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STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

**VERIFIED PETITION OF DUKE ENERGY)
INDIANA, INC. SEEKING (1) APPROVAL OF AN)
ONGOING REVIEW PROGRESS REPORT)
PURSUANT TO IND. CODE 8-1-8.5 AND 8-1-8.7)
AND; (2) AUTHORITY TO REFLECT COSTS)
INCURRED FOR THE EDWARDSPORT)
INTEGRATED GASIFICATION COMBINED)
CYCLE GENERATING FACILITY ("IGCC)
PROJECT") PROPERTY UNDER CONSTRUCTION)
IN ITS RATES AND AUTHORITY TO RECOVER)
EXTERNAL COSTS THROUGH ITS INTEGRATED)
COAL GASIFICATION COMBINED CYCLE)
GENERATING FACILITY COST RECOVERY)
ADJUSTMENT, STANDARD CONTRACT RIDER)
NO. 61 PURSUANT TO IND. CODE SECTIONS 8-1-)
8.8-11 AND -12)**

CAUSE NO. 43114 IGCC-3

APPROVED: DEC 0 2 2009

BY THE COMMISSION:

**David E. Ziegner, Commissioner
Scott R. Storms, Chief Administrative Law Judge**

On May 1, 2009, Duke Energy Indiana, Inc. ("Duke Energy Indiana," "Petitioner" or "Company") filed its Verified Petition with the Indiana Utility Regulatory Commission ("Commission") in this Cause. In its Petition, Duke Energy Indiana requested: (1) the approval of an ongoing review progress report; and (2) the authority to reflect costs incurred for the Edwardsport Integrated Gasification Combined Cycle Generating Facility ("IGCC Project" or "Project") property under construction in its rates and the authority to recover certain external costs through its Integrated Coal Gasification Combined Cycle Generating Facility Cost Recovery Adjustment, Standard Contract Rider No. 61 ("Rider 61" or "IGCC Rider").

Pursuant to notice as required by law, proof of which was incorporated into the record by reference and placed in the official files of the Commission, an Evidentiary Hearing was held in this Cause on August 26, 2009, at 9:30 a.m. EST in Room 222 of the National City Center, 101 West Washington Street, Indianapolis, Indiana. The parties to this proceeding, other than Duke Energy Indiana, included the Indiana Office of Utility Consumer Counselor ("OUCC"), Citizens Action Coalition of Indiana, Inc. ("CAC"), Save the Valley, Inc. ("STV"), Valley Watch, Inc. ("Valley Watch"), Nucor Steel-Indiana, a division of Nucor Corporation ("Nucor"), Indiana Wildlife Federation, and the Clean Air Task Force. Citizens Action Coalition of Indiana, Inc., STV, and Valley Watch are collectively referred to as "CAC." These parties, other than the OUCC, are collectively referred to as "Intervenors" throughout this Order.

At the Evidentiary Hearing, Petitioner presented the testimony and exhibits of Mr. W. Michael Womack, Vice President, Edwardsport IGCC Project (Pet. Ex. A, Pet. Redacted Exhibit A-1 and A-2, Pet. Confidential Exhibit A-1, A-2 and A-3, together with Pet. Exhibit A-4 and A-5) and Ms. Diana L. Douglas, Director of Rates for Duke Energy Indiana (Pet. Ex. B, B-1, Redacted Exhibit B-2, Confidential B-2, B-3, B-4, and B-5) for its case-in-chief. For its rebuttal case, Duke Energy Indiana presented the testimony and exhibits of Mr. W. Michael Womack, (Pet. Reb. Ex. A-R, A-1, and A-2), Dr. Richard G. Stevie, Managing Director, Customer Market Analytics, (Pet. Reb. Ex. B-R, B-1, B-2, Revised B-3, and B-4), Mr. John L. Stowell, Vice President, Environment, Health and Safety Policy (Pet. Reb. Ex. C-R), and Ms. Diane L. Jenner, Director, Regulatory Strategy (Pet. Reb. Ex. D-R, D-1, D-2, D-3, and D-4). On September 10, 2009, pursuant to the request of the Presiding Officers at the hearing, Petitioner filed its Motion for Leave to Late File an Exhibit, consisting of Petitioner's Confidential Exhibit A-R-3, which is an updated integrated schedule for the IGCC Project. This Motion was granted by the Presiding Officers in a Docket Entry issued on September 22, 2009. All testimony and exhibits offered by the Petitioner were admitted into evidence in this matter. The OUCC presented the testimony of Mr. Wes R. Blakley, Senior Utility Analyst. CAC presented the testimony of Mr. Grant S. Smith, its Executive Director. The Indiana Wildlife Federation, the Clean Air Task Force, and Nucor did not present testimony in this matter. The pre-filed testimony and exhibits of the OUCC and CAC were admitted into evidence. No members of the general public appeared at the hearing in this matter.

Based upon applicable law and the evidence presented herein, the Commission finds as follows:

1. **Notice and Jurisdiction.** Due, legal, and timely notice of the Evidentiary Hearing in this Cause was given and published by the Commission as required by law. Duke Energy Indiana is a public utility as defined by Ind. Code § 8-1-2-1, and is subject to regulation by the Commission to the extent provided for in the Public Service Commission Act, as amended. Accordingly, the Commission has jurisdiction over Duke Energy Indiana and the subject matter of this proceeding.

2. **Petitioner's Characteristics.** Duke Energy Indiana is an Indiana corporation with its principal office located at 1000 East Main Street, Plainfield, Indiana. Duke Energy Indiana is engaged in the business of supplying electric utility service to the public in the State of Indiana. The Company owns, operates, manages and controls plant, property and equipment used and useful for the production, transmission, distribution and furnishing of electric utility service to the public in the State of Indiana. Duke Energy Indiana directly supplies electric energy to approximately 775,000 customers located in 69 counties in the central, north central and southern parts of the State of Indiana. The Company also sells electric energy for resale to municipal utilities, Wabash Valley Power Association, Inc., Indiana Municipal Power Agency, and to other public utilities that in turn supply electric utility service to numerous customers in areas not served directly by Duke Energy Indiana.

3. **Relief Requested.** In its Verified Petition, Duke Energy Indiana requested: (1) the approval of an ongoing review progress report pursuant to Ind. Code § 8-1-8.5 and 8-1-8.7; and (2) the authority to add to the valuation of its utility property for ratemaking purposes the actual Project costs incurred through March 31, 2009, and approve for recovery the financing costs and its external costs through its IGCC Rider.

4. **Prior Proceedings.** In its November 2007 Order in Cause Nos. 43114 and 43114-S1 (the "CPCN Order"), the Commission issued certificates of public convenience and necessity and clean coal technology ("CPCNs") authorizing Petitioner to construct the 630 megawatt Edwardsport integrated gasification combined cycle plant in Knox County, Indiana near the location of the Company's existing Edwardsport generation station. The CPCN Order approved Petitioner's estimated construction cost for the IGCC Project of \$1.985 billion and Petitioner's proposed IGCC Rider, which provides for the timely recovery of costs in connection with the IGCC Project. The Commission also directed Petitioner to file semi-annual IGCC Rider and ongoing review progress report proceedings.

On May 1, 2008, Petitioner filed its first semi-annual IGCC Rider and ongoing review progress report proceeding related to the Project, designated as Cause No. 43114 IGCC-1. In addition to the ongoing review process approved by the Commission in its CPCN Order, the first semi-annual IGCC filing also included a request by the Company to revise the projected cost estimate of the Project from \$1.985 billion to \$2.350 billion, and a request for approval to undertake studies related to carbon capture at the IGCC Project and for cost recovery for such studies. On January 7, 2009, the Commission issued its order in Cause No. 43114 IGCC-1 (the "IGCC-1 Order") in which it approved Petitioner's revised projected construction cost estimate for the Project of \$2.350 billion and its ongoing review progress report, the timely recovery of construction and operating costs through the IGCC Rider reflecting actual expenditures through February 29, 2008, and studies related to carbon capture at the IGCC Project and cost recovery for such studies.

On November 3, 2008, Petitioner filed its second semi-annual IGCC Rider and ongoing review progress report proceeding related to the Project, designated as Cause No. 43114 IGCC-2. On May 13, 2009, the Commission issued its order in Cause No. 43114 IGCC-2 (the "IGCC-2 Order") in which it approved the Company's request for recovery under the IGCC Rider of the additional actual costs of the Project through September 30, 2008, and for certain external costs, and of the Company's updated ongoing progress report for the IGCC Project.

In both the IGCC-1 Order and the IGCC-2 Order the Commission set forth specific information required to be filed by the Company in each update proceeding regarding the IGCC Project, including an integrated schedule.

5. **Ongoing Review of IGCC Project.**

A. **Petitioner's Evidence.** Mr. Womack testified that the Company has made significant progress with respect to the IGCC Project since the last filing in November 2008. He stated that the engineering and design work is over 50% complete and on track to be 90% complete by the end of 2009. The procurement of major equipment and materials is nearly

complete and the procurement group focus is shifting to the construction labor contracts. The site preparation work is nearly complete, the underground utilities and foundation support piling are progressing and the concrete foundations are being constructed. Project offices have also been established and the Project management team continues to grow as planned. Pet. Ex. A., at 3 (Womack Direct).

Although the Project is progressing, Mr. Womack testified there are a few issues that the Company is working diligently to resolve. Mr. Womack explained that it is normal practice to create a project schedule which supports completing the project earlier than the need date and that this practice has been followed by building a schedule for Project completion by June 1, 2012, when, in reality, the peak demand is likely to be later in the summer of 2012. The Project's current master schedule indicates a substantial completion date of mid-August 2012. Mr. Womack stated that a new plan is being developed to regain the slip in the completion date of the Project predicted by the then current master schedule. *Id.*

Mr. Womack testified that certain steps were being taken to regain the Project schedule. He explained that the scheduling process on a major capital project initially starts with a summary schedule. As more detail becomes available in terms of engineering, procurement, construction and startup activities, the schedule becomes larger and more complicated in terms of the lines of detailed activities. As the process proceeds, the schedule becomes increasingly integrated between the various activities. Any scheduling mismatches that are discovered are then addressed. Mr. Womack stated that various steps have been taken and continue to be taken to develop the IGCC Project master schedule, including the addition of a Bechtel employee as the Scheduling Manager for the Project, upgrading the scheduling software, and changing the sequences of activities that are causing the completion date to slip into August 2012 in order to bring the Project back on schedule to meet the completion goal of June 1, 2012. *Id.* at 5.

Mr. Womack also reported that the Project cost estimate has encountered significant additional scope of work expansion with both the raw water treatment and grey water disposal systems. While the resolution of these issues is not clear at this time, the cost impact could be in the \$70 to \$120 million range. A comprehensive analysis of the likely cost contingency needs for the remainder of the Project is currently being performed, which will allow the Project team to better gauge the confidence level for finishing the Project within the estimate of \$2.35 billion approved by the Commission. Mr. Womack stated that based on the current Project information, these unexpected costs can be absorbed within the contingency and escalation allowances for the Project without impacting the overall Project estimate of \$2.35 billion. *Id.* at 3-4.

In addition, the Company is working on the resolution of several known critical paths. *Id.* at 4-5. At the time of Mr. Womack's prefiled direct testimony, he testified that the critical paths involved the following equipment or systems: the Distributed Control System ("DCS"); the raw water treatment system; the steam turbine installation and interconnected piping in the Power Island; the grey water disposal system; and the gasification tower. Mr. Womack provided additional details on each of these issues and certain steps taken to address them.

(i) **Grey Water Issues.** With respect to the “grey water¹” disposal issue, Mr. Womack testified that the preferred method of grey water disposal, and the one budgeted in the current Project budget and assumed in the FEED study, involved injection of the grey water into deep saline aquifers through a group of deep wells. The anticipated make-up of the grey water at the time of the FEED study would have allowed the grey water to be designated as non-hazardous for purposes of obtaining a deep well injection permit from EPA pursuant to the Underground Injection Control (“UIC”) permit program of the Safe Drinking Water Act. *Id.* at 8.

Mr. Womack indicated that in November 2007, GE revised the design specifications of the grey water to include worst-case scenario levels of arsenic and selenium. Under the revised specifications, the Project grey water would be considered a hazardous waste under the applicable sections of the Resource Conservation and Recovery Act (“RCRA”). However, the Company’s analysis concluded that the grey water qualified as a RCRA Subtitle C-exempt Bevill waste. (“Bevill amendment exemption”)² This exemption led the Company back to its initial position that a permit was needed to dispose of the Project grey water by deep well injection pursuant to a non-hazardous UIC – Class I injection well permit. *Id.* at 8-9

According to Mr. Womack, through the fall of 2008, the Company pressed the EPA for an acknowledgment of the applicability of the Bevill amendment exemption for the Project. In January 2009, the EPA stated that the agency would most likely not agree to the applicability of the Bevill amendment exemption. Although the Company continues to dispute the EPA’s viewpoint concerning the applicability of the Bevill amendment exemption, the completion date of the Project would be jeopardized if an alternate design solution was not pursued. Mr. Womack stated that alternate solutions are being evaluated and that the current estimate of the increased cost of implementing an alternate grey water disposal solution is \$50 to \$100 million. *Id.* at 8-10.

(ii) **Engineering Progress.** Mr. Womack next provided an update on the engineering progress for construction of the Project. Bechtel has the largest portion of the design work and was slightly behind schedule. However, Mr. Womack indicated Bechtel should be back on schedule by August 2009. *Id.* at 10.

Mr. Womack continued his testimony by stating that the major equipment and bulk materials purchases are nearly complete. As of the end of January 2009, 57 of the 69 major equipment purchases planned by Bechtel had been placed as well as the orders for the major bulk materials. The current economic recession has positively impacted the cost of these purchases as most are within budget or slightly above. In addition, the focus of the procurement staff is shifting to the award of the construction contracts. The concrete foundation construction package was recently awarded and proposals are being evaluated for several major steel erection and piping installation contracts. *Id.* at 10-11. Mr. Womack also reported that major site preparation work is nearly complete. *Id.* at 11. Further, he reported favorably on the progress of transmission line and substation work associated with the Project. *Id.* at 12. In addition, Mr.

¹ “Grey water” is the waste water stream generated by the gasification process of the plant after it has gone through initial processing to remove most of the suspended solids

² This exemption is codified in 40 CFR §261.4(b) (7) (ii) (G) with the categorical description: “Process wastewater from coal gasification.”

Womack stated that the rail spur siting study has been updated and approved and the Company has recently begun notifying community leaders and the public about the Company's plans to extend the rail spur, including the selected route. *Id.*

(iii) Environmental Permitting Issues. Mr. Womack also commented on the status of the petition for review filed by the CAC, of the Project's air permit issued by the Indiana Department of Environmental Management ("IDEM") currently pending before the Indiana Office of Environmental Adjudication. On June 17, 2008, the Company filed a motion to dismiss regarding the assertion that IDEM should have included CO₂ in the "Best Available Control Technology" analysis. The motion to dismiss has been fully briefed and the Company is awaiting a decision. Duke Energy Indiana also filed various motions for summary judgment, which are awaiting decisions. No date for the final hearing has been scheduled. *Id.* at 12-13.

Mr. Womack stated that since a stay of the effectiveness of the permit was not issued, the Company has a permit in effect and construction of the site continues and will continue during the challenge of the air permit. Mr. Womack also stated that based on the current schedule and the issued air permit, the existing Edwardsport plant will need to be retired by December 1, 2010, because the Project has a milestone of early December 2010 to begin operation of the auxiliary boiler, which will result in the Project's first emissions. *Id.* at 13-14.

(iv) Additional Budgetary Issues. Mr. Womack reported that there have been changes in the budgeted amounts of the cost estimate within major cost categories. Some of these changes resulted in the shift of work between Bechtel and the Company as Bechtel's contract was finalized and the joint management plan was fine-tuned. In addition, unexpected issues and market conditions required the use of some of the contingency and escalation allowances provided for in the cost estimate. Mr. Womack sponsored Petitioner's Confidential Exhibit A-1 which is a breakdown of the current cost estimate of \$2.35 billion as of March 31, 2009. Other changes in budgeted amounts within the overall Project estimate occurred because of the consolidation of the concrete foundation budgets into one line and the allocation of contingency and escalation to various categories as required. *Id.* at 14-15.

Mr. Womack also reported that the most recent projection for AFUDC is \$140.2 million, approximately \$15.5 million more than the current estimate. However, this projection is based on numerous assumptions over time, such as interest rates, cash flow patterns, and the timing of the Commission's ruling on future IGCC petitions for construction work in progress cost recovery. Therefore, the estimate for AFUDC was not currently being revised. *Id.* at 15.

Mr. Womack reported that the recession has mitigated the runaway escalation of major equipment and materials seen in 2007 and early 2008. Although prices have not been restored to previous levels in all cases, the price of many components has improved, including structural steel, piping, and electrical wire and cable. Overseas freight pricing has fallen back to levels in the cost estimate and the recession has caused the cancellation of many projects, which has enlarged the availability and quality of craft personnel for the Project. *Id.* at 16. Mr. Womack stated that it is difficult to predict whether once the recession is over significant escalation will return and impact the Project. He noted that by 2010 virtually all of the Project equipment and

material will have been procured and much of it will have been delivered and 40%-50% of the labor man hours will have been completed. *Id.* at 17.

Mr. Womack reported that the projected cancellation costs for the Project as of March 31, 2009 total approximately \$1.197 billion. He sponsored Petitioner's Exhibit A-4, which is a graph of forecasted future cancellation costs (committed costs). *Id.*

Mr. Womack provided details on the Project information which the Commission directed the Company to provide in its IGCC-1 and IGCC-2 Orders. In addition to certain information set forth in his testimony, Mr. Womack provided such information in Petitioner's Redacted Exhibit A-2, Petitioner's Confidential Exhibit A-2, and Petitioner's Confidential Exhibit A-3. *Id.* at 18-19. Mr. Womack noted that this information has been provided in one form or another to Black & Veatch, the Commission's independent consulting firm for the Project. *Id.* at 20. Mr. Womack described Petitioner's Confidential Exhibit A-3 as a copy of the integrated project schedule and various views of the schedule which are used to monitor the Project's progress by system, through milestones and critical paths. Cost reports are also included, which are used to monitor and control cost, including analysis of contingencies. *Id.* at 20.

In closing, Mr. Womack stated that he remains optimistic that the Project will finish on schedule and on budget. The current schedule challenges are being investigated and recovery plans are being developed. Unexpected cost items, such as the grey water issue, are a major drain on the budget, but the recession has helped lower the cost for some items. Mr. Womack said he remains reasonably confident of the Project cost estimate and schedule; however, it is possible that other, yet unknown problems will prevent the Project from meeting the schedule and/or budget. *Id.* at 20-21.

B. Intervenors' Evidence and Petitioner's Rebuttal Testimony. The CAC presented testimony of Mr. Grant Smith who testified that due to the current recession electricity usage is declining and the Commission should conduct a full hearing on whether the CPCN should be revoked in that the Project is no longer needed. In addition, CAC presented testimony that climate change legislation or EPA regulations addressing carbon dioxide emissions are more likely to become reality and compliance with such laws haven't been factored into the Project cost estimate.

Although Mr. Womack's testimony was not specifically challenged by any witness, Mr. Womack provided rebuttal testimony in order to provide a further update to the Commission and the parties on the status of the Project since the filing of his direct testimony. Pet. Rebuttal Ex. A-R (Womack Rebuttal), pgs. 2-3. We will first address the evidence relevant to CAC's two contentions. This is followed with a summary of Mr. Womack's status report rebuttal testimony, along with an overview of his cross examination testimony before the Commission.

1. Continuing Need for the IGCC Plant.

a. CAC Evidence. CAC witness Grant Smith testified that construction of the IGCC Project should be put on hold and that a full and comprehensive review of the Project should be conducted pursuant to the Utility Power Plant Construction Act, Ind. Code § 8-1-5-5,

et seq., due to the decline in electricity usage that is likely to continue for the foreseeable future. Res. Customers Ex. A at 3 (Smith Direct). Mr. Smith also stated that net generation in the United States, the gross domestic product, and the residential, commercial, and industrial sectors continue to decline. *Id.* at 3-4. In addition, Mr. Smith referred to a portion of the testimony of Mr. James Rogers, CEO of the Company, presented at the March 2009 hearing in Cause No. 43374 (the Company's energy efficiency case) where Mr. Rogers noted recent industrial demand reduction which might lead to 2 consecutive years of demand reductions. *Id.* at 4-5. Mr. Smith concluded that given the recent decline in energy usage, the prospect for further energy reductions before economic recovery begins, and the increase in renewable energy generation, the Commission should put a hold on further construction of the IGCC Project and require a full and comprehensive examination of the need for future baseload generation. *Id.* at 7-8.

Mr. Smith further testified that net generation from wind sources was 34.8% higher and that higher wind generation totals in Texas, Iowa, New York, and Indiana accounted for 62.2 percent of the national increase. According to Mr. Smith, over 400 MW of wind capacity has been added in Indiana this year alone. Mr. Smith also noted that the cost of photo-voltaic, or PV systems is declining. *Id.* at 5.

b. Petitioner's Rebuttal Testimony. Duke Energy Indiana witness Dr. Stevie responded to Mr. Smith's testimony regarding recent changes in electricity usage due to the current economic downturn. Pet. Reb. Ex. B-R, at 4 (Stevie Rebuttal). Dr. Stevie disagreed with Mr. Smith's opinion that the Commission should review the need for the IGCC Project. He stated that though he generally agreed with Mr. Smith that economic activity locally and nationally has weakened and that this has reduced current levels of electricity usage, one must be careful in citing statistics on changes in raw energy usage from one year to the next. Dr. Stevie testified that electricity use on a weather normal basis has been lower when one looks at current levels on a year-over-year basis, however this does not mean that sales growth will not return as the economy rebounds. Dr. Stevie further stated that Mr. Smith's testimony does not take into account the Company's significant need for additional generating resources to replace Wabash River Units 2, 3 and 5, which a federal judge has ordered to be retired at the end of September 2009.³ *Id.* at 5-6.

Dr. Stevie further testified that the Company relies on projections of the economy from Moody's Economy.com, which forecast indicates a rebound beginning in 2009. He presented a table with his testimony that indicates that while the decline in the economy has been deeper near-term than previously expected, economic growth is expected to begin a rebound in the 3rd quarter of 2009 and build in strength over time. In addition, Petitioner's Rebuttal Exhibit B-1, a table from the National Bureau of Economic Research, provides information on past business cycles back to 1854. This table shows the average length of a contraction across all business cycles, which is in line with the projection of the rebound for the current economic downturn. In addition, Dr. Stevie noted that the passage of the federal stimulus bill (the American Recovery and Reinvestment Act of 2009) bolsters support for a rebound, though it is still too early to determine if this will accelerate the timing of the rebound. *Id.* at 6-7.

³ *U.S. v. Cinergy Corp. et al.*, No IP99-1693-C-M/S, (S.D. Ind. May 22, 2008).

Dr. Stevie discussed Petitioner's Rebuttal Exhibit B-2, which provides data on how Duke Energy Indiana's weather normal retail sales have changed during the past business cycles. This exhibit demonstrates that in each of the past business cycles, declines in sales are eventually followed by increases. In fact, Dr. Stevie noted that it appears that when the decline is longer and deeper, the rebound is stronger. He further commented that the historical track record shows that once the contraction comes to an end, economic growth rebounds and electrical sales increase and that he fully expects this will occur in this business cycle. *Id.* at 7-8.

Dr. Stevie also discussed Petitioner's Revised Rebuttal Exhibit B-3, which provides information comparing the forecasts of energy and peak prepared in 2007, the fall of 2008, December 2008, and a new forecast prepared in the spring 2009 that reflects a contemporary outlook on the economy prepared by Moody's Economy.com. This table shows the differences in the energy and peak load forecasts relative to each of the prior forecasts. By the year 2012, the new forecast is lower than the previous forecasts by a range of approximately 4% to 8%, depending upon the vintage of the prior forecast. Dr. Stevie stated the latest load forecast was provided to Ms. Jenner for use in her analysis of the need for the IGCC Project, along with revised estimates of expected demand response. The estimates of demand response for the near-term have been lowered consistent with the near-term reductions in industrial activity reflected in the lower load forecast. *Id.* at 8-9.

Dr. Stevie also provided brief testimony on current economic trends by sponsoring Petitioner's Rebuttal Exhibit B-4, which consists of five charts showing the current trends for light vehicle sales, housing starts, the Institute of Supply Management's National Association of Purchasing Managers Index (ISM-NAPM), initial claims for unemployment insurance, and the Economic Cycle Research Institutes weekly index of leading indicators (ECRIW). Dr. Stevie stated that this recession has been driven by declines in consumer spending on light vehicles and housing as well as a decline in manufacturing and that these five macroeconomic concepts are leading indicators that provide insight into trends. He testified that all five of these indicators point to the beginning of a rebound. Dr. Stevie concluded by stating that while there is no guarantee that a recovery has begun, indications are positive that we have reached the bottom in this business cycle and are beginning the process of recovery. He stated that these trends bolster the point that the economy will not continue to decline, but will return to a growth path which will lead to growth in the use of energy. *Id.* at 9-10.

Duke Energy Indiana witness Ms. Jenner also responded to CAC witness Smith's assertion that, due to decreased sales, a full and comprehensive examination of the need for the Edwardsport IGCC Project should be performed. Pet. Reb. Ex. D-R, at 3 (Jenner Rebuttal). Ms. Jenner pointed out that in the original CPCN case, Cause No. 43114/43114-S1, the Company presented its integrated resource plan ("IRP") showing the need for the IGCC plant to meet the Company's service requirements in 2011 and beyond. Petitioner's IRP also continued to show a need for the IGCC capacity as well as additional peaking and intermediate capacity in 2012 and beyond. With the recession already in place, the Company's Spring 2008 load forecast showed a somewhat lower level of expected load such that the Company would not need to acquire generation in addition to the IGCC plant in the 2012 through 2015 timeframe unless the Company retired some of the Wabash River units. However, according to Ms. Jenner, the Company would still have a need for additional peaking capacity in the near term (*i.e.*, 2009-

2011). Ms. Jenner further noted that in the first IGCC tracker case she had testified that even with a higher level of anticipated demand and energy savings from the Company's pending energy efficiency proposal, the Company still had a need for more capacity to meet customers' needs in a reliable manner. *Id.* at 3-4.

Ms. Jenner observed that neither the CAC nor any other party seriously questioned the need for the IGCC plant prior to or at the time of the August 22, 2008, hearing in Cause No. 43114 IGCC-1, although the recession was well underway. *Id.* at 5. She further noted that this Commission stated in its January 7, 2009 Order in Cause No. 43114 IGCC-1 that:

[e]ven with the revised cost estimate and the change of the completion date to June 2012, the project remains reasonable and necessary and that the Company's overall need for baseload capacity has not changed. Even with an updated lower load forecast and additional IRP analysis, the Company has a need for approximately 590 MWs in summer 2012 and beyond. As Ms. Jenner testified, this significant need will remain even with the addition of increased energy efficiency programs and/or increased wind resources to Petitioner's resource portfolio.

Cause No. 43114 IGCC 1, at 12 (*Ind. Util. Reg. Comm'n*, January 7, 2009)

Ms. Jenner also discussed her rebuttal testimony in Cause No. 43114 IGCC-2 concerning the continued need for the IGCC plant. At that time, Ms. Jenner used the December 2008 load forecast and demand response impacts reflecting the economic downturn. According to her analysis, Duke Energy Indiana will need to purchase or acquire additional capacity beginning in 2013 to meet its required Reserve Margin. Ms. Jenner concluded that there is still a need for the Edwardsport IGCC's baseload capacity, even with the lower load forecast. *Id.* at 5-6.

Ms. Jenner also pointed to the Commission's finding that the IGCC plant was still needed in its IGCC-2 Order. *Id.* at 6.

[The Commission] recognize[s] that planning and constructing new generation capacity must appropriately look to long term trends and projections to ensure that capacity is planned and constructed in a manner that will result in its timely availability to meet future demand. To stop construction of the IGCC Project in response to an economic downturn, without clear projections of a long term corresponding overall decline in electricity demand as suggested by the CAC, would be inconsistent with this approach. In addition, we also note that Ms. Jenner provided evidence in this proceeding that the Company's overall need for baseload capacity, that will be provided by the Edwardsport Project, has not changed even with an updated lower load forecast and lower Reserve Margin. We find Ms. Jenner's assessment on this issue to be reasonable.

Based on the evidence presented in this matter, we conclude that the Petitioner has demonstrated the IGCC Project is still needed by the Company for baseload capacity, despite the current downturn in the economy, and that public

convenience and necessity continues to require the construction and completion of the IGCC Project.

Order in Cause No. 43114 IGCC 2, at 13 (*Ind. Util. Reg. Comm'n*, May 13, 2009).

Ms. Jenner testified that on May 29, 2009, the Court issued its remedy order in the New Source Review ("NSR") litigation. Among other rulings, the Court ordered the shutdown of Wabash River Units 2, 3, and 5 by September 30, 2009. Ms. Jenner stated that the Company is currently evaluating its appeal options at the Seventh Circuit Federal Court of Appeals. *Id.* at 6-7. Ms. Jenner also discussed the issues that could impact the shutdown of these units by September 30, 2009, stating that the Midwest ISO is currently performing a study which will assess the reliability impacts of shutting down these Wabash River units. Depending on the outcome of the study, the Company will further consider its options, including whether it will ask for a stay of the shutdown pending the outcome of any appeal. *Id.* at 7. Although Ms. Jenner noted that there is a possibility that the Wabash River Units could be brought back on-line after shutdown if the remedy order is reversed on appeal, she observed that these units date back to the 1950s and that environmental regulations continue to tighten. According to Ms. Jenner, at some point in the foreseeable future it will no longer be economic to run these units due to new compliance requirements. *Id.* at 7-8.

Ms. Jenner testified that Petitioner's Rebuttal Exhibits D-1 through D-3 are an update to her analyses provided in Cause No. 43114 IGCC-2 that show the supply versus demand balance for Duke Energy Indiana for 2009-2018 using the Spring 2009 load forecast and demand response impacts reflecting the current economic downturn. *Id.* at 8. Ms. Jenner explained the resource adequacy requirement assumptions used in her updated analyses stating that the Midwest ISO made changes to its Tariff to include a long-term resource adequacy requirement such that the Loss of Load Expectation ("LOLE") due to resource inadequacy cannot exceed one day in ten years. Beginning with planning year June 2009-May 2010, the LOLE standard became enforceable under the Midwest ISO's Tariff and there are financial consequences for failure to meet this standard. Mr. Jenner also described that for the 2009/2010 planning year, Petitioner is required to meet a Planning Reserve Margin ("PRM") on an Unforced Capacity basis of 5.35% and that the Midwest ISO will be performing studies every year to determine the required PRM for the upcoming planning year, which will define the minimum reserve margin requirement for the Company. For longer planning purposes, the Company believes that the result for the 2009/2010 planning year is indicative of what will be required in the future. *Id.* at 8-9. For this year, Ms. Jenner stated that translating the 5.35% PRM_{UCAP} requirement to the equivalent installed capacity reserve margin requirement (the historical method used by the Company) is 14.3%, which she used in her updated analyses. *Id.* at 9.

Ms. Jenner concluded that Petitioner's Rebuttal Exhibit D-1, which relies on the updated load forecast information supplied by Dr. Stevie, demonstrates that the IGCC Plant continues to be needed to meet its customers' electricity needs in 2012. Petitioner's Rebuttal Exhibit D-1 shows the addition of the Edwardsport IGCC Plant in 2012 and the retirement of Wabash River Units 2, 3, and 5 by September 30, 2009. In addition, she testified that the Company has a continuing near-term need for peaking capacity in 2010-2011 and that once the IGCC plant is on line in 2012, Duke Energy Indiana's supply vs. demand position is essentially in balance through

2016. She said the Company will need to purchase or acquire additional capacity beginning in 2017. As Petitioner's Rebuttal Exhibits D-2 and D-3 show, without the addition of the Edwardsport IGCC Plant, the Company will be about 450-800 MW short from 2012 to 2018. *Id.* at 9-10.

Ms. Jenner also noted that there is the potential that the capacity need could be greater than what is shown in Petitioner's Rebuttal Exhibits D-1 through D-3 because the jury in the NSR case found liability for projects performed on the Company's Gallagher Units 1 and 3, and no remedy order concerning these units has been issued yet.⁴ In addition, the CO₂ legislation being considered in Congress along with more stringent Clean Air Mercury Rule ("CAMR") and Clean Air Interstate Rule ("CAIR") requirements could hasten the retirement of Duke Energy Indiana's older, smaller coal units. *Id.* at 10.

Ms. Jenner addressed Mr. Smith's reference to comments made by Mr. Rogers in the Company's energy efficiency case that the current recession could result in two years of demand reduction in a row. She pointed out that Mr. Smith did not present any specific criticism of the Company's load forecast or of the Company's need for additional capacity. Ms. Jenner concluded that she remains convinced that the Company needs the baseload capacity that the IGCC Project will provide. *Id.* at 11.

2. Potential Impact of Carbon Legislation.

a. **CAC Evidence.** Mr. Smith also testified that a review of the Project is warranted pursuant to Ind. Code § 8-1-8.7-5 because the cost estimate represented by the Company is not the true cost to ratepayers of completing the IGCC Project in light of impending carbon legislation. CAC Ex. A, at 5-6 (Smith Direct). Mr. Smith opined that the Commission should continue to review the costs of the IGCC Project, pursuant to Ind. Code. § 8-1-8.7, *et seq.*, to determine if public convenience and necessity will be served by the construction of the IGCC Project. *Id.* He stated that even though the Company maintains its cost estimate for the Project is unchanged, its cost estimate understates the true cost to ratepayers of completing the Project. Mr. Smith noted the testimony of the Petitioner's CEO Jim Rogers in Cause No. 43374 where Mr. Rogers observed that rates in Indiana would rise as much as 40-60% based a carbon legislation proposal and that carbon legislation is just over the hill. *Id.* at 6.

Mr. Smith also testified that carbon capture and sequestration ("CCS") is still unproven and very expensive. Mr. Smith believes that the so-called environmental proponents of CCS are succumbing to a false hope. *Id.* at 7. Mr. Smith concluded that the current cost estimate for the Project is not accurate with respect to the true costs to ratepayers in light of ever more certain and costly carbon compliance requirements. *Id.* at 7-8.

b. **Duke Energy Indiana's Rebuttal Evidence.** Duke Energy Indiana witness John L. Stowell responded to Mr. Smith's testimony regarding the developments related to carbon legislation and provided his assessment of the future direction and scope of such legislation. Pet. Reb. Ex. C-R, at 3 (Stowell Rebuttal).

⁴ The remedy phase trial has been scheduled for January 25, 2010.

Mr. Stowell testified that Mr. Smith's view that carbon restrictions will be enacted through climate change legislation is not new information. In fact, Mr. Stowell has been saying for some time, including in his rebuttal testimony in the underlying CPCN proceeding (Cause No. 43114), that climate change legislation would likely be passed in the 2009/2010 time frame. *Id.* at 13-14. Moreover, the potential for such restrictions was included in the planning of the IGCC Project. Mr. Stowell explained that the Company presented the results of integrated resource planning ("IRP") modeling in Cause No. 43114/43114-S-1, showing that the Edwardsport IGCC Project would be economic even if it became necessary to purchase carbon emissions credits. In addition, Ms. Jenner presented evidence in Cause No. 43114 IGCC-1 that when the Company used the mid-range prices for carbon emissions put forward by the CAC's expert witness in the Company's modeling analyses the Edwardsport IGCC Project remained a robust and reasonable choice for the Company to meet its native load power supply obligations.⁵ Accordingly, Mr. Stowell reported that the Company has considered the possibility that carbon emission restrictions would become part of its regulatory framework for some time and it has reasonably evaluated that possibility in its economic analyses of the IGCC Project. Mr. Stowell observed that Mr. Smith has not presented any new information in this proceeding related to potential climate change legislation that justifies further economic modeling of the IGCC Project and re-evaluation of the CPCNs issued for the IGCC Project. *Id.* at 17-18.

Mr. Stowell testified that on June 26, 2009, the United States House of Representatives narrowly passed H.R. 2454, the American Clean Energy and Security Act ("Waxman-Markey"). Waxman-Markey establishes, for the first time, an economy-wide greenhouse gas emissions limit beginning in 2012. In the first year of compliance, the economy's greenhouse gas emissions are capped at 3 percent below 2005 emission levels and the cap continues to decline such that in 2020 emissions must be 17 percent below 2005 levels. The cap continues to decline to 2050, when emissions must be 83 percent below 2005 levels. Mr. Stowell noted that Waxman-Markey includes a cap-and-trade system. Allowances are allocated to local distribution companies, so that regulators may assure that the value of those allowances are used to mitigate price increases for customers. Mr. Stowell also pointed out that the legislation contains an offset program. Companies will be able to purchase offsets as a compliance option, which Mr. Stowell believes will help keep the carbon price lower.⁶ *Id.* at 6-7.

Mr. Stowell also explained why he believes the Senate will be practical and mindful of the economic impact when negotiating and passing climate change legislation. He pointed out that just before senators broke for the August recess, the chairman of the Senate Environment Committee said she was actively considering establishing a floor and a ceiling price for carbon, which demonstrates that Senator Boxer recognizes the fragile state of our country's economy and is willing to address it, even though it represents a major change in her position. Many senators are also sensitive to the concerns of our nation's manufacturers who worry that increased energy costs will put them at a disadvantage against foreign competitors whose governments do not

⁵ Ms. Jenner's modeling assumed an initial CO₂ emission cost of \$22.92 per ton beginning in 2013 (nominal dollars) and going all the way up to \$89.42 per ton (nominal dollars) in 2030.

⁶ Mr. Stowell also testified that Waxman-Markey contains incentives which may accelerate the development and deployment of carbon capture and storage options for coal-fired power plants. Mr. Stowell believes that the bonus allowances may be helpful for the IGCC Project. *Id.* at 7.

control greenhouse gas emissions. Mr. Stowell also noted that in the last Congress, the Senate took the lead on climate change legislation and passed a bill out of the Senate Environment and Public Works Committee which eventually failed on cloture. On June 6, 2008, a few days after that vote, a group of 10 Democratic senators wrote to Majority Leader Harry Reid and Senate Environment Committee Chair Barbara Boxer explaining the issues that would have to be addressed in any final climate legislation. These senators, whose ranks later grew to 16, listed a series of conditions, including cost containment, which would need to be met before they could support future climate legislation. *Id.* at 8. Nearly all of these senators are still in the Senate and Mr. Stowell pointed out he believed that sufficient votes would not be forthcoming unless the Senate bill is cost effective. *Id.* at 10-11.

Mr. Stowell disagreed with Mr. Smith's reliance on a portion of testimony by Mr. Rogers, Duke Energy's CEO, in February 2009, in the Company's energy efficiency case, Cause No. 43374. In that case, Mr. Rogers briefly mentioned an increase in Indiana rates based on President Obama's draft budget proposal, which included cap and trade provisions for carbon dioxide emissions with no "zero cost" allowances granted.⁷ Mr. Stowell explained that Mr. Rogers' remarks were to emphasize the importance to customers of energy efficiency in the face of rising energy prices, not to discuss the content, scope or timing of climate change legislation.

Finally, Mr. Stowell disagreed with Mr. Smith's assertion that the cost of carbon compliance has become more expensive under the new administration. Mr. Stowell stated that the anticipated cost of compliance under the Waxman-Markey bill is very much in line with the Company's projections and carbon prices used by Ms. Jenner in evaluating the IGCC Plant in her IRP modeling. In fact, the Energy Information Administration ("EIA") recently released its "Energy Market and Economic Impacts of H.R. 2454, the American Clean Energy and Security Act of 2009." In this document, the EIA forecasted prices of CO₂ emission allowances if carbon legislation similar to the Waxman-Markey bill becomes law. The CO₂ emission allowance prices that Ms. Jenner used in her modeling a year ago (which were the mid-range prices of the outside consultant hired by CAC and its collaborators in that proceeding) are very much in line with the prices forecasted by the EIA. *Id.* at 18-19.

Ms. Jenner also responded to CAC's contention that the IGCC Project is not the least cost option for new generation because of the increased probability of carbon legislation. She explained that CAC raised this same issue in the original CPCN case, Cause No. 43114, again in the first update case, Cause No. 43114 IGCC-1, and again in the second update case, Cause No. 43114 IGCC 2 and that extensive analysis were performed in both the CPCN case and IGCC-1 which showed that the IGCC plant was a reasonable and robust option for baseload generation for the Company under alternative scenarios, including scenarios which assumed Congress would pass climate legislation that would result in prices/costs for the emission of CO₂. In the CPCN case, the Commission found these analyses reasonable and issued the CPCNs for the IGCC Project. In its first update case, Cause No. 43114 IGCC 1, the Commission stated "Even with higher CO₂ prices assumed (as suggested by the CAC), the economics of the IGCC Project remain reasonable." Pet. Reb. Ex. D, at 12 (Jenner Rebuttal).

⁷ Mr. Stowell noted that this draft proposal was withdrawn and bears no resemblance to Waxman-Markey. *Id.* at 14-15.

In addition, Ms. Jenner quoted the IGCC 2 Order, related to the same issue raised by the CAC as follows:

No party disputed the fact that carbon restrictions, in some form, will likely become law in the not too distant future. The anticipated regulation of CO₂ is not a new issue as it has been considered by the Commission in its underlying CPCN Order and in the initial filing in these ongoing review proceedings in Cause No. 43114 IGCC 1. While the CAC again discusses the anticipated regulation of CO₂ in its testimony in this proceeding, it does not offer additional information that has not previously been considered by the Commission in prior proceedings involving the IGCC Project.

The evidence presented by the CAC with respect to expected carbon legislation or regulations does not justify conducting a full review of the underlying CPCN for the Project. The Petitioner has previously adequately evaluated the possibility of carbon emission restrictions and the Project remains reasonable for meeting the Company's baseload capacity needs.

IGCC-2 Order, at 13.

Ms. Jenner stated that just as the CAC did not present any new information in Cause No. 43114 IGCC-2 about the likely content of carbon emission restrictions, Mr. Smith has not done so in this case. *Id.* at 11-13.

Ms. Jenner testified that she did not do any additional modeling based on different assumptions for carbon prices compared to the modeling she performed in the IGCC-1 update case because of her reliance on Mr. Stowell's expertise and testimony that Congress will not pass climate change legislation that will create additional economic hardship on particular sectors of the economy or particular regions, such as the Midwest, which rely heavily on coal-fired generation. *Id.* at 13-14.

Ms. Jenner concluded her testimony by explaining Petitioner's Rebuttal Exhibit D-4, which is a graph showing the CO₂ allowance prices from the recently-released "Energy Market and Economic Impacts of H.R. 2454, the American Clean Energy and Security Act of 2009" produced by the Energy Information Administration ("EIA"). The mid-range prices for carbon emissions put forward by the CAC's expert witness in Cause No. 43114 IGCC-1 ("Synapse Mid") that were used in the Company's analyses presented in that cause are also shown on this exhibit for comparison purposes. Petitioner's Rebuttal Exhibit D-4 demonstrates that the Synapse Mid CO₂ prices are in the same general range as the EIA prices. Since the probability of carbon restrictions and the forecasted cost of CO₂ emission allowances has already been considered and taken into account in prior proceedings, there is no justification for doing additional modeling of the IGCC Project or for re-opening the CPCN for further comprehensive review. *Id.* at 14-15.

3. Rebuttal Testimony Status Report.

Mr. Womack testified in his rebuttal testimony that the Project continues to progress well. The engineering and design work is approaching 80% complete, the underground utilities and foundation support piling are on track for completion by the end of September and significant progress continues to be made on the concrete foundations, which have been poured for the coal unloading hopper, gasification tower, heat recovery steam generator, coal slurry prep, and steam turbine foundations. The Selexol tank and the fine slag settling tanks are being erected and several major components of the radiant syngas coolers have been received at the site and are being welded together. The structural steel erection for the gasification area pipe racks will begin in September. Pet. Reb. Ex. A-R (Womack Rebuttal), at 2.

Mr. Womack also reported on Project budget cost pressures. Additional costs have been incurred related to the grey water disposal system and pricing quotations received thus far on the main construction packages are coming in above budget. These unexpected costs are absorbing significant portions of the available escalation and contingency allowances. *Id.* at 2. In July 2009, the Company entered into a contract with HPD, LLC to design and supply equipment to treat the grey water waste stream. While the price of this contract is still being refined, the price plus equipment installation is expected to be approximately \$90 million, plus or minus 15%, which represents an increase of approximately \$61 million, plus or minus 22%, over the original grey water disposal plan. *Id.* at 3-4.

Mr. Womack also reported that the Company is receiving bid proposals for the largest and most important construction packages on the project, which includes the heat recovery steam generator erection, structural steel erection, piping installation, equipment setting, cable tray installation, and the auxiliary power electrical installation. Some of the proposals are significantly above expectations and the proposals are still being evaluated. One of the contributing factors to the cost increase is an increase in the scale of many of the Project construction components, such as the approximately 60% increase in structural steel, approximately 25% increase in piping, approximately 25% increase in concrete, approximately 25% increase in manual valves, and approximately 10% increase in electrical cable. While some of these quantity increases include scope additions, the primary cause is design development. Design development is growth in quantities due to factors that were not known at the time of the preliminary design or due to the complexity and uniqueness of a project. Another cause of the increases appears to be higher than expected field supervision and overhead costs from the bidders. The Company is trying to mitigate these cost increases by consolidating construction packages into fewer contracts. *Id.* at 4-5.

Mr. Womack next provided an update on the contingency analysis which will provide a clearer picture on the total forecasted cost of the Project taking into account many scenarios. The Company held numerous meetings to identify areas of cost risk and to discuss ranges of possible outcomes for reach risk. In addition, by late August proposals for many of the remaining large construction packages will have been received which will help to narrow the range of certain cost risks. The analysis is expected to be completed by the end of August or beginning of September and going forward will be periodically updated with current data. *Id.* at 5.

Mr. Womack stated that the Project schedule continues to be refined. As of August 2, 2009, the Project master schedule indicated an in-service date of July 3, 2012, which is being driven by the erection of the gasification tower and radiant syngas coolers. The Company is pursuing plans to shorten these critical paths by overlapping certain construction activities and working extra shifts and overtime. In addition, from time to time unexpected potential schedule delays may materialize. Despite temporary schedule setbacks, Mr. Womack believes there is a high probability that ways can be found to accelerate the critical path activities or shorten the duration of activities toward the end of Project in order to place the plant in-service to support the peak loads of the summer of 2012. *Id.* at 6-7.

Mr. Womack concluded by noting his continued belief that the approved Project cost estimate of \$2.35 billion is reasonable although the factors he discussed have placed unexpected increased pressure on costs due to design modifications which increased the scope and scale of the Project. There have also been significant design changes due to the raw water treatment and grey water disposal plan changes. However, with everything known at this time, Mr. Womack continues to believe that the approved cost estimate of \$2.35 billion remains within a range of reasonable outcomes, though much depends on whether the remaining construction packages come in within budget and the identification of actions that can be taken to reduce costs going forward. In addition, the contingency analysis will provide important information regarding the confidence level of finishing the Project with the current estimate. Mr. Womack testified that the Company is committed to managing the Project in the most cost effective manner and continues to look for every reasonable way possible to reduce the costs of the Project for the benefit of customers. *Id.* at 7.

4. Testimony of Mr. Womack at the Evidentiary Hearing.

At the Evidentiary Hearing in this matter, Mr. Womack responded to questions from the Presiding Officers regarding the status of the integrated schedule for the Project and several questions regarding increasing Project costs. Mr. Womack explained that improvements had been made to the integrated schedule since the outset of the Project. He said there was a time when there existed a backlog of new information that needed to be entered into the integrated schedule. However, additional staff was added to the scheduling group and an experienced scheduler on complex projects from Bechtel was brought in to head up the scheduling group as a "borrowed" employee. Mr. Womack expressed his view that the integrated Project schedule is now current and as new details about the multitude of Project activities becomes available this information is promptly added to the integrated Project schedule. Mr. Womack stated that the integrated Project schedule is now fully adequate to the meet the needs of the Project and Project team.

Mr. Womack testified that the integrated schedule appropriately provides information about activities on the critical path to completion of the Project by the target completion date. He also stated that the critical path activities listed in his direct testimony were now off the critical path with the exception of activities related to the gasification tower about which he provided additional details.

Mr. Womack also responded to questions about the grey water issue. He stated that the cost of the grey water solution is estimated to be \$61 million, plus or minus 15%. Mr. Womack also discussed the potential impact of the grey water solution and other potential increased costs on the contingency and escalation amounts in the Project budget. He noted that if all potential cost increase amounts were counted against the contingency portion of the budget the contingency amount would be reduced from \$140 million to \$35 million.

Mr. Womack also reported that the Company received an additional construction bid since his pre-filed rebuttal testimony was prepared. Although this bid was higher than what was initially budgeted, it was in line with the forecast of what he thought it would be. He also stated that some opportunities for cost savings exist, which is partially dependent on the quality of supervision and labor working on the Project, as well as the quality of the design. In addition, he said that there are seven "vertical" construction packages and the Company is looking at ways to combine the packages so as to allow contractors to reduce overheads.

Mr. Womack also responded to questions about the substantial increases in commodity quantities reported in his rebuttal testimony. Mr. Womack stated that some of these increases are due to a change in scope, however, much of the increases are attributable to design growth or design development. Mr. Womack explained that every project has design growth, but that the numbers for the Project are higher than the Company expected, most likely due to the uniqueness and complexity of the Project.

Overall, Mr. Womack remained optimistic about being able to meet the target in service date for the Project of June 2012. Further, he affirmed that the Project cost estimate remains within the range of reasonable Project cost outcomes.

C. Discussion and Findings of the Commission Regarding the Continuing Need for the IGCC Plant; the Potential Impact of Anticipated Carbon Legislation; and the Ongoing Progress Report.

1. Continuing Need for the IGCC Plant.

CAC again questioned the continuing need for the IGCC Plant due to the current economic recession citing Ind. Code § 8-1-8.5-5.5, which states:

When, in the opinion of the commission, changes in the estimate of the probable future growth of the use of electricity so indicate, the commission shall commence a review of any certificate granted under this chapter to determine whether the public convenience and necessity continues to require the facility under construction. If the commission finds that completion of the facility under construction is no longer in the public interest, the commission may modify or revoke the certificate.

CAC raised this same issue in Cause No. 43114 IGCC 2. Then, and in this proceeding, the Company agreed with CAC that electricity usage has been impacted by the current state of the economy, but the Commission found the Company's position to be reasonable that the

reduction in load is temporary and that load will resume its upward trend once the recession passes. The evidence provided by Company witness Dr. Stevie demonstrates that in past business cycles, declines in sales are eventually followed by increases and that, in fact, when a decline is longer and deeper, the rebound is stronger. Dr. Stevie stated that historical track records show that once the contraction comes to end, economic growth rebounds and electrical sales increase. Dr. Stevie also provided evidence that the current recession is forecasted to end in the third quarter of 2009 and provided evidence of leading indicators consistent with that forecast.

We find Dr. Stevie's testimony credible on this issue and recognize that planning and constructing new generation capacity must appropriately look to long term trends and projections to ensure that capacity is planned and constructed in a manner that will result in its timely availability to meet future demand. To stop construction of the IGCC Project in response to an economic downturn, without clear projections of a long term corresponding overall decline in electricity demand as suggested by the CAC, would be inconsistent with this approach. In addition, we note that Ms. Jenner provided evidence in this proceeding that the Company's overall need for baseload capacity that will be provided by the Edwardsport Project, has not changed even with an updated lower load forecast. We find Ms. Jenner's assessment on this issue to be reasonable.

Based on the evidence presented in this matter, we conclude that the Company has demonstrated the IGCC Project is still needed by the Company for baseload capacity, despite the current downturn in the economy, and that public convenience and necessity continues to require the construction and completion of the IGCC Project.

2. Expected Carbon Legislation. In its testimony, the CAC also indicated that separate review of the Project by the Commission is warranted pursuant to Ind. Code § 8-1-8.7-5 as the cost estimate represented by the Company is not the true cost to ratepayers of completing the IGCC Project in light of impending carbon legislation. We decline to take such action based on the testimony presented in this matter. No party disputed the fact that carbon restrictions, in some form, will likely become law in the not too distant future. The anticipated regulation of CO₂ is not a new issue as it has been considered by the Commission in the underlying CPCN Order and in the ongoing review proceedings in Cause Nos. 43114 IGCC 1 and 43114 IGCC 2. While the CAC again discusses the anticipated regulation of CO₂ in its testimony in this proceeding, it does not offer additional information that has not previously been considered by the Commission in prior proceedings involving the IGCC Project.

The evidence presented by CAC with respect to expected carbon legislation or regulations does not justify conducting a full review of the underlying CPCN for the Project. The Petitioner has previously adequately evaluated the possibility of carbon emission restrictions on the Project and the Project remains reasonable for meeting the Company's baseload capacity needs. Therefore, consistent with our findings in the CPCN Order, the IGCC 1 Order, the IGCC 2 Order, and our review of the testimony on this issue in this Cause, we find that the IGCC Project continues to represent a viable baseload generating unit and it is in the public interest.

3. **Ongoing Review Progress Report.** No party questioned the specific information presented by Mr. Womack in his ongoing review progress report for the IGCC Project. As noted above, the Presiding Officers questioned Mr. Womack about cost and scheduling information related to the Project. The Company has adequately satisfied the information reporting requirements to the Commission for purposes of these review proceedings as specified in our Orders in Cause Nos. 43114 IGCC 1 and 43114 IGCC 2. We find and conclude that the Company's ongoing review progress report of the IGCC Project should be approved.

6. **Ratemaking Issues Presented in this Matter.**

A. **Petitioner's Testimony on this Issue.**

On behalf of Duke Energy Indiana Ms. Diana Douglas requested that the Commission approve the following: (1) the value of the IGCC Project; (2) authorization for the Company to earn a return on such value; (3) the amount and recovery of Duke Energy Indiana's expenditures for the IGCC Project incurred through March 31, 2009; (4) recovery of amortized regulatory filing expenses (related to the IGCC CPCN proceeding) and fees and expenses of Black & Veatch (the Commission's independent engineering firm for the Project); (5) recovery of actual depreciation expense incurred through March 31, 2009 and estimated depreciation from October 2009 through March 2010 on the portion of the Project that has been placed in service; and, (6) adjustment of Petitioner's retail electric rates, via the IGCC Rider (Rider 61), to include the revenue effect of such investment and cost recovery. Pet. Ex. B, at 3 (Douglas Direct). The Company specifically requested approval of Petitioner's Exhibit B-1, consisting of its updated Rider 61, which Ms. Douglas noted includes changes approved by the Commission in Cause No. 43114 IGCC-1. *Id* at 4. Ms. Douglas sponsored Petitioner's Exhibit B-4, pages 1 and 2, which depicts the changes made to Rider 61.

Ms. Douglas testified regarding Petitioner's Exhibit B-1 which represents Duke Energy Indiana's Rider No. 61, identifying changes resulting from the IGCC-1 Order, such as the requirement that the incentive treatment of deferred income taxes approved in the Commission's CPCN Order is limited to the initial \$1.985 billion estimate and that the amortization of external costs in accordance with the IGCC-1 Order includes the recovery of the costs as incurred for the services of Black & Veatch for project oversight. In addition, the language regarding operating expense reconciliation has also been revised to include reconciliation of the actual Black & Veatch costs incurred to costs collected from customers. Petitioner's Exhibit B-4 highlights the changes to the language approved by the Commission's 43114 IGCC 1 Order that have been incorporated into the tariff and included as Petitioner's Exhibit B-1, pages 1 and 2. *Id.* at 3-4. Ms. Douglas provided further explanation on what is encompassed in Petitioner's Exhibit B-1.⁸

⁸ The proposed modification of Standard Contract Rider No. 61, as referenced in paragraph 7, reflects approval by of the costs incurred for Black & Veatch oversight of the project as ordered by the Commission in its June 3, 2008, docket entry in Cause No. 43114 IGCC-1. The Commission notes that, while it required Duke Energy to retain Black & Veatch in its June 3, 2008 Docket Entry, it approved the recovery of costs incurred by Black & Veatch in its Order in 43114 IGCC-1. Rider No. 61 should conform to this prior determination of the Commission.

Ms. Douglas also testified regarding Petitioner's Exhibit B-2, indicating that this exhibit sets forth data for the IGCC Project, including: the estimated cost of completing the Project; the current stage of completion; the estimated or actual in-service date; total expenditures for the Project as of March 31, 2009; Project expenditures applicable to wholesale jurisdiction; retail IGCC facility investment as of March 31, 2009; and the amount of retail allowance for funds used during construction ("AFUDC") included in the cost of the Project.

Ms. Douglas further stated that the jurisdictional balance of the Company's investment in the IGCC Project subject to CWIP ratemaking treatment is \$503,782,000 as of March 31, 2009. *Id.* at 5. This amount multiplied by the Company's overall weighted average cost of capital of 7.51% as of March 31, 2009, results in a six-month after tax return in the amount of \$18,915,000. She further explained that the after tax return is converted to the revenue requirement by using the applicable revenue conversion factors applied to the debt and equity components of the after tax return. The jurisdictional revenue requirement requested for this 6-month filing, based on the qualified investment at March 31, 2009, is \$27,085,000. *Id.* at 8-10.

Ms. Douglas provided an update on the costs of several transmission projects, which are included in the \$2.350 billion Project estimate and listed on Petitioner's Exhibit B-2, page 1. Ms. Douglas also explained that for the transmission projects (as previously presented in prior IGCC related proceedings) that qualify as part of the Midwest Independent Transmission System Operator's ("Midwest ISO") transmission expansion plan and are recognized by the Midwest ISO as Regional Expansion and Criteria Benefit ("RECB") projects, the Company will first seek cost recovery for such projects pursuant to its Rider No. 68 and the Midwest ISO's Schedule 26. Page 1 of Petitioner's Exhibit B-2 shows the reduction in IGCC Project expenses by the value of the RECB transmission project expenditures as of March 31, 2009. To the extent that costs for an IGCC related transmission project are not eligible for recovery through Rider No. 68 and Schedule 26, then the Company will seek cost recovery for such project (or portion of a project) through the IGCC Rider. *Id.* at 6-7.

Ms. Douglas also noted that the relocation of a transmission line has been completed and was placed in-service as of November 2007 and that although this line relocation project was put in-service in November 2007, the required accounting to reflect this was not completed until after the cut-off dates for the Company's rate filings in IGCC-1 and IGCC-2. Therefore, the Company is including the accumulated depreciation expense for this transmission line relocation project from December 2007 through March 2009 in its revenue requirements calculations in this filing. In addition, the revenue requirements approved by the Commission in IGCC-1 and IGCC-2 have been recomputed to reflect the impacts on the return calculation of the accumulated depreciation that should have been included on the Company's books at each of the cut-off dates used in those filings, which are shown on Petitioner's Exhibit B-5, pages 1 and 2, and a voluntary credit of \$3,000 has been credited to customers in this filing. In addition, one other line relocation project was put into service in March 2009, however, no depreciation expense had been reflected on the Company's books and records as of the March 31, 2009, the cutoff date for this filing, but will be incurred beginning in April 2009 and going forward. *Id.* at 7-8.

Mr. Douglas also explained the calculation of the jurisdictional revenue requirement applicable to operating expenses. External costs associated with the IGCC CPCN retail

regulatory filing, excluding employee expenses, through March 31, 2009, totaled \$632,571. Six months' worth of amortization of this amount over the amortization period of 48 months totals \$79,074. The fees and expenses incurred by the Company during October 2008 through March 31, 2009, for services by Black & Veatch for Project oversight totaled \$401,878. Actual depreciation of the first in-service line relocation transmission project related to the IGCC Project from December 2007 through March 31, 2009 totaled \$60,453. The estimated depreciation expense for the October 2009 through March 2010 six-month forecast period is \$27,694. The total of all these operating expense items, \$569,099 was included in the calculation of the total revenue to be recovered from retail customers. After application of the revenue conversion factor, the total to be recovered for operating expenses in this filing is \$581,306. *Id.* at 10-11.

After briefly explaining the IGCC Cost Recovery Adjustment Factors, by jurisdictional rate group set forth on page 7 of Petitioner's Exhibit B-2, Ms. Douglas discussed the derivation of the Company's weighted average cost of capital as of March 31, 2009, as provided on Petitioner's Exhibit B-2, page 8. Ms. Douglas stated that the weighted average cost of capital has been calculated consistent with the Commission's administrative rules, the Commission's CPCN Order, and the Commission's IGCC 1 Order. Based on the Commission's CPCN Order and its Order in Cause No. 43114 IGCC 1, because the Project expenditures do not exceed \$1.985 billion, deferred taxes have been excluded from the capital structure for purposes of the IGCC revenue requirements calculation. *Id.* at 13.

Ms. Douglas also discussed AFUDC related to the Project and included for recovery in this proceeding for the period October 2008 through March 2009, as shown on page 9 of Petitioner's Exhibit B-2. *Id.* at 13-14. Ms. Douglas said that AFUDC is accrued on the IGCC Project expenditures, including previously computed AFUDC amounts, until such expenditures and AFUDC amounts begin earning a return through Rider 61 or through base rates. Ms. Douglas also opined that the Company's AFUDC rates were computed in compliance with FERC guidance. *Id.* at 14-15.

Ms. Douglas commented that consistent with 170 I.A.C. 4-6-22 and in accordance with the Commission's November Order, the IGCC Project will be deemed to be under construction, and Duke Energy Indiana will continue to receive revenues through Rider 61, until the Commission determines that this Project is used and useful in a proceeding that involves the establishment or investigation of Duke Energy Indiana's base rates and charges. *Id.* at 15.

Ms. Douglas also sponsored and discussed Petitioner's Exhibit B-3 which shows the impact of the proposed IGCC Project ratemaking treatment on the monthly bill of a typical residential customer using 1,000 kilowatt-hours. The monthly bill of a residential customer using 1,000 kilowatt-hours will increase by \$0.52 or approximately 0.7%, if this factor is approved. *Id.*

B. OUCC's Evidence. OUCC witness Wes Blakely testified that the OUCC concurs with Petitioner's calculations for the IGCC Rider. Pub. Ex. 1, pg. 4 (Blakely Direct). Mr. Blakely sponsored Exhibit WRB-1. Mr. Blakely stated that the amount of retail jurisdictional investment that Petitioner is seeking to earn a return on is \$503,722,000 net of

depreciation with a rate of return of 7.51%. *Id. at 2-3.* Mr. Blakely reported that the Company excluded zero cost deferred income taxes from its capital structure because the Commission approved this exclusion on the IGCC investment up to its \$1.985 billion original estimate as cited in the Commission's IGCC-1 order. *Id. at 3.* Mr. Blakely explained Attachment WRB-1 calculates three different capital structures and capital structure III of that exhibit shows a premium equity return of 12.50% to achieve the same overall rate of return under traditional ratemaking. According to Mr. Blakely the effective "incentive" return on equity is 2% on top of the cost of equity approved in the Company's last rate case which was 10.5%. *Id. at 4.*

No witness other than Ms. Douglas or Mr. Blakely presented any evidence on the ratemaking issues.

C. **Commission Discussion and Findings on Ratemaking Issues.** None of the parties to this proceeding took issue with the Company's proposed implementation of the updated IGCC Rider (Standard Contract Rider 61) or with the associated calculations contained in that Rider. Based on our review of the evidence presented on this issue, we find that Duke Energy Indiana's IGCC Rider, as sponsored by the testimony of Duke Energy Indiana witness Ms. Douglas, reflects the actual Project costs incurred through March 31, 2009, and should be approved by the Commission.

7. **Petitioner's Request for Confidential Treatment.** On May 28, 2009, Petitioner filed a Motion for Protection of Confidential and Proprietary Information ("Motion"), supported by the affidavits of Mr. W. Michael Womack, Vice President Edwardsport IGCC Project, Mr. Timothy R. Huskey, Operations Manager for General Electric Company ("GE") through its GE Energy business and Mr. Dennis Lear, Project Manager IGCC for Bechtel. The affidavits of Messrs. Womack, Huskey, and Lear indicate that such confidential information ("Confidential Information") constitutes a trade secret and that Petitioner, GE and Bechtel have taken all reasonable steps to protect the confidential information from disclosure. On June 4, 2009, the Presiding Officers issued a Docket Entry in which they granted confidential treatment to the Confidential Information on a preliminary basis.

Based on the foregoing, pursuant to Ind. Code § 5-14-3-4(a)(4), we find that the IGCC Project cost and cost estimate information set forth in Petitioner's Confidential Exhibit A-1 and Petitioner's Confidential Exhibit B-2 presented in this proceeding constitute a "trade secret" and should continue to be afforded confidential treatment. In addition, we find that the cost estimate and budget information, together with the detailed scheduling and procurement information and certain information related to start-up and operational characteristics of the Project set forth in Petitioner's Confidential Exhibits A-2, A-3 and A-R-3 constitute "trade secrets" and should continue to be afforded confidential treatment. Accordingly, this information is exempted from public disclosure and will continue to be held as confidential by the Commission.

IT IS THEREFORE ORDERED BY THE INDIANA UTILITY REGULATORY COMMISSION, that:

1. The ongoing review progress report for the IGCC Project is hereby approved by the Commission based on the evidence of record.
2. Duke Energy Indiana's IGCC Rider (Standard Contract Rider No. 61) as reflected in the exhibits and testimony of Duke Energy Indiana witness Ms. Douglas and consistent with our findings above, including the actual Project costs incurred through March 31, 2009, is hereby approved. Rider 61 shall go into immediate effect for all bills rendered upon filing of the revised Rider 61 with the Commission's Electricity Division.
3. Petitioner's Confidential Exhibit A-1, Petitioner's Confidential Exhibit A-2, Petitioner's Confidential Exhibit A-3, Petitioner's Confidential Exhibit A-R-3, and Petitioner's Confidential Exhibit B-2, p. 1 presented in this proceeding are found to be confidential and a trade secret, excepted from public access, and will continue to be held as confidential by the Commission.
4. This Order shall be effective on an after the date of its approval.

ATTERHOLT, LANDIS, AND GOLC CONCUR; HARDY AND ZIEGNER ABSENT:

APPROVED: DEC 02 2009

I hereby certify that the above is a true and correct copy of the Order as approved.


Brenda A. Howe
Secretary to the Commission