commission.

An example of this proposed “Incentive Mechanism” would be if the Commission-hired independent monitor determined that the prudent costs for this project was \$2.2 billion and the Company built the plant for \$2 billion, \$200 million below what the independent monitor found as prudent, MPC ratepayers would be then penalized and forced to pay an additional \$100 million above the actual cost of the plant to reward the Company for their performance. This creates a situation where MPC ratepayers are paying more for the plant than its actual cost to build. Such incentives are not needed.

The Company should always strive to provide its ratepayers with the lowest cost in any project and should certainly not be rewarded for doing that which it should be doing anyway. In essence, this provision of the majority’s order is counterintuitive to the goal of bringing the project in as low as possible because the “bonus” to the Company would then be tacked on top of the actual cost. In the previous example, a project that actually cost \$2 billion to build would then cost \$2.1 billion because of this “bonus.” As we are all aware, in this scenario, it would MPC ratepayers who would be forced to pay the \$100 million above the actual cost of the plant to provide the Company with its “bonus”.

Nobel Prize winning-author and native Mississippian William Faulkner once said “I object to anyone making a public statement which any fourth grade child with a pencil and paper can disprove.” In that the majority may contend that this “Incentive Mechanism” is in the public interest and would somehow not cost ratepayers more money than the actual cost of the project, should it be less than \$2.4 billion, I would apply Mr. Faulkner’s thinking. If the majority intends to place a cost cap based on the Company’s estimates, the cap should be the lesser of the Company’s estimate or the prudent cost as determined by the Commission’s independent monitor and approved by the Commission and not include any type of “bonus” for the Company.



### **FINANCIAL EFFECT ON THE COMPANY; "TOO BIG TO FAIL"**

No Commission comes to work saying "we want our utility to make a bet on an untried technology where the bet is almost twice the company's investment base." Yet, if the Company chooses to go agree with the majority's conditions imposed in its order, that is exactly what will happen in this case and the Company's financial well being along with that of its ratepayers will be exposed to this large amount of uncertainty.

I agree with the majority's order, in that it exposes the fact that this project, with a cost of \$2.4 billion (after government subsidies) is almost twice the value of the Company's current net utility plant of \$1.308 billion. I also agree that this large investment places the Company and its ratepayers in a situation of risk. The majority was right to find that this risk supports the finding that the Company's proposal, in its current form, does not satisfy the statutory "public convenience and necessity" test. In my opinion that is where the majority's order should have stopped .

If the Company decides to move forward under the majority's conditions, there exists a possibility that the Commission may one day be faced with a situation where, because of cost overruns for whatever reason, it must either jeopardize the Company's ability to attract capital on reasonable terms by disallowing cost recovery and therefore jeopardize the quality of service to the captive MPC ratepayers or allow the costs to be recovered by way of rate increases to MPC ratepayers and, in effect, disregarding the cost cap imposed by the majority's conditions. All of which becomes a vicious cycle that could be avoided by waiting. In either of these scenarios it will be MPC ratepayers that will be punished for poor performance by the Company.

Mr. Steven Fetter, a Company witness, testified in the Phase II proceedings that during his tenure on the Michigan Public Service Commission, the commission allowed imprudent costs to be recovered through rates due to the fact that to do otherwise would have put the

Company's financial status in jeopardy. This is a real possibility in this case. By giving the "green light" to the Company for this project, albeit with many conditions I agree with, the majority begins a process that could have severe effects on both the Company and its ratepayers, which are at some point in the future, irreversible.

These factors and real possibilities lead to a chance that this project will become "too big to fail." A term which means, for purposes here, that at some point, if the Company and/or ratepayers are hundreds of millions of dollars, possibly billions of dollars, into this endeavor and it becomes uneconomical or an alternative resource makes more sense, this Commission or a future Commission could be faced with a series of decisions that may have to be made to possibly save the Company from financial failure and allow the project to go forward even when doing so is imprudent and will be costly to MPC ratepayers. At that point, MPC ratepayers' interests will be obscured from the picture because the pressure will be on the Commission to either save the Company's financial standing and/or ensure service quality and therefore allow the imprudent cost to be recovered through rate increases. If that happens it will have occurred because the majority allowed this project to go forward even when it was cognizant of the large amounts of risk involved and the chance of this being the outcome.

Although the majority, through its conditions, strives to alleviate MPC ratepayers from some of this risk in these particular areas of concern, the fact remains that they (MPC ratepayers) will still bear a heavy burden of risk and financial impact with this project because of issues previously discussed and the possibility that this project will become "too big to fail." I hope that this bleak picture is not the case in the end, but when faced with the extremely large amounts of uncertainty in this case these concerns should be forefront in the minds of this Commission and certainly should give the majority pause in considering a conditional approval.

Given how large the investment is relative to the company's size, the more the

company spends, the more likely that a prudence disallowance will weaken the company's financial strength. That fact will increase the pressure on the Commission not to make prudence disallowances for the reasons set forth above.

### **TECHNOLOGY RISKS**

The Company gives the Commission, and subsequently MPC ratepayers, no guarantee that the air-blown Transport Integrated Gasification ("TRIG") technology developed jointly by Southern Company, Kellogg, Brown and Root, LLC and the U. S. Department of Energy will work. This technology is a centerpiece of this project. If the Company adopts the majority's conditions and proceeds with construction, then at some point later in the project timeline it is discovered that TRIG will not work, MPC ratepayers will be at risk. There is no doubt that the Company, Southern, Kellogg, Brown and Root, LLC and the U. S. Department of Energy should be commended for the work in this arena and in developing this type of technology. It is my opinion that public utilities serve the public interest well when they are innovative in seeking products and/or technologies that could possibly help their ratepayers and thus further the public interest. Though, with no guarantees from the Company that this technology will work, I am of the opinion that the public interest would be best served by waiting to see if, at some point, the Company is able to guarantee that TRIG will work. At that point, the picture would be much clearer for both the Commission and MPC ratepayers.

As it stands today this technology has only run a total of 1,795 hours, which equates to 75 days of run time at the Wilsonville experimental gasification plant ("Wilsonville"). Furthermore, Mississippi lignite has been run at the rate of 5,610 lbs. per hour at Wilsonville whereas this project would be expected to run at 401,145 lbs. per hour. Synthesis gas flow at Wilsonville has been at a rate of 28,914 lbs. per hour, whereas this project is proposed to have a synthesis gas flow of 1,311,100 lbs per hour. Both the Mississippi lignite and the synthesis gas have only run approximately 2% of the totals projected in this project. The time of

demonstration at Wilsonville relative to the time of use during operation in the project is minimal and certainly not indicative that TRIG will work at full scale.

Conditional approval of this project without knowing whether or not TRIG will work, at the scale proposed, is the equivalent of buying a car and having no idea whether or not the engine will run, but buying it anyway.

#### **POSSIBILITY OF AN ADDITIONAL RATE INCREASE DUE TO PEP-5**

If the Company assents to the majority's conditions and receives a certificate for construction, even with whole or partial approval, or denial by the Commission of construction period financing costs ("CWIP"), MPC ratepayers may be forced to pay higher rates, on top of any increase due to CWIP or other project related costs, due to a possible downgrade of the Company's credit quality which will may be reflected in the Company's cost of capital and therefore will be subject to the calculations of the Company's Performance Evaluation Plan 5 (PEP-5) currently in force. This rate increase possibility is separate and apart from any rate increase resulting from the Commission later granting whole, partial or no amount of CWIP.

Regardless of the Commission's decision on CWIP in a later proceeding, the possibility for a rate increase due to PEP-5 still exists and would have MPC ratepayers possibly paying more for electrical service if the Company goes forward in this case. This would create a possible double rate increase for MPC ratepayers because of this project, all of which could be partially, if not totally avoided if the Commission were to wait a period to gather additional facts related to the uncertainties in this case. MPC ratepayers clearly have much at risk in this case but they also have the risk of not just one possible rate increase but two.

## **PROTECTION AGAINST IMPRUDENCE; COMMISSION'S EXPERT TEAM FOR OVERSIGHT OF THE PROJECT**

If this project goes forward the Commission and MPC ratepayers will be dependent on having an expert team, selected by and under the control of the Commission, overseeing the construction process to give guidance related to prudence determinations and alternative resource screening during the construction phase to guard against imprudence. This team's work will be essential to protecting MPC ratepayers, yet, several issues exist that could make the expert team's job difficult and therefore result in a less than robust oversight investigation, all to the possible detriment of MPC ratepayers. The majority correctly addresses these concerns to some extent in its order but the admonitions in the order do not sufficiently protect MPC ratepayers. This fact raises several concerns:

1. I am unaware of any situation in regulation where a commission's expert has set up shop inside a utility to look over the Company's shoulder. We don't know who this person will be, how many team members will be necessary or what they will cost MPC ratepayers.
2. We don't know what kind of resistance the Company will create to this expert team. On this subject, once the Commission says "yes" to the project, it will have little leverage over the Company. For example: We don't know what confidentiality the Company will attach to the technology or other components. Third party contractors often forbid non-contracting entities from getting information about technologies and practices. The Company could argue that it has no clout with these third parties, and thus can't ensure that the Commission's expert will get full access to all information. All the Company can do is attempt its best efforts.
3. Because the technology is new and because only Southern Company owns it, it will be difficult to have an expert that is just as smart or smarter than the company's experts. Absent at least equality in experience it is hard for an expert to make judgments about prudence. The natural tendency then is to defer to the Company. In effect the company will be teaching the technology to our expert -- which places the expert in an unequal position.

This is another reason that the Commission would be wise to wait on this project until more information and experience with this technology is available and these issues of confidentiality and expert team access are resolved.

To further stress this point and its importance to MPC ratepayers we must look at the fact that whether there is real protection from imprudence depends on several “ifs”: (a) *if* the Commission can find an good consulting team, (b) *if* that team has as much expertise and information and experience with this type of plant as does the Southern team, (c) *if* the Southern team cooperates fully with the Commission’s team, (d) *if* the Southern team is able to share confidential information (which might be controlled by third party contractors) with the Commission team, and (e) *if* the Commission itself has the resources and spends the time studying and digesting the consultants’ reports. There is no history of this type of regulatory oversight in Mississippi. We should not be allowing the Company to almost double its net utility plant with this many “ifs.”

#### **PUBLIC DISCLOSURE OF RATE IMPACT TO CUSTOMERS**

The Company’s proposal and filings in this case keep confidential and out of the public’s view the possible rate impacts associated with this project. Although current Commission rules allow for this practice, the majority should have made public disclosure of the rate impact a condition that must be met by the Company to make the application consistent with the public interest. MPC ratepayers have a right to know what they will be faced with paying for such an essential service as electricity should the Company go forward with the project. This is basic information that MPC ratepayers have a right to know. The Commission should amend its rules to prohibit utilities from designating rate impact information as confidential.

#### **REASONS TO WAIT**

As I have stated earlier in this opinion, I feel the public interest would be better served if the Commission would wait for certain issues to become more clear and therefore have a better idea of what resource will best meet MPC ratepayers’ needs and be consistent with the public interest. Former Secretary of Defense Donald Rumsfeld once said “...there are known-



unknowns, that is to say that there are things we now know we don't know...." That is also true in evaluating the best resource for MPC ratepayers in this case. In this case many of the things that we do not know about at the present time could provide meaningful help for the Commission in making the best choice for MPC ratepayers which could include the Company's project or another. I offer the following as reasons to wait and therefore disagree with the majority's "opening of the door" to possible approval at this time even with the conditions proposed:

1. No other commission is taking this route. Some others are choosing nuclear; others entering "holding patterns" until they can see more clearly what develops in reference to gas prices, carbon prices, renewable energy possibilities, DSM and energy efficiency.
2. The discoveries of shale gas are major. We don't know how they will affect future gas price, but we will know more in a few years.
3. We don't know how much capacity we will need in Mississippi over the next forty (40) years or when we will need it. For example:
  - a) We don't know if there will be innovations in DSM or energy efficiency. The Commission has not made a finding about the prudence or reasonableness or sufficiency of the company's integrated resource planning efforts.
  - b) Ms. Turnage stated in rebuttal testimony that according to the Commission's Phase I order, the Company and the Commission had vetted this issue fully. That is an incorrect reading of the Phase I Order. That order said only that in light of the Company's present efforts, the amount of demand-side M DSM and energy efficiency it could count on was insufficient to eliminate the need for a plant. The Commission said nothing about the adequacy of the company's efforts or the opportunity for additional gains. Those are in fact among the subjects to be addressed in the energy efficiency docket.
  - c) Committing to gas for a few years is a possibility given surplus capacity. It is true that we don't know what the prices will be, but given the surplus and given the Company's bargaining power, there is grounds to expect the price will be reasonable. In other words, the alternative to Kemper is not 40 years' exposure to volatile gas prices. Although that was the center of the Company's case, that is a false comparison.
4. There is no reason to think that the Kemper option won't still be here in a few years: the technology, the lignite, the basic economics. The tax incentives might still be

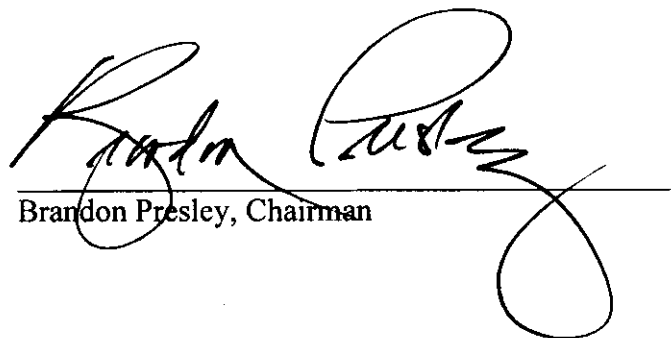
here, or they might not. But over time, the economics of this type of plant will improve. That is the process of new technologies.

I am unaware of any other utilities or states that are so fearful of gas prices in the next five (5) years that they are making forty (40) year bets right now on untested technologies, where the bets are of dollar amounts higher than the net worth of the company.

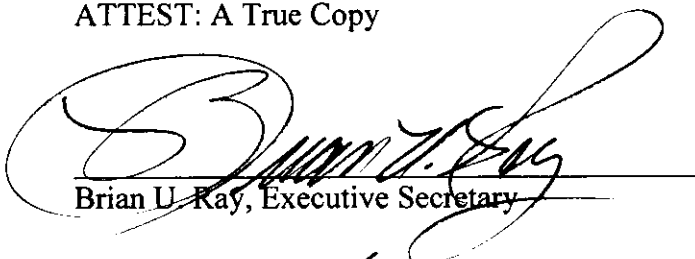
On balance, it is prudent to wait until we can see the future better. The electric utility industry is filled with continuous change and uncertainty. I agree with the company on that point. But this proposal contains an inordinate amount of uncertainty all at once: technology, alternative energy, gas prices, carbon prices and regulation. With this amount of uncertainty it's better to make small bets rather than big bets.

For these reasons, I concur in part and respectfully dissent in part with the majority's order in this case.

Respectfully submitted this the 29<sup>th</sup> day of April, 2010.

  
Brandon Presley, Chairman

ATTEST: A True Copy

  
Brian U. Ray, Executive Secretary

This the 29<sup>th</sup> day of April, 2010